

Influence of Attachment Styles on Experiences of Emotional Regulation After Relationship Dissolution

Eton Au

*Li Po Chun United World Colleges, Hong Kong, China
Au.eton@gmail.com*

Abstract. The purpose of this research was to examine how individuals' attachment styles, avoidant and anxious, influence their experiences of emotional regulation after dissolution from a romantic relationship, determining emotional regulation by testing participant's use of cognitive reappraisal and suppression strategies, and determining emotional response by testing emotional distress, self-blame, emotional numbness, and intensity of emotional reactions, rated on a Likert scale. After analyzing the data from the Emotional Regulation Questionnaire and Breakup-Specific Emotional Response Inventory surveys, the predicted results would likely reveal that anxious attachment styles are positively associated with higher emotional distress following a breakup, subsequently resulting in greater reliance on cognitive reappraisal strategies, facilitating personal growth. In essence, the heightened emotional responses, characterized by sadness and self-blame, catalyzes deeper cognitive engagement with their experiences which transforms stress into positive outcomes. Conversely, avoidant attachment styles would link to emotional numbness, ultimately preferring suppression strategies and results in lower levels of personal growth. Specifically, the emotional suppression characterizing avoidance individuals inhibits their capacity for emotional processing, limiting growth opportunities. Ultimately, in the endeavor to ameliorate the social stigma associated with emotional responses to relationship dissolution, these findings underscore the critical role of attachment styles in shaping emotional regulation.

Keywords: Emotional Regulation, Attachment Styles, Relationship Dissolution, Emotional Response

1. Introduction

Romantic relationships and the dissolution of such have been empirically proven to have a plethora of potential responses, differing from negative cognitions[1], sadness and anger, diminished life satisfaction, deteriorated physical condition, and the development of mental health issues, including severe depression[2].

On this premise, although emotional distress post-separation has been well established, emotional regulation with regards to attachment styles is a facet that is underexplored and should be investigated deeper. One aspect of existing research on the similar topic of attachment styles post relationship dissolution focuses on personal growth, finding that anxious individuals were more

likely, and avoidant individuals less, to transform their breakup distress into personal growth[3]. Other research has primarily examined relationship features like gender and duration, revealing a minimal negative correlation between anxiety and relationship length, while neglecting the significant role of attachment styles in emotional regulation post-dissolution[4].

In an endeavor to ameliorate the social stigma associated with emotional distress, comprehending the profound impact of relationship dissolution on individuals' psychological well-being is critical. Hence, this research paper seeks to inquire how individuals' attachment styles (avoidant and anxious) influence their experiences of emotional regulation after a breakup from a romantic relationship.

It is predicted that individuals with anxious attachment styles will experience greater distress in emotional regulation following a breakup, manifesting increased sadness, anger, and self blame. This will lead to higher scores in the Experiences in Close Relationships Scale (ECR) and Breakup-Specific Emotional Response Inventory. In addition, these individuals will also show less effective use of cognitive reappraisal strategies, favoring emotional suppression.

Conversely, individuals with the avoidant attachment style will demonstrate higher levels of emotional numbness and lower intensity of emotional reactions. The paper predicts that the avoidant individuals may also report maladaptive coping strategies, such as avoidance or self-medication, as means of managing their emotions.

2. Methods

The study aims for approximately 300-500 participants to ensure statistical power. The demographics will include both male and female participants, ranging from 18-39 years old, coming from a diverse sample of ethnic groups (ethnicity will not be controlled). The study will also focus on individuals with a straight sexual orientation.

2.1. Design and procedure

This study employs a quantitative cross-sectional survey design to investigate the relationship between attachment styles (anxiety, avoidance) and emotional regulation following a breakup, with the primary aim to assess the individuals' experiences of emotional regulation post-breakup, and the secondary aim to comprehend the coping strategies that the different attachment styles may use.

The survey will be distributed through posting a link to online psychology survey websites (Social Psychology Network Online Social Psychology Studies, Psychology on the Net, and the intranet at the authors' university), with a detailed description of what the study entails. The survey will underscore confidentiality, and the option to withdraw at any time without penalty. All participants will and must provide informed consent electronically before accessing the survey.

Assigning to experimental conditions will be inapplicable in this study, since it uses a correlational design rather than an experimental one, where all participants will complete the same survey measuring attachment styles and emotional regulation.

Participants will first complete a questionnaire recording their demographics, such as age, gender, and ethnicity, before completing the Experiences in Close Relationships Scale (ECR) to measure their attachment style. This will be achieved by responding to questions indicating the participant's level of agreement with statements related to anxiety about partner availability and responsiveness (anxiety), and regarding discomfort with closeness and dependence (avoidance).

To measure emotional regulation post relationship dissolution, the survey will first respond to a Emotional Regulation Questionnaire (ERQ), eliciting the participant to rate their use of cognitive

reappraisal and suppression strategies in the context of past breakups. Subsequently, the participant will also complete a Breakup-Specific Emotional Response Inventory, which will measure emotional response through participant's responding to questions on emotional distress (e.g., sadness, anger), self-blame, emotional numbness, and intensity of emotional reactions, rated on a Likert scale. An example question would be: "'Since the breakup, I sometimes find it hard to feel much of anything.'" (Rate from 1 - Strongly Disagree to 7 - Strongly Agree)". By understanding emotional regulation techniques through the ERQ and the emotional responses (effects) through the Emotional Response Inventory, the study can better understand the psychological processes of a breakup and assess the psychological impact.

Coping will also be assessed to achieve the secondary purpose of the study, to assess the use of coping strategies including: social support seeking, avoidance (e.g., staying busy), self-medication (use of alcohol/drugs), and positive reframing.

2.2. Materials

The stimuli in this experiment is the attachment style, measured by the Experiences in Close Relationships Scale (ECR). The response variable, emotional regulation and emotional response, is measured through the Emotional Regulation Questionnaire (ERQ), evaluating cognitive reappraisal and suppression strategies, and a Breakup-Specific Emotional Response Inventory assessing emotional distress, self-blame, and emotional numbness respectively. Data collection and analysis will be conducted using SPSS, a statistical software to analyze results.

2.3. Data analysis

A 2 (attachment style: high vs. low anxiety) $\times$ 2 (attachment style: high vs. low avoidance) ANOVA will be conducted to examine the differences in emotional regulation strategies (cognitive reappraisal and suppression) among the four groups created by the intersection of attachment anxiety and avoidance, determining whether attachment styles significantly impact the use of specific emotional regulation strategies, allowing for insights into how different attachment orientations shape emotional coping mechanisms. This tests the hypothesis by determining if variations in attachment styles significantly impact the use of emotional regulation strategies. The power of this analysis, assuming a medium effect size (Cohen's $f = 0.25$), was calculated to be approximately 0.80.

Pearson correlation coefficients will be calculated to analyze the relationships between attachment anxiety, avoidance, and emotional regulation scores (both cognitive reappraisal and suppression) as well as the emotional responses measured in the Breakup-Specific Emotional Response Inventory, providing insights into how these variables interact and potential patterns that may manifest. This tests the hypothesis by identifying specific patterns of association regarding the interplay between attachment styles and emotional regulation.

Multiple regression analysis will be employed to predict emotional regulation strategies based on attachment styles while controlling for demographic variables (age, gender, etc.) and emotional quality (EQR), allowing for a clearer understanding of how attachment styles contribute to emotional regulation after accounting for potential confounding factors. This analysis tests the hypothesis that attachment styles would significantly predict emotional regulation strategies, even when accounting for other variables. Similarly, the power for this analysis was also estimated at 0.80.

3. General discussion

Restating the research question, this study aims to investigate the relationship between attachment styles (stimulus) and emotional regulation following a breakup, specifically investigating emotional responses and coping strategies used. These insights serve wide significance to the greater psychological community, allowing more comprehension in tailoring strategies to foster positive growth post breakup based on individuals attachment styles. Furthermore, this study can ameliorate existing stigma on emotional responses post dissolution, providing a more nuanced view into well-being.

Predicted findings would suggest that individuals with anxious attachment styles would exhibit higher levels of emotional distress and therefore more reliance on cognitive reappraisal; Avoidant attachment styles would show increased emotional numbness and thus an amplification in the preference for suppression strategies. Anxious individuals' heightened breakup distress will fully account for their greater personal growth, whereas avoidant individuals' lower breakup distress will result in lower personal growth[3]. Building on these findings, other studies anticipated that the heightened breakup distress in anxious individuals will lead to greater reliance on cognitive reappraisal as a coping strategy, while conversely, avoidant individuals, characterized by emotional detachment, would demonstrate a tendency to suppress emotions, potentially resulting in emotional numbness and less effective coping overall[3]. This is further demonstrated by another study, finding that anxious individuals may leverage adaptive strategies like positive reappraisal, while avoidant individuals often resort to less effective coping mechanisms[5].

Based on the evidence above, this study's Breakup-Specific Emotional Response Inventory will likely reveal anxiety attachment individuals with higher levels of emotional response in forms of distress (e.g., sadness, anger) and self-blame, while avoidance attachment individuals with emotional numbness. This will impact the ERQ results, with anxiety demonstrating more usage of cognitive reappraisal strategies, while avoidance will show higher uses of suppression strategies to numb emotional response.

Through neurobiology, three potential scientific reasonings that could elicit such responses from the participants are amygdala activity, cognitive regulation, and memory processing.

Firstly, research has denoted that anxious attachment style individuals show increased amygdala activation in response to emotionally charged stimuli. A study by Mikulincer et al. reveals that anxious individuals exhibit greater amygdala activity to images depicting societal rejection and loss, correlating with elevated distress levels. The increase in the level of stress accurately matches the depiction of the anxious attachment style, where individuals are perceived to be insecure; stemming from abandonment, mistrust, and low self-esteem, these are factors to why anxious individuals may evoke heightened emotional responses[6]. Conversely, avoidantly attached individuals often demonstrate reduced activation in areas associated with emotional processing, such as the anterior cingulate cortex (ACC). Through the study conducted by Buchheim et al. on attachment styles using fMRI scans, it evinced how avoidantly attached individuals show diminished ACC activation when recalling emotionally significant memories, contributing to their accentuated emotional numbness and defaulting to suppression strategies[7].

Secondly, cognitive reappraisal has also been verified by studies examining the prefrontal cortex. A meta-analysis conducted by Ochsner et al. demonstrated that engaging in cognitive reappraisal activates the prefrontal cortex, modulating emotional responses generated by the amygdala. This suggests that, through augmented clarity and logical thinking induced by the prefrontal cortex, one can change their thoughts to modify their response, ameliorating their emotional distress. Although this is not particularly evident in anxious individuals, it manifests a neurological system to how

cognitive reappraisal is elicited[8]. Contrarily, emotional suppression is associated with lower levels of activation in the prefrontal cortex, resulting in unexpressed emotional responses. Yet as Gross highlighted, it can still result in increased physiological stress responses and a lack of emotional clarity. This is evident in avoidant individuals, experiencing heightened physiological arousal (measured via cortisol levels) without the cognitive tools to process that arousal effectively, exacerbating emotional detachment and limiting their ability to engage with their emotions, thereby hindering effective coping mechanisms in the aftermath of a breakup[9].

Lastly, the hippocampus can also impact the rumination of previous emotional distress stemming from relationship dissolution. As shown from research by Ghasemi et al. and Lee et al., individuals with anxious attachment styles have a hyperactive hippocampus, leading to vivid recollections of past emotional distress. This not only increases emotional responses when faced with reminders of past relationships, but also fosters rumination and engagement with cognitive reappraisal strategies[10,11]. On the contrary, avoidant individuals may exhibit reduced hippocampal activation, as demonstrated by a study conducted by Mather & Carstensen, finding that avoidant individuals are less likely to recall emotionally salient details from past experiences. The poorer encoding and retrieval of emotionally distressing memories may highlight the emotional detachment avoidant individuals may feel, contributing to the reliance on suppression as a coping mechanism[12].

Therefore, In anxious individuals, the heightened emotional responses (e.g., sadness, anger, self-blame) can trigger a cascade of neural activity involving the amygdala and prefrontal cortex, leading them to actively engage in cognitive reappraisal as they process their distress. This engagement may manifest in their responses during the Breakup-Specific Emotional Response Inventory survey, reflecting greater emotional involvement and a tendency to frame their experiences in a way that promotes personal growth.

In avoidant individuals, the emotional numbness can stem from a pattern where the amygdala is activated in response to distressing memories but is countered by a lack of engagement from the PFC and ACC, resulting in the reliance on suppression strategies, leading to responses characterized by emotional detachment and diminished engagement with the survey items, thus reflecting a lower capacity for recognizing and articulating their emotional experiences.

While this study contributes knowledge to the field of psychology, it also has limitations: there may be inaccuracies in the data, as participants may not accurately reflect their state due to bias or untruthfulness, both consciously and unconsciously; the cross-sectional design limits the ability to draw general conclusions, as it captures a snapshot of experiences rather than changes over time; and the focus on a specific age range (18-39) and heterosexual orientation will restrict the generalizability of the findings to broader populations, such as elderly relationships, teen relationships, and homosexual relationships.

Moreover, the quality of the relationship also plays a big impact on the emotional response, so therefore to better understand the context of the breakup, some quality of relationship survey should be employed and used to help mitigate this limitation. For example, the Emotional Quality of the Relationship (EQR) scale could be employed, measuring 7 items scoring 1-4 points each, which composes a total composite score of between 7-28, as conducted in a similar trial by Kreuter M et al. [13]. Instead of measuring specific questions such as who initiated the breakup, time since the breakup, and the duration of the relationship, the study will utilize the ERQ scale to generalize and tailor the assessment of emotional involvement to each participant's unique experience, ensuring a nuanced understanding that is individualized to each unique relationship.

4. Conclusion

Søren Kierkegaard once said: "Life can only be understood backwards; but it must be lived forwards." Reflecting on the idea of understanding past experiences, it reflects the nature of humans and how it affects the way we act in the future. On the premise of this study, it manifests how, by choosing to reflect on past experiences, anxious individuals may perceive heightened levels of emotional distress due to the experience of emotional turmoil, which will cause their ability to live forwards - by utilizing more reliance on cognitive reappraisal strategies (turning negative thoughts into positive ones). On the contrary, avoidant individuals may perceive emotional numbness, which would manifest in the use of suppression strategies which, through empirical evidence, is understood as less effective as a coping mechanism.

References

- [1] Sbarra, D. A. , & Ferrer, E. (2006). The structure and process of emotional experience following nonmarital relationship dissolution: Dynamic factor analyses of love, anger, and sadness. *Emotion*, 6(2), 224–238. <https://doi.org/10.1037/1528-3542.6.2.224>
- [2] Boelen, P. A. , & Reijntjes, A. (2008). Negative cognitions in emotional problems following romantic relationship break-ups. *Stress and Health*, 25(1), 11–19. <https://doi.org/10.1002/smi.1219>
- [3] Marshall, T. C. , Bejanyan, K. , & Ferenczi, N. (2013). Attachment Styles and Personal Growth following Romantic Breakups: The Mediating Roles of Distress, Rumination, and Tendency to Rebound. *PLoS ONE*, 8(9), e75161. <https://doi.org/10.1371/journal.pone.0075161>
- [4] Davis, D. , Shaver, P. R. , & Vernon, M. L. (2003). Physical, Emotional, and Behavioral Reactions to Breaking Up: The Roles of Gender, Age, Emotional Involvement, and Attachment Style. *Personality and Social Psychology Bulletin*, 29(7), 871–884. <https://doi.org/10.1177/0146167203029007006>
- [5] Delgado, B. , Amor, P. J. , Domínguez-Sánchez, F. J. , & Holgado-Tello, F. P. (2023). Relationship between adult attachment and cognitive emotional regulation style in women and men. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-35250-0>
- [6] Mikulincer, M. , Shaver, P. R. , Gillath, O. , & Nitzberg, R. A. (2005). Attachment, Caregiving, and Altruism: Boosting Attachment Security Increases Compassion and Helping. *Journal of Personality and Social Psychology*, 89(5), 817–839. <https://doi.org/10.1037/0022-3514.89.5.817>
- [7] Buchheim, A. , Erk, S. , George, C. , Kächele, H. , Ruchow, M. , Spitzer, M. , Kircher, T. , & Walter, H. (2006). Measuring Attachment Representation in an fMRI Environment: A Pilot Study. *Psychopathology*, 39(3), 144–152. <https://doi.org/10.1159/000091800>
- [8] Ochsner, K. N. , Silvers, J. A. , & Buhle, J. T. (2012). Functional imaging studies of emotion regulation: a synthetic review and evolving model of the cognitive control of emotion. *Annals of the New York Academy of Sciences*, 1251(1). <https://doi.org/10.1111/j.1749-6632.2012.06751.x>
- [9] Gross, J. J. (1998). The Emerging Field of Emotion Regulation: An Integrative Review. *Review of General Psychology*, 2(3), 271–299. <https://doi.org/10.1037/1089-2680.2.3.271>
- [10] Ghasemi, M. , Navidhamidi, M. , Rezaei, F. , Azizikia, A. , & Mehranfar, N. (2021). Anxiety and hippocampal neuronal activity: Relationship and potential mechanisms. *Cognitive Affective & Behavioral Neuroscience*, 22(3), 431–449. <https://doi.org/10.3758/s13415-021-00973-y>
- [11] Lee, J. Q. , McHugh, R. , Morgan, E. , Sutherland, R. J. , & McDonald, R. J. (2022). Behaviour-driven Arc expression is greater in dorsal than ventral CA1 regardless of task or sex differences. *Behavioural Brain Research*, 423, 113790. <https://doi.org/10.1016/j.bbr.2022.113790>
- [12] Mather, M. , & Carstensen, L. L. (2005). Aging and motivated cognition: the positivity effect in attention and memory. *Trends in Cognitive Sciences*, 9(10), 496–502. <https://doi.org/10.1016/j.tics.2005.08.005>
- [13] Kreuter, M. , Sullivan, M. , & Siösteen, A. (1996). Sexual adjustment and quality of relationships in spinal paraplegia: A controlled study. *Archives of Physical Medicine and Rehabilitation*, 77(6), 541–548. [https://doi.org/10.1016/s0003-9993\(96\)90292-0](https://doi.org/10.1016/s0003-9993(96)90292-0)