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Exploring emotion regulation mechanisms and attachment styles in individuals with childhood trauma

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Abstract

This study aimed to investigate the relationship between childhood trauma and attachment styles, as well as emotional regulation strategies. Data were collected using valid questionnaires examining Childhood Trauma Questionnaire by Bernstein & Fink (2003), Attachment Style scale by Becker & Gilbert (1997) and Emotion Regulation scale by Gross and John (2003). A sample of 150 participants aged 18 to 30 years was analyzed using Kruskal-Wallis and Spearman correlation tests. The analysis revealed a significant correlation between childhood trauma and the use of expressive suppression as an emotion regulation strategy. Individuals with trauma tended to rely more on suppression than cognitive reappraisal. Additionally, anxious and avoidant attachment styles were predominant among participants with childhood trauma, suggesting disruptions in attachment formation due to childhood trauma. In conclusion, childhood trauma significantly influences attachment styles and emotion regulation strategies in individuals.

Keywords: Childhood Trauma; Attachment Styles; Emotional Regulation; Appraisal; Suppression

1 Introduction

Childhood trauma is an event experienced by a child that includes emotional abuse, physical abuse and mental abuse by the caregiver, close ones, family members, or any adult. It is an event experienced by a child that threatens their life in many ways. It affects their mental, physical and emotional growth in all manners. Traumatic reactions can include a variety of responses, such as intense and ongoing emotional upset, depressive symptoms or anxiety, behavioral changes, difficulties with self-regulation, problems relating to others or forming attachments, regression or loss of previously acquired skills, attention and academic difficulties, nightmares, difficulty sleeping and eating, and physical symptoms, such as aches and pains. Childhood trauma is a profound and intricate phenomenon that can have enduring effects on an individual's emotional and psychological well-being. As defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), it encompasses a range of distressing experiences during a person's formative years. These experiences often overwhelm a child's ability to cope, leading to feelings of helplessness, fear, and vulnerability. Childhood trauma can manifest in various forms, each with its own distinct consequences. Physical abuse involves deliberate physical harm or injury inflicted upon a child by caregivers or authoritative figures. Emotional abuse encompasses non-physical maltreatment, such as constant criticism, humiliation, and threats, which can erode a child's self-esteem and emotional stability. Sexual abuse involves non-consensual sexual activities or exploitation of a child, leading to profound emotional and psychological trauma. Neglect occurs when caregivers fail to provide basic physical, emotional, or educational necessities, resulting in developmental delays and emotional distress.

Emotion regulation refers to the processes and strategies individuals use to manage, control, and modulate their emotions effectively. It begins with recognizing and acknowledging one's emotions. This involves being aware of what you're feeling in a given moment. Emotion regulation significantly impacts various aspects of individuals' lives. It plays a crucial role in how people cope with stress, regulate their emotions, and navigate social interactions. Effective emotion

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regulation can contribute to better mental health outcomes, including reduced levels of anxiety, depression, and stress. Emotional regulation, as proposed by James Gross, is the process of effectively managing and modifying one's emotional responses to better suit the demands of various situations. Gross categorizes emotional regulation into two primary strategies: Cognitive Reappraisal and Expressive Suppression. These strategies play crucial roles in our ability to navigate emotions and social interactions, ultimately impacting our psychological well-being and the quality of our relationships.

Cognitive Reappraisal involves reinterpreting the meaning of a situation to change its emotional impact. For example, reframing a stressful event as an opportunity for personal growth. involves changing the way we interpret or think about emotional situations to influence our emotional responses. This strategy revolves around consciously altering the meaning we ascribe to a particular event or stimulus.

Expressive Suppression involves concealing or suppressing emotional expressions, which may be appropriate in some social contexts but can have long-term effects if overused. entails concealing or regulating the outward expression of one's emotions. It involves deliberately controlling facial expressions, body language, or verbal cues to mask inner feelings.

Attachment style refers to the way individuals relate to others in emotionally close relationships, particularly romantic ones. It is influenced by early childhood experiences with caregivers and can shape one's beliefs about themselves, others, and relationships. According to Bartholomew and Horowitz attachment style model (1991) there are 4 styles. Secure attachment, represents a balanced and healthy approach to relationships. Individuals with a secure attachment style have a positive view of themselves and others. They are comfortable with both emotional intimacy and autonomy, striking a harmonious blend between the desire for closeness and the capacity for independence. Securely attached individuals have a strong sense of self-worth, which allows them to engage in relationships with confidence. Preoccupied attachment style reflects a complex and often challenging way of forming and maintaining relationships. It's characterized by a high level of dependency on others for validation and reassurance, coupled with a negative self-image. Individuals with this attachment style often exhibit intense emotional highs and lows in their relationships and may experience anxiety and insecurity. Dismissive-Avoidant Attachment represents a specific way in which individuals approach and engage in relationships. This attachment style is characterized by a tendency to downplay the importance of emotional intimacy and often involves maintaining a high degree of independence. They may perceive emotional dependence as a sign of vulnerability and view it negatively. As a result, they strive to maintain a sense of control over their emotions and may avoid deep emotional connections. Individuals with a Fearful-Avoidant Attachment style tend to have experienced inconsistent caregiving during their formative years, which has left them with unresolved emotional conflicts. On one hand, they crave emotional closeness and intimacy like those with an anxious attachment style. However, on the other hand, they fear the potential pain or rejection that may come from being too reliant on others, similar to individuals with an avoidant attachment style. This inner turmoil can create a challenging and unpredictable dynamic in their relationships.

In the review of literature by Miu, Pollak, et.al (2022) studied Emotion regulation as mediator between childhood adversity and psychopathology. This meta- analysis of 215 studies explored the relationship between childhood adversity, emotion regulation, and psychopathology. Using meta-analytic structural equation modeling, the study assessed how childhood adversity influenced psychopathology both directly and through emotion regulation. Various aspects of emotion regulation were examined, including difficulties and habitual use of rumination, distraction, reappraisal, and suppression. Results indicated that Childhood adversity was linked to difficulties in emotion regulation and increased use of rumination and suppression, while habitual reappraisal was lessened. In another study by Chen & Fagundes (2022) studied Childhood maltreatment, emotion regulation strategies and depressive symptoms during spousal bereavement. The study examined 130 bereaved individuals at 3, 4, and 6 months after the death of a spouse, assessing the impact of childhood maltreatment on depressive symptoms following spousal bereavement, and how emotion regulation strategies (cognitive reappraisal and expressive suppression) moderated this relationship. A mixed model approach was used to analyze the data. Cognitive reappraisal, but not expressive suppression, moderated the relationship between childhood maltreatment and depressive symptoms. Participants who used less cognitive reappraisal showed a stronger positive relationship between childhood maltreatment and depressive symptoms, while those who used more cognitive reappraisal did not exhibit this relationship. Similarly, Boroujerdi, Yazdi, et.al (2019) conducted a study on Attachment style and history of childhood abuse in suicide attempters. The findings revealed that a substantial proportion of participants had a history of childhood maltreatment, with a notable portion having attempted suicide at least once. However, no significant link was observed between the number of suicide attempts and attachment style. Interestingly, a significant majority of participants displayed an avoidant attachment style, and those who had experienced childhood maltreatment were more likely to exhibit avoidant or ambivalent attachment styles.

The literature review indicated that individuals with childhood trauma exhibited use of emotional regulation appraisal strategies and some studies indicated the use of expressive suppression along with anxious-avoidant attachment style. To understand the emotion regulation strategy more clearly this current study included individuals with a history of childhood trauma to understand this variable in depth.

2 Material and methods

2.1. Research Design

The research follows a retrospective Quantitative design to study childhood trauma and its impact on attachment styles and emotion regulation strategies, through descriptive and inferential statistical analysis.

2.1 Statement of the problem

The purpose of exploring emotional regulation mechanisms and attachment styles in individuals with childhood trauma is to understand how they cope with their feelings and form relationships. This research could help develop better support systems and interventions to aid individuals in healing from their past experiences and lead healthier lives.

2.2 Objective of the study

- O1- To investigate the relation between Childhood Trauma and Attachments styles (Secure, Avoidant and Preoccupied Styles).
- O2- To Investigate the relation between Childhood Trauma and Emotional Regulation Strategy (cognitive Reappraisal and expressive Suppression style)

2.3 Hypothesis

- H0- There will be no significant difference between emotional strategies used by individuals with childhood trauma.
- H1- Childhood trauma will be positively associated with insecure attachment styles, specifically anxious and avoidant attachment styles.

2.4 Operational Definitions

2.4.1 *Childhood Trauma*

Childhood trauma is a profound and intricate phenomenon that can have enduring effects on an individual's emotional and psychological well-being. As defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), it encompasses a range of distressing experiences during a person's formative years. These experiences often overwhelm a child's ability to cope, leading to feelings of helplessness, fear, and vulnerability.

2.4.2 *Emotional regulation*

As proposed by James Gross, is the process of effectively managing and modifying one's emotional responses to better suit the demands of various situations. Gross categorizes emotional regulation into two primary strategies: Cognitive Reappraisal and Expressive Suppression. Cognitive Reappraisal involves reinterpreting the meaning of a situation to change its emotional impact. Expressive Suppression involves concealing or suppressing emotional expressions, which may be appropriate in some social contexts but can have long-term effects if overused

2.4.3 *Attachment style*

Attachment styles refer to patterns of emotional and behavioral responses in relationships, categorized into secure, anxious-preoccupied, dismissing-avoidant, and fearful-avoidant based on comfort with intimacy and dependence, fear of rejection, and attitudes towards relationships.

2.5 Sample and Techniques

The data was collected by convenience sampling by reaching out to individuals who belong to the age group of 18 to 30 years. The sample target was 200, which due to inclusion criteria of individuals having a high score of childhood trauma were only included in the research. The data was collected and distributed to all over India through various online platforms, so that the data has diversity in understanding the research topic more.

2.6 Tools for the study

2.6.1 Childhood Trauma

Childhood Trauma Questionnaire developed by Bernstein & Fink (2003) is a 28-item questionnaire consists of five subscales of five items each, i.e., Emotional Abuse (EA), Physical Abuse (PA), Sexual Abuse (SA), Emotional Neglect (EN) and Physical Neglect (PN). Its test-retest coefficient reliability is 0.80. (5-point Likert scale)

2.6.2 Attachment Styles

Attachment Style scale by Becker & Gilbert (1997) consists of 3 categories Secure attachment, Avoidant and ambivalent/anxious (preoccupied Attachment). The alpha reliability is 0.82 and it is a 25 item scale. (7 point Likert scale)

2.6.3 Emotional Regulation

It was developed by Gross and John (2003). This is a 10-item scale designed to measure respondents' tendency to regulate their emotions in two ways: (1) Cognitive Reappraisal and (2) Expressive Suppression. The reliability is Cronbach's alpha, value of 0.70. (7 point Likert scale)

2.7 Geographical area

This research includes individuals from all over India.

2.8 Inclusion Criteria

- Participants between the ages of 18 to 30 years
- Participants from India.
- Participants with a history of childhood trauma.
- Participants who have filled the consent form.

2.9 Exclusion Criteria

- Individuals who do not match the age criteria.
- Individuals who have not filled out the consent form.
- Individuals who have low scores or do not have a history of childhood trauma.
- Individuals who are not from India.

2.10 Research ethics followed-

- The data was collected from participants who have filled the consent form.
- The research aim was clearly briefed to the participants.
- Participants could withdraw from the research anytime they want to.

2.11 Statistical Analysis

The data obtained from the research was scored using the manual and norms were further analyzed using IBM SPSS. The data was analyzed using Kruskal-Wallis and Spearman correlation. Descriptive statistics involved frequency distribution, mean median and standard deviation of the data of 3 variables and sub-categories.

3 Results

The data was obtained from participants which was scored according to the manual norms and further analyzed using SPSS version 25. Kruskal-Wallis method was used to analyze the variables as the data was non-parametric. There were sub categories in the variables i.e. Attachment styles consist of 3 subtypes like Secure attachment styles, Anxious attachment styles and Avoidant attachment styles. Emotional regulation also comprises two sub categories of regulation strategies i.e. Cognitive Reappraisal and Expressive Suppression. Kruskal-Wallis was used for analysis because it allows comparison of multiple groups (in this case, attachment styles and emotion regulation strategies) even when the assumptions of normality and equal variances are not met. It helps determine if there are significant differences in attachment styles and emotion regulation strategies among individuals with a history of childhood trauma, considering the sub-categories within each variable. The analysis of the data shows that the data was non parametric as the data was not normally distributed according to the Shapiro-Wilk Test (0.000).

Table 1 The descriptive statistics of the variables (Mean and Standard Deviation)

Variable	n	M	SD
Suppression	150	30.7667	9.60035
Reappraisal	150	25.5467	10.43265
Childhood Trauma	150	116.586	16.73167

According to table 1, which shows the descriptive statistics for three variables: Suppression, Reappraisal, and Childhood Trauma, based on a sample size of 150. The data suggests that on average, participants tend to use suppression strategies more frequently (M = 30.77, SD = 9.60) than reappraisal strategies (M = 25.55, SD = 10.43). Additionally, childhood trauma levels are relatively high (M = 116.59, SD = 16.73) across the sample. Suppression and reappraisal exhibit slightly different skewness and kurtosis, indicating variations in their distributions.

3.1 Hypothesis Test Summary

Table 2 The Hypothesis test summary of the Attachment styles with Childhood trauma.

Null Hypothesis	Test	Sig.	Decision
The distribution of childhood Trauma is the same across categories of Attachment	Independent Samples Kruskal-Wallis test	.743	Retain the null hypothesis

Asymptotic significance is displayed. The significant level is .05.

The analysis of attachment styles showed that only Anxious style and avoidant style was mainly used by participants which upon further analysis between these 2 styles showed that both the styles were equally used by participants with history of childhood trauma. According to table 2, which shows the attachment style difference in individuals with childhood trauma, the null hypothesis is retained indicating that distribution of childhood trauma was same between both the negative attachment style i.e. anxious and avoidant attachment style. The null hypothesis states that the distribution of childhood trauma is the same across the categories of attachment style. The significance level for the test is set at .05, indicating the threshold for accepting or rejecting the null hypothesis.

The prevalence of anxious and avoidant attachment styles among individuals with a history of childhood trauma may be attributed to various factors. Firstly, childhood trauma often disrupts the development of secure attachment bonds with caregivers during crucial developmental stages. This disruption can lead to insecure attachment styles characterized by fear of abandonment (anxious attachment) or avoidance of intimacy (avoidant attachment) as coping mechanisms to protect oneself from further emotional harm. Additionally, individuals who have experienced childhood trauma may exhibit heightened sensitivity to interpersonal relationships and a diminished capacity for trust due to past experiences of betrayal, neglect, or abuse. These factors can contribute to the adoption of anxious or avoidant attachment styles as adaptive responses to navigate relational challenges and protect oneself from perceived threats to emotional well-being. In terms of emotion regulation strategies, the preference for suppression over reappraisal among individuals with childhood trauma may stem from several factors.

Table 3 The Spearman correlation between Childhood trauma and emotional regulation strategies i.e. Suppression and Reappraisal.

Variable	n	M	SD	1	2	3
Suppression	150	30.7667	9.60035	--		
Reappraisal	--	25.5467	10.43265	-.759**	--	
Childhood Trauma	--	116.586	16.73167	.175**	-.133	--

According to the table 3, Spearman correlation between the variables childhood trauma and Suppression emotional strategy, there is a correlation of 0.175 at the significant level of 0.05. Whereas, there is no significant relation between the childhood trauma and Cognitive reappraisal style of emotional regulation.

According to the data, the use of suppression as an emotion regulation strategy appears to be used more than the use of reappraisal. This conclusion is based on the correlation coefficient of -0.759^{**} between Suppression and Reappraisal, indicating a strong negative relationship. The negative correlation suggests that as the use of suppression increases, the use of reappraisal decreases significantly. Therefore, based on the data, it can be inferred that suppression is used more frequently than reappraisal as an emotion regulation strategy.

4 Discussion

The research data when obtained and analyzed to find the emotion regulation strategies and attachment styles among individuals with a history of childhood trauma. The individual who had high scores in the trauma scale has been ruled out to study their emotion and attachment. The data revealed that the suppression strategy was majorly used by individuals with trauma. As the results of the correlation between childhood trauma and suppression and emotional strategy, there was no relation found between the cognitive reappraisal style of emotional regulation. Whereas, the use of suppression as an emotion regulation strategy appears to be used more than the use of reappraisal. The negative correlation suggests that as the use of suppression increases, the use of reappraisal decreases significantly. In a similar study done by Gruhn & Compas on Effects of maltreatment on coping and emotion regulation in childhood and adolescence in 2020 had similar results which indicated that individual with childhood maltreatment have decreased emotion regulation where they use strategies like emotional suppression, increased avoidance and expressing negative emotions in response to stress. All tables should be inserted in the main text article at its appropriate place.

On the analysis of attachment styles that included three sub domains i.e. Secure attachment, Avoidant and ambivalent/anxious in terms of childhood trauma, the results showed that only Anxious style and avoidant style was mainly used by individuals with high childhood trauma which upon further analysis between these two styles showed that both the styles of attachment i.e. Anxious style and avoidant style were equally used by participants with a history of childhood trauma. The ambivalent/anxious style of attachment is also known as preoccupied Attachment. Similar results were seen in a study done by Grady & Brown (2021) on Childhood maltreatment experiences, attachment, sexual offending which suggested that individuals with childhood trauma are more likely to exhibit anxious- ambivalent and anxious- avoidant attachment styles. These attachment styles are also associated with difficulty in regulation. Another research by Kim & Park (2021) on Association of parent-child experiences with insecure attachment in adulthood. The results showed that individuals with childhood neglect and psychological abuse during childhood are more likely to develop both anxiety-related attachment and avoidance-related attachment styles in adulthood. A similar result was seen in the study by Holens (2010) on Adult attachment styles comparison between psychologically maltreated and non-maltreated individuals using self-report and projective methods. This study indicated that individuals who experienced childhood psychological maltreatment are more likely to exhibit insecure attachment styles in adulthood, characterized by higher levels of both attachment avoidance and attachment anxiety, compared to those who did not experience maltreatment. Another research done by McDowell (2022) on Emotional Neglect in Childhood and Attachment Anxiety in Adult Relationships as Predictors of Social Networking Addiction indicated that childhood neglect individuals tend to develop anxious-avoidant attachment styles but do not necessarily mediated the relationship between childhood maltreatment and social networking addiction.

With respect to the results obtained in such cases post-traumatic growth can play which can help an individual with a history of childhood abuse can help them deal with perceived stress even if they have difficulty coping with emotions or have insecure attachment styles. This concept has been suggested in a research done by Mohr & Rosén (2017) on The impact of protective factors on posttraumatic growth for college student survivors of childhood maltreatment where the results stated that individuals with childhood maltreatment may tend to moderate their thinking pattern through acceptance, positive reframing and emotional support that directs towards post-traumatic growth. The possible reasons that might affect the attachment formation due to early trauma as seen in this research is that abuse disrupts the secure attachment formation bond between the child and their caregivers which is also reflected in the later adult attachment styles. This disruption can lead to insecure attachment styles such as anxious-ambivalent and avoidant attachment due to inconsistent nurturing caregiver, the individual may develop mistrust and uncertainty in relationships. Insecure attachment styles may reflect in the adult through trust issues, struggles with intimacy and communication related problems in the relationship. In terms of emotional regulation difficulties as seen in the results of this research in individuals with childhood trauma it can be because abuse involves experience of intense and overwhelming emotions that are difficult to process. In the absence of proper emotional support and coping mechanisms individuals may tend to have maladaptive strategies like emotional suppression or avoidance to manage their emotions. These strategies may provide temporary relief but in later stages may affect and result in dysregulation. In response to childhood abuse individuals may develop adapting coping strategies that prioritize survival over emotional well-being. This in the long term can result in rumination, and difficulty in modulating emotional responses in adulthood.

5 Conclusion

This research examined the relationship between Childhood Trauma and Attachment Styles which consist of 3 subtypes like Secure attachment styles, Anxious attachment styles and Avoidant attachment styles and Emotional regulation which has two sub categories of regulation strategies i.e. Cognitive Reappraisal and Expressive Suppression. The data was collected by convenience sampling from the individuals between the age 18 to 30 years.

The data was then extracted and segregated with individuals with only high childhood trauma and then was further analyzed using SPSS through Kruskal-Wallis method. The study utilized non-parametric analysis due to the non-normal distribution of data, with the Shapiro-Wilk Test confirming this distribution. Spearman correlation revealed a significant positive correlation (0.175) between childhood trauma and the suppression of emotional strategy, while no significant relationship was found between childhood trauma and cognitive reappraisal.

Moreover, suppression emerged as the predominant emotion regulation strategy in individuals with childhood trauma, showing a strong negative correlation (-0.759**) with reappraisal, indicating its higher frequency of use. Attachment style analysis revealed that individuals with childhood trauma mainly showed anxious and avoidant attachment styles, with no significant difference between the prevalence of these two styles. This suggests suppression suggests difficulties in processing intense emotions, potentially stemming from past traumatic experiences. The null hypothesis was rejected which stated that there is no significant difference between emotional strategies used by individuals with childhood trauma. The alternative hypothesis was accepted as it proposes a positive association between childhood trauma and insecure attachment styles, particularly anxious and avoidant styles. The prevalence of these attachment styles may be attributed to disruptions in secure attachment formation due to childhood abuse, leading to mistrust, fear of abandonment, and difficulties in forming intimate relationships. Similarly, emotion regulation difficulties among individuals with childhood trauma may stem from intense and overwhelming emotions experienced during abuse, leading to maladaptive coping strategies such as suppression. This suggests they might benefit from learning better ways to handle their feelings. Moreover, it showed that they tend to have either anxious or avoidant attachment styles, which can affect how they relate to others. So, therapies should focus on improving these emotional coping skills and helping them build healthier relationships.

Further researchers on this topic can consider longitudinal research to track changes over time for deeper insights in this area. Overall, this study offers insights into the complex interconnection between childhood trauma, emotional regulation, and attachment styles, with implications for tailored therapeutic interventions to support individuals in overcoming adversity and building resilience.

Compliance with ethical standards

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Disclosure of Conflict of interest

No conflict of interest to report.

Statement of ethical approval

As this study was done for dissertation purpose, approval was taken from the college.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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