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The Association Between Forgiveness and Distress Tolerance: Mediating Role of Emotion Regulation in Recovery from Alcohol Dependence

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ABSTRACT: Alcohol has been widely used in almost all the cultures for centuries, but its dependence- producing properties are associated with significant health risks and harms. The objective of this study was to find out the mediating role of emotion regulation (cognitive reappraisal, expressive suppression) on the relationship between forgiveness and distress tolerance. For the purpose 150 young adults recovering from alcohol dependence participated in the study and completed the Heartland Forgiveness Scale (HFS), Emotional Regulations Questionnaire (ERQ) and The Distress Tolerance Scale (DTS). The correlation analysis established a significant positive association between forgiveness and cognitive reappraisal ($r = .569$, $p < .01$) and significant negative correlation between forgiveness and expressive suppression ($r = -.600$, $p < .01$). Additionally, forgiveness was significantly and positively correlated with distress tolerance ($r = .596$, $p < .01$). Furthermore, a significant negative correlation was found between cognitive reappraisal and expressive suppression ($r = -.636$, $p < .01$). The findings also depicted a significant positive correlation between cognitive reappraisal and distress tolerance ($r = .703$, $p < .01$), while expressive suppression was negatively correlated with distress tolerance ($r = -.648$, $p < .01$). Cognitive reappraisal and expressive suppression strategy both partially mediated the relationship between forgiveness and distress tolerance. Findings reveal that forgiveness directly influences distress tolerance and indirectly through emotion regulation strategies (cognitive reappraisal, expressive suppression). The findings further depict the significant positive correlation between cognitive reappraisal and forgiveness, and a significant negative correlation between distress tolerance and expressive suppression.

1. INTRODUCTION

Alcohol and alcoholic beverage contain ethanol, a harmful chemical that can lead to dependence (World Health Organization, 2024). In the year 2019, use of alcohol was linked to 2.6 million deaths globally, among which 2 million are reportedly males and 0.6 million are females (WHO, 2024). Use of alcohol has a disproportionate harmful impact on younger people; in 2019, people between the age bracket of 20-39 accounted for 13%, the largest proportion shared in alcohol related deaths (WHO, 2024). Alcohol consumption is a public health problem among adolescent that can lead to many long-term negative outcomes (Süzer Gamli & Can Erata, 2024). Since antiquity, alcohol consumption has been a socially integrated practice. The studies conducted in the past demonstrate that recovery is achievable without specialized treatment and that can be made possible by a variety of methods along with contributing components (Soweid et al., 2024). These findings might lead to the development of innovative approaches that will help in the recovery of individuals who are unable to get alcohol use treatment (Soweid et al., 2024). Individuals who were more confident in reducing down on excessive drinking were more inclined to recover, although individuals who were more anxious and sensitive to worry were less likely to accomplish otherwise. In order to support people with alcohol problems in achieving their alcohol dependence recovery goals, social workers have been urged to keep evaluating

and dealing with mental health in alcohol dependence treatment (LaBarre et al., 2024). The findings emphasize the significance of comprehending recovery-friendly environmental contexts and strengthen the benefits of enhancing participation in alcohol-free programs and the role that relative reinforcement plays in helping people with Alcohol Use Disorder (AUD) cut back on their drinking and improve their performance (Kuhlemeier et al., 2024).

Gross and John (2003) defined emotion regulation as the process to modify individual reactions to emotions consciously. Research is evident of the fact that assisting college students in learning more effective techniques for controlling their emotions could be a useful strategy for preventing and lowering problematic alcohol consumption (You et al., 2023). According to the findings, prevention and intervention initiatives might benefit greatly from focusing on emotion management techniques (You et al., 2023). Two specific emotion regulation strategies namely cognitive reappraisal and expressive suppression have been studied under the present study.

Distress tolerance, understood as the ability to resist negative emotional states (Simons & Gaher, 2005). The capacity to deal with unpleasant internal experiences, such as unpleasant feelings, urges, and disruptive thoughts, is known as distress tolerance. Psychological discomfort is seen by those with low distress tolerance as intolerable and overwhelming (Veilleux, 2018). On the other hand, those who have a high distress tolerance are more prepared to deal with discomfort and typically adopt more flexible coping strategies for difficult situations (Lass et al., 2023). People with low distress tolerance levels and negative affect may be more susceptible to acquiring alcohol use disorder (McCool et al., 2025).

According to Wohl and McLaughlin (2014), Forgiveness is a moral virtue and the outcome of pro-social motives, internal decision to release or reduce resentment or vengeance towards transgressor and increase benevolence or positive feelings towards aggressor. Forgiveness may be categorized as self-forgiveness, forgiveness of others and situational forgiveness. Findings indicate that higher levels of self-compassion and self-forgiveness are link with a decreased risk of problematic alcohol consumption; self-forgiveness has been studied in recovery outcomes far more than self-compassion; and self-forgiveness may rise across different alcohol treatments (Berg et al., 2024). In the context of alcohol and drug abuse, self-forgiveness was consistently related to reduced psychological distress and reduced susceptibility to substance use, both directly and indirectly through resentment. Forgiveness of others was similarly linked, although it was less prevalent (Webb et al., 2024). The long-held anecdotal beliefs about the significance of forgiveness and resentment to addiction recovery have been appeared to be supported by empirical data, indicating for interventions and treatment approaches for those who abuse drugs (Webb et al., 2024).

The present study examines the mediatory influence of emotion regulation strategy (cognitive reappraisal and expressive suppression) on the correlation between the forgiveness and distress tolerance among individuals recovering from alcohol dependence.

2. MATERIALS AND METHODS

2.1 Participants

The sample of the current study was male young adults (N=150) falling in the age bracket of 20-44 years young adults and recovering from the alcohol dependence. The participants who volunteered to participate were selected from the different de-addiction centers and hospitals located in the state of Haryana. The persons who were undergoing treatment inpatient and outpatient were included in the study whereas persons with severe mental illness and other medical conditions were excluded from the study.

2.2 Measures

1) Heartland forgiveness Scale (HFS; Thompson et al., 2005): Developed by Thompson et al. (2005) includes 18 items to evaluate an individual's forgiveness level, comprised of three sub-dimensions namely, forgiveness of self, forgiveness of others, forgiveness of situation, is a seven-point Likert scale ranging from "almost always false of me" (1) to "almost always true of me" (7). Higher score on the scale is indicative of higher levels of forgiveness in an individual. The HFS as a whole possesses the reliability 0.81 for composite scale and sub- scales exhibit sound reliability obtained at Cronbach's alpha 0.70 for forgiveness of self, forgiveness of others 0.67 and forgiveness of situations 0.79 (Gallo-Giunzioni, K et al., 2020).

2) Emotion Regulation Questionnaire (ERQ; Gross & John, 2003): The Emotion Regulation Questionnaire developed by Gross and John (2003) is a 10-item questionnaire measuring reappraisal (6 items) and suppression (4 items) strategy of emotion

regulation. The Cronbach's alpha of the ERQ for the dimension of cognitive reappraisal ($\alpha = .89$ to $.90$) and for expressive suppression ($\alpha = .76$ to $.80$) indicates sound internal consistency reliability (Preece et al., 2020).

3) The Distress Tolerance scales (DTS; Jeffrey S. Simons et al.): Simon and Gaher developed the distress tolerance scale in 2005. It is a 15 item five-point Likert scale which assesses the levels of distress tolerance. The scale further has four subscales as: tolerance subscale, absorption subscale, appraisal subscale, and regulation subscale (Leyro et al., 2011). The reliability of the DTS is $\alpha = .91$.

2.3 Statistical Analysis

Data was analysed with IBM SPSS (Version 23) and PROCESS (Version 4.2) macro by Hayes for SPSS. Descriptive statistics and Pearson's Product-Moment correlation were conducted to determine the correlation among variables. Further, for the parallel mediation analysis model, Model 4 of Hayes' process macro was applied.

3. RESULTS AND DISCUSSION

Table 1. Shows the descriptive analysis and zero-order correlations. Descriptive analysis shows the mean scores for the participants: forgiveness ($M = 96.84$, $SD = 7.93$), cognitive reappraisal ($M = 33.69$, $SD = 6.30$), expressive suppression ($M = 10.29$, $SD = 4.47$) and distress tolerance ($M = 58.62$, $SD = 8.13$). The correlation analysis reveals a significant positive correlation between forgiveness and cognitive reappraisal ($r = .569$, $p < .01$) and significant negative correlation between forgiveness and expressive suppression ($r = -.600$, $p < .01$). Additionally, forgiveness was significantly and positively correlated with distress tolerance ($r = .596$, $p < .01$).

Table 1. Correlation analysis

	Mean	SD	1	2	3	4
1-Forgiveness	96.84	7.93	-	.569**	-.600**	.596**
2-Cognitive Reappraisal	33.69	6.30		-	-.636**	.703**
3-Expressive Suppression	10.29	4.47			-	-.648**
4-Distress Tolerance	58.62	8.13				-

**.'Correlation is significant at the 0.01 level (2-tailed)'

Furthermore, a significant negative correlation was found between cognitive reappraisal and expressive suppression ($r = -.636$, $p < .01$). The findings also depict a significant positive correlation between cognitive reappraisal and distress tolerance ($r = .703$, $p < .01$), while expressive suppression was negatively correlated with distress tolerance ($r = -.648$, $p < .01$).

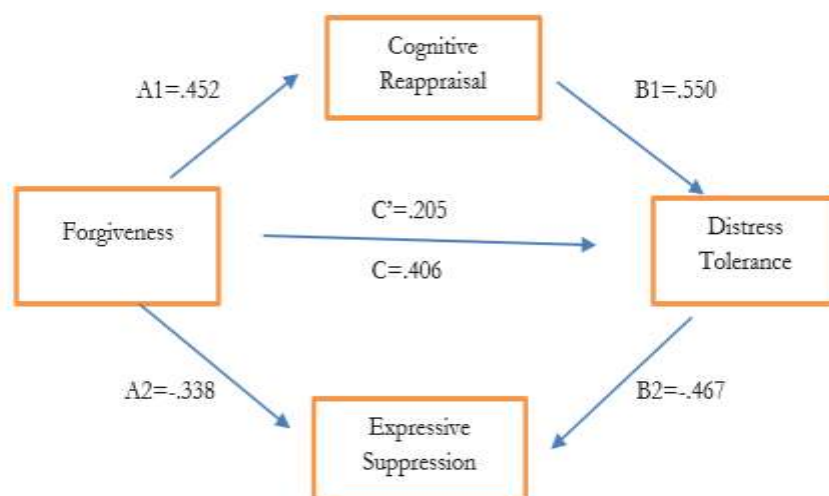


Figure 1. Parallel mediating role of cognitive reappraisal and expressive suppression on the association between forgiveness and distress tolerance

The parallel mediation model depicts that forgiveness had a significant positive association with cognitive reappraisal (Path a1: $B = .452$, $t = 8.408$, $p < .001$) and a significant negative association with expressive suppression (Path a2: $B = -.338$, $t = -9.114$, $p < .001$). Furthermore, the direct path (Path c') from forgiveness to distress tolerance was statistically significant ($B = .205$, $t = 2.858$, $p = .005$). Regarding the mediator pathways, cognitive reappraisal had a significant positive association with distress tolerance (Path b1: $B = .550$, $t = 5.882$, $p < .001$), whereas expressive suppression had a significant negative association with distress tolerance (Path b2: $B = -.467$, $t = -3.441$, $p < .001$).

Table 2. Total Direct and Indirect effect of Forgiveness on Distress Tolerance through Emotion Regulation Subscale

Total Effect	Direct	Relationship	Indirect	BC 95% Bootstrapped CI		
(FO-DT)	(FO-DT)			Lower	Upper Bound	Bound
.406 (0.000)	.205 (0.005)	(FO-CR-DT)	.249	.125	.378	
		(FO-ES-DT)	.158	.049	.314	

Note- 'FO-Forgiveness, DT-Distress Tolerance, CR- Cognitive Reappraisal, ES- Expressive Suppression'

^aThe relation of forgiveness to distress tolerance through cognitive reappraisal.

^bThe relation of forgiveness to distress tolerance through expressive suppression.

Table 2 examine the mediating role of cognitive reappraisal and expressive suppression in the relationship between forgiveness and distress tolerance. The bootstrap results confirmed a significant indirect association of forgiveness with distress tolerance through cognitive reappraisal ($B = .249$, 95% CI [.125, .378]). Furthermore, the findings also indicate a significant indirect association through expressive suppression ($B = .158$, 95% CI [.049, .314]). Because the direct association of forgiveness with

distress tolerance remained statistically significant in the presence of these mediators ($B = .205, p < .005$), cognitive reappraisal and expressive suppression strategy both partially mediate the relationship between forgiveness and distress tolerance.

3.1 Discussion

The current study investigated the association of emotion regulation strategies (cognitive reappraisal and expressive suppression) on the relationship between forgiveness and distress tolerance among individuals recovering from alcohol dependence. The study found that cognitive reappraisal and expressive suppression partially mediate the relationship between forgiveness and distress tolerance among individuals recovering from alcohol dependence.

The findings are consistent with previous literature emphasizing the important role of emotion regulation strategies in alcohol dependence. Findings may be corroborated with the previous study demonstrating the degree of dependence to be negatively correlated with cognitive reappraisal, an emotion-regulation technique. Whereas, expressive suppression exhibits a positive association with the intensity of dependence suggesting that higher levels of dependence are linked to a repressing emotional manifestation (Chethan & Payikkattu, 2024). Present findings are in line with Lo Coco et al. (2026) wherein with a sample of 1116 ($N=1116$) outpatient adults concluded that increase cognitive reappraisal and reduce expressive repression strongly predict decreased distress. Response surface analysis indicated that clients who enhanced cognitive reappraisal and diminished expressive suppression by the same degree saw the most substantial decreases in distress.

The study reveals a complex relationship between alcohol consumption, distress tolerance, and negative affect. Low distress tolerance develops an alcohol use disorder if they experience significant negative effects after drinking (Anderson et al., 2025). The present findings are in agreement with the findings of Zaorska et al. (2023) wherein they concluded a substantial correlation between emotional dysregulation and distress tolerance in people with alcohol use disorder. These outcomes suggest that people with lower distress tolerance may have more trouble controlling their emotions. The relationship between dimensions like distress tolerance and self-compassion has been demonstrated to be mediated by emotion regulating strategies (Sedighiarfaee & Eskandari, 2020).

These findings suggest that some facets of forgiveness, particularly self-forgiveness, pivotal for decreasing psychological distress and connected problems in Adult Children of Alcoholics (ACOAs). Present findings are in agreement with the study indicating that college students with a family history of alcohol misuse can benefit from forgiveness-based therapy for treating problematic alcohol consumption and ACOA-related difficulties (Maxton et al., 2026). Moreover, a direct relationship between self-forgiveness and situational forgiveness, with lower levels of psychological distress and fewer substance use problems (Dangel & Webb, 2018) supports the present findings. Prior research indicates that forgiveness positively predicts adaptive cognitive reappraisal use (Rey & Extremera, 2016), and the current study similarly demonstrates that cognitive reappraisal positively affects distress tolerance. Previous studies have not directly examined mediating pathways in this variable.

4. CONCLUSION

Overall, the findings show that forgiveness has a negative correlation with expressive suppression but a positive correlation with distress tolerance and cognitive reappraisal. Additionally, the relationship between forgiveness and distress tolerance is partially mediated by expressive suppression and cognitive reappraisal, indicating that emotion regulation plays a significant role in this relationship.

Limitations of the study: The study is subject to several limitations. First, the findings rely entirely on self-report measures, which may introduce social desirability and recall biases. Second, the sample consisted exclusively of individuals recovering from alcohol dependence, meaning this study may not generalize to all active alcohol users or other clinical populations. Third, while the current study demonstrated that emotion regulation strategies (cognitive reappraisal and expressive suppression) mediate the relationship between forgiveness and distress tolerance, future research should explore these dynamics across a broader range of substance use disorders. Concludingly, the current research suggests that forgiveness directly influences distress tolerance in recovering persons while also exerting an indirect association through increased use of cognitive reappraisal and decreased reliance on expressive suppression.

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AUTHOR CONTRIBUTIONS

Ekta Rani: data collection, preparation of manuscript, data analysis.

Taruna Gera: Methodology, supervision, Review & Editing.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ETHICS STATEMENT

Institutional Ethic Committee (IEC) of university gave their approval for the research work.

DATA AVAILABILITY STATEMENT

Data supporting the findings of this study are available from the corresponding author upon reasonable request.

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