

# Examining the Influence of Situational Factors on Reappraisal Efficiency in Adults: An Exploratory Study

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## ABSTRACT

Cognitive reappraisal is an adaptive emotion regulation strategy that involves altering the underlying appraisals that produce negative emotions. However, gaps remain in identifying its subtypes within a coherent theoretical model and in understanding how their association with negative emotional intensity varies by context. To address these issues, the reAppraisal model recently introduced two mechanisms: reconstrual and repurposing. This study examined how specific appraisal dimensions predict sadness and anxiety and how reconstrual and repurposing relate to these emotions under low and high perceived control. A total of 120 individuals (109 women) aged 18–30 ( $M=23.98$ ) were asked to recall sadness- and anxiety-related events and reported changes in their thinking from the time of the event to the present. Participants rated eight different emotions, appraisal dimensions, and perceived control. Regression analyses revealed that sadness and anxiety were associated with different appraisal dimensions. Repurposing was used more frequently for sadness and reconstrual for anxiety. Analysis of variance (ANOVA) revealed that reappraisal users reported lower distress than non-users ( $F [2, 92]=13.825$ ,  $p<0.001$ ,  $\eta^2=0.23$ ). However, no significant interactions were found between perceived control and reappraisal type ( $p>0.05$ ). This study improves our understanding of theory-based reappraisal strategies and suggests that their associations with emotional experience may vary across situational contexts.

**Keywords:** Appraisal, cognitive reappraisal, emotion regulation, situational factors

## ÖZ

### Yetişkinlerde Yeniden Yapılandırmanın Etkililiğini Belirleyen Durumsal Faktörler: Keşfedici Bir Çalışma

Bilişsel yeniden yapılandırma, olumsuz duyguların ortaya çıkmasına yol açan temel bilişsel değerlendirmelerin değiştirilmesini içeren, uyumlu bir duygu düzenleme (DD) stratejisi olarak kabul edilmektedir. Ancak, bu stratejinin alt türlerinin bütüncül bir kuramsal model içinde tanımlanmasına ve etkililiklerinin bağlama göre nasıl değiştiğinin anlaşılmasına ilişkin önemli boşluklar bulunmaktadır. Bu sorunları ele almak amacıyla geliştirilen reAppraisal modeli iki temel mekanizma önermiştir: Yeniden yapılandırma (reconstrual) ve yeniden amaçlandırma (repurposing). Bu çalışmada, belirli bilişsel değerlendirme boyutlarının üzüntü ve kaygıyı nasıl yordadığı ve yeniden yapılandırma ile yeniden amaçlandırmanın, algılanan kontrol düzeyine bağlı olarak bu duygularla nasıl ilişkilendiği incelendi. Yaşları 18 ile 30 arasında değişen ( $M=23.98$ ) 120 katılımcıdan (109'u kadın), üzüntü ve kaygı ile ilişkili geçmiş anılarını yazmaları ve olayın yaşandığı zamandan günümüze kadar düşüncelerinde meydana gelen değişimleri raporlamaları istendi. Katılımcılar sekiz farklı duyguyu, bilişsel değerlendirme boyutlarını ve algılanan kontrol düzeylerini derecelendirdi. Regresyon analizleri, üzüntü ve kaygının farklı bilişsel değerlendirme boyutlarıyla ilişkili



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olduğunu gösterdi. Yeniden amaçlandırmanın üzüntü için, yeniden yapılandırmanın ise kaygı için daha sık kullanıldığı tespit edildi. Varyans analizleri, bilişsel yeniden yapılandırma stratejilerini kullanan katılımcıların, kullanmayanlara kıyasla daha düşük düzeyde sıkıntı bildirdiklerini ortaya koydu ( $F [2, 92]=13.825$ ,  $p<0.001$ ,  $\eta^2=0.23$ ). Ancak, algılanan kontrol ile bilişsel yeniden yapılandırma türü arasındaki etkileşimler anlamlı bulunmadı ( $p_s>0.05$ ). Bu çalışma, kurama dayalı bilişsel yeniden yapılandırma stratejilerinin anlaşılmasına katkı sağlamakta ve bu stratejilerin duygusal deneyimlerle ilişkilerinin bağlamsal faktörlere bağlı olarak değişebileceğini düşündürmektedir.

**Anahtar Kelimeler:** Bilişsel değerlendirme, bilişsel yeniden yapılandırma, duygu düzenleme, durumsal faktörler

## INTRODUCTION

Emotions are central to personal and social functioning (Reeck et al., 2016). They emerge when individuals evaluate a situation as relevant to their goals, needs, and values (Frijda, 1986; Lazarus, 1991). For example, sadness may occur when a negative event is perceived as irreversible and highly relevant to one's goals, whereas anxiety may arise when a situation is perceived as uncertain, threatening, and uncontrollable (Smith & Ellsworth, 1985; Miceli & Castelfranchi, 2005). This evaluation process, referred to as appraisal, involves multiple dimensions, such as relevance to one's goals, congruence with goal pursuit, accountability attributed to self or others, certainty about future outcomes, and the ability to influence the situation (Moors et al., 2013; Scherer et al., 2001). Appraisal theories suggest that emotions emerge from the interaction of these distinct patterns of evaluations regarding specific situations (Roseman & Smith, 2001; Scherer et al., 2001; Smith & Lazarus, 1990). Therefore, examining appraisal patterns is essential for understanding emotional experiences and their regulation.

Emotion regulation (ER) refers to the processes by which individuals alter their emotional states in terms of type, duration, or intensity (Gross, 2001, 2014). Common ER strategies include suppression, distraction, cognitive reappraisal, and acceptance (Aldao et al., 2010). Among these strategies, cognitive reappraisal (CR), which refers to intentionally shifting how a situation is interpreted to change its emotional impact (Gross & John, 2003), has received extensive empirical and clinical attention (Aldao et al., 2010; Larionow et al., 2025). CR has been introduced as an integral part of several therapeutic approaches, such as cognitive behavioral therapy and metacognitive therapy (Beck & Dozois, 2011; Wells, 2011). Several empirical studies have provided evidence for the effectiveness of CR in reducing negative emotions and enhancing well-being across both non-clinical and clinical populations (Kam et al., 2024; Liu et al., 2019; Troy et al., 2013). Despite its wide use and demonstrated benefits in

practice and research, the broad use of the term "reappraisal" without a clear theoretical background makes it difficult to differentiate between specific CR tactics (Ehring & Woud, 2023). In the literature, reappraisal has been operationalized in several ways, including looking at a situation more positively (Lau & Tov, 2023), changing the personal relevance of a situation and one's subjective distance from it (Sun et al., 2022), distancing oneself from an emotional event through a non-observer perspective (Zhu et al., 2024), or modifying future consequences (Mcrae et al, 2012). The ability to compare the effectiveness of study findings is limited by this mixed reappraisal operationalization.

Uusberg et al. (2019) introduced the reappraisal framework to address these issues. Their model introduces two theoretically grounded reappraisal mechanisms: reconstrual and repurposing. Reconstrual refers to modifying a situation's mental representation, while repurposing involves modifying the situation's underlying goals or values. For example, reconstrual may involve reinterpreting an exam as a manageable challenge rather than an obstacle to success, whereas repurposing may involve shifting expectations from achieving high grades to doing one's best and accepting the experience as an opportunity for personal growth (Uusberg et al., 2023a). Therefore, reconstrual and repurposing may be useful depending on the specific characteristics of the situation. Empirical studies comparing these two strategies are very limited, and the available research that has directly examined them has failed to find significant differences regarding their effectiveness in decreasing negative and increasing positive emotional responses (Wang et al., 2025; Kam et al., 2024). However, these studies did not consider the situational factors that may influence the effectiveness of reconstrual and repurposing strategies.

The effectiveness of an ER strategy may vary across situations (Aldao et al, 2015; Kobylińska & Kusev, 2019), such as according to an individual's perceived control over the situation (Ford & Troy, 2019; Aldao, 2013). Several studies

have reported that reappraisal is linked to more positive outcomes when the situation is perceived as low in control (Haines et al., 2016). However, it can be maladaptive when faced with a controllable stressor that requires action (Troy et al., 2013). Therefore, the current study aims to examine how reconstrual and repurposing are associated with sadness and anxiety across different levels of perceived control. Furthermore, emotion type may be a factor influencing the selection of different reappraisal strategies and their associations with decreases in negative emotional intensity (Dixon-Gordon et al., 2015). Anxiety and sadness are distinct emotions in terms of both their appraisal dimensions and temporal orientation (Frijda et al., 1989; Pomerantz & Rose, 2014). Anxiety is primarily a future-oriented emotion linked to anticipated threat, whereas sadness indicates a past orientation related to irreversible loss (Eysenck & Fajkowska, 2017; Scherer et al., 2022). These differences in appraisal dimensions and temporal orientation may necessitate the use of distinct CR tactics.

The current exploratory study aimed to a) explore the individuals' strategic preference for reconstrual and repurposing in sadness and anxiety-related situations, b) examine the role of appraisal dimensions in determining the type of emotion experienced (sadness or anxiety), and c) explore whether reconstrual and repurposing are associated with differences in reported emotional intensity (sadness and anxiety) across levels of perceived control (low/high). We aim to understand how reconstrual and repurposing strategies relate to emotional experiences across different situations by examining these questions. First, based on appraisal theories, we expected anxiety to be associated with the appraisal dimensions of coping potential and incongruence, whereas sadness was expected to be linked to the dimensions of relevance and outlook valence. Second, we hypothesized that both reconstrual and repurposing would be associated with lower reported levels of sadness and anxiety compared to those who did not use any reappraisal strategy. Third, reconstrual was expected to be more strongly associated with lower negative emotional intensity in situations perceived as high in control. Modifying the interpretation can alter perceived risk and increase the sense of agency. In contrast, repurposing was expected to be more strongly associated with lower negative emotional intensity in situations perceived as low in control, such as sadness-inducing losses, because it shifts the focus from what cannot be changed to what can be learned or valued. Lastly, we aimed to explore individual preferences regarding strategy use in sadness and anxiety-inducing situations, although no prior hypotheses were developed for strategy selection due to limited prior research.

## METHODS

### Participants

A total of 120 university students (Mage=23.98 years, SD=3.05; female=109) provided memories of sadness via Qualtrics. The inclusion criteria required participants to be between 18 and 30 years of age. Participants who did not complete the primary study measures or failed attention checks were excluded. Participants who self-reported a current psychiatric diagnosis were excluded from the analyses. A subset of these participants (n=72) completed the anxiety memory procedure due to drop out. No significant differences in any of the variables were found between participants who continued and those who did not continue after the sadness task ( $p>0.05$  for all outcome variables).

### Measures

#### The Autobiographical Memory Test (Williams & Broadbent, 1986)

Participants were instructed to recall and describe a personal experience involving the cue emotion (sadness and anxiety) in as much detail as possible. The event was required to have a clear beginning and an end, to occur at a specific time and place, to involve the participants' direct experience or something they personally witnessed, and to have occurred more than one year ago (Campbell et al., 2011). This time frame was specifically chosen to ensure that participants had sufficient distance from the event, which allowed for natural reflection and meaning-making. With time, people usually reinterpret past experiences, which gives a chance to observe how initial appraisals evolved (Bachfischer & Harris, 2025).

#### Emotion Ratings

Participants rated the intensity of eight emotions (distress, anxiety, unhappiness, guilt, sadness, fear, anger, uneasiness, and shame) on a 1–5 Likert scale (1=not at all, 5=very much).

#### Appraisal Dimensions

Appraisals for each memory were assessed using a 10-item measure developed by Uusberg et al. (2023b). The measure focused on five main appraisals via 10 dimensions, such as relevance (this situation matters to me), congruence (this situation is potentially desirable for me), incongruence (this situation is potentially harmful to me), accountability by the self (I am responsible for this situation), accountability by others (someone else is responsible for this situation), accountability by none (no one in particular is responsible for this situation), outlook certainty (I do not know how this situation is going to turn out), situational coping potential (I can change this situation for better), emotional coping potential (I can accept whatever happens in this situation), outlook valence (this situation is going to turn out well in one

way or another). This measure was translated into Turkish for this study. The initial Turkish translation was reviewed by 10 psychology graduates fluent in both Turkish and English in terms of item clarity and linguistic equivalence between the Turkish and English versions.

### Reappraisal

Reappraisal was assessed via two open-ended questions requiring both past interpretation of the memory (Please write in detail what this event meant to you at the time you experienced it in the past and your thoughts about the event at that time) and current interpretation of the event (Please write in detail what this event means to you at this moment and your current thoughts about it). Participants' descriptions were coded as reconstruals if their current description reflected a change in their situational interpretation compared to their initial evaluation. They were coded as repurposing if they indicated a shift in their personal goals, priorities, or expectations. They were coded as no reappraisal if there was no change in thinking from the initial evaluation to the current interpretation. Coding was conducted in accordance with the reAppraisal framework by one of the authors based on the procedure outlined by Uusberg (A. Uusberg, personal communication, May 24, 2024).

### Perceived Control

Perceived control regarding the memories was measured using a single item (to what extent was this event you were able to control or alter?) rated on a scale from 0 to 100. Higher scores indicate higher perceived control.

### Trait Reappraisal and Suppression

We used the Turkish adaptation of the ER Questionnaire (Eldeleklioğlu & Eroğlu, 2015) originally developed by Gross and John (2003) to measure trait reappraisal and suppression. The questionnaire is a 10-item measure rated on a 7-point Likert scale (1=strongly disagree, 7=strongly agree) that assesses two ER strategies: CR (6 items) and expressive suppression (4 items). Higher scores indicate higher use of each strategy. Cronbach's alpha values for the reappraisal subscale were 0.78 and 0.73, respectively, for the suppression subscale. Test-retest reliability coefficients for the reappraisal subscale were 0.74 and 0.72 for the suppression subscale.

### Anxiety and Depression

We used the Turkish version of Patient Health Questionnaire-4 (PHQ-4, Demirci & Ekşi, 2018), which is a 4 item self-report measure consisting of two anxiety and two depression items rated on a 4-point scale (0–3). The internal consistency reliability coefficient was 0.83 for the overall scale 0.76 for the anxiety subscale, and 0.68 for the depression subscale. Higher scores indicate greater symptom severity.

### Ethical Approval

Ethical approval for the study was obtained from the Ibn Haldun University Ethics Committee for Social and Human Sciences (No: 2023/08-03; Date: 15.12.2023), and the study was conducted in accordance with the ethical principles of the Declaration of Helsinki.

### Procedure

Participants first completed the demographic questions. Then, the participants were instructed to recall and write two different memories that elicited feelings of sadness and anxiety, respectively. For each memory, they rated the emotional intensity of eight different emotions (troubled, anxious, unhappy, guilty, sad, scared, angry, uneasy, and ashamed) on a 1-point scale 5 Likert scale. The participants were asked to provide emotional ratings for their current emotional state (T2-Emotion) and at the time of the event (T1-Emotion). Then, the participants described how their interpretations of these events were at the time of the event and how their perspectives had changed since the time of the incident. The participants completed 10 items regarding their current appraisals of the memory in addition to rating their perceived control over each memory on a scale from 0 to 100. Finally, the participants completed the ER Questionnaire and Patient Health Questionnaire-4.

Before completing the measures, participants were informed about the general purpose and procedures of the study, and written informed consent was obtained to ensure voluntary participation. The study took 25 min on average via Qualtrics.

### Statistical Analysis

All statistical analyses were performed using the Statistical Package for the Social Sciences 25. Descriptive statistics were used to analyze the types of recalled memories and the distribution of reappraisal strategies. We performed linear regression analyses to examine the predictive roles of appraisal dimensions on current sadness and anxiety scores. Factorial analysis of variance (ANOVA) was conducted to examine the main effects of reappraisal type and perceived control on current emotion levels and their interaction effects. We categorized the perceived control ratings into high and low perceived control groups using a median split. Furthermore, an exploratory factor analysis was conducted to examine the empirical coherence of the theoretically defined appraisal dimensions in terms of appraisal measure. Factor loadings and theoretical interpretability were used to group items into preliminary composites (coping, external accountability, and threat/relevance). Internal consistency analyses were then performed for each composite. When the reliability estimates were below the acceptable thresholds (<0.70), the corresponding constructs

**Table 1.** Descriptive statistics by type of reappraisal

Group/emotion type	Age (M)	N	T1 emotion (M)	T2 emotion (M)	Perceived control (M)	Trait reappraisal (M)	Trait suppression (M)	Depression/anxiety (M)
No reappraisal (sadness)	24.09	43	4.95	4.21	18.44	24.85	11.75	4.64/5.03
Reconstrual (sadness)	23.95	22	4.73	2.68	28.50	26.72	13.88	4.11/4.44
Repurposing (sadness)	23.87	33	4.88	3.00	19.72	27.90	13.22	4.22/4.36
No reappraisal (anxiety)	23.21	19	4.95	3.00	37.15	10.31	11.78	4.57/4.89
Reconstrual (anxiety)	23.54	35	4.86	1.74	54.68	16.44	13.28	4.02/4.42
Repurposing (anxiety)	23.61	18	4.89	2.06	56.66	16.72	12.70	4.88/4.82

T1 emotion: Emotion rating at the time of incident; T2 emotion: Current emotion rating; N: number of participants.

**Table 2.** Themes by reappraisal type for sadness

Theme	No reappraisal (N)	Reconstrual (N)	Repurposing (N)	Total (N)
Death of a loved one	23	4	10	37
Friendship	3	4	5	12
Health-related	3	4	5	12
Family relationship	5	3	3	11
Romantic relationship	1	3	3	7
Failure (academic or occupational)	1	0	3	4
Seperation	2	1	1	4
Other/miscellaneous	5	3	3	11
Total	43	22	33	98

Other/miscellaneous: moving-related experiences, work-related stress, and physical violence.

were retained as single-item indicators rather than composite scales. Perceived control and self-accountability were analyzed as single-item variables in subsequent analyses.

## RESULTS

### Descriptive Statistics

Among the 120 participants who provided memories related to sadness, the death of a loved one was the most frequently reported theme, followed by interpersonal and health-related difficulties. Less frequent themes included failure, separation, and other miscellaneous events. Responses from 98 participants were coded into one of the predefined ER categories (reconstrual, repurposing, or no reappraisal). To ensure categorical clarity, participants whose responses reflected both reconstrual and repurposing were excluded from further analyses.

Among the 72 participants who provided memories about anxiety, exam-related stress was the most frequently reported theme, followed by broader academic, health-related, and situational stressors. The relationship-related and other less

frequent themes were also reported. For the reappraisal strategy classification, 72 participants were included in the final analysis. The Appendix presents descriptive statistics for thematic content.

For the reappraisal strategy usage for sadness memories, the participants most frequently used repurposing (33.7%,  $n=33$ ) or engaged in no reappraisal (43.9%,  $n=43$ ). Reconstrual was used by 22 (22.4%) participants. Reconstrual was the most frequently used strategy for anxiety memories (48.6%,  $n=35$ ). Repurposing was used by 24.9% of the participants ( $n=18$ ), whereas 26.4% ( $n=19$ ) reported no use of reappraisal (Table 1). The initial emotion ratings were consistently high for both sadness ( $M=4.88$ ,  $SD=0.10$ ) and anxiety ( $M=4.89$ ,  $SD=0.06$ ) (Appendix 1–3).

### Themes by Reappraisal

As shown in Table 2, autobiographical memories related to sadness among participants who used reconstrual or repurposing primarily involved experiences of losing a loved

**Table 3.** Themes by reappraisal type for anxiety

Theme	No reappraisal (N)	Reconstrual (N)	Repurposing (N)	Total (N)
Academic	5	20	10	35
Health-related	8	2	0	10
Romantic/social relationships	0	6	1	7
Environmental/situational	3	3	2	8
Financial	1	0	1	2
Family relationship	0	2	0	2
Work-related	1	1	2	4
Other/miscellaneous	1	1	2	4
Total	19	35	18	72

Academic issues: examination, presentation, study; Health-related issues: health, health of a loved one, personal health; Romantic/social relationships: arguing with romantic partner, friendship, marriage decision, inappropriate friendship; Environmental/situational stressors: being in crowded/dangerous place, being in public, going out alone, car travel, moving city, political instability, earthquake; Financial stressors: debt, house foreclosure; Other/miscellaneous: dog fear, missing pet, physical abuse.

**Table 4.** Linear regression results predicting sadness and anxiety levels from appraisal dimensions

Appraisal dimensions	Sadness				Anxiety			
	B (SE)	β	t	p	B (SE)	β	t	p
Relevance/threat	0.424 (0.20)	0.224	2.11	0.037	0.190 (0.13)	0.156	1.43	0.156
Self-accountability	-0.169(0.14)	-0.136	-1.14	0.255	0.309 (0.11)	0.335	2.77	0.007
External-accountability	-0.162 (0.11)	-0.151	-1.43	0.155	-0.260 (0.12)	-0.235	-2.08	0.041
Coping potential	-0.208 (0.15)	-0.136	-1.34	0.183	-0.304 (0.12)	-0.263	-2.47	0.016
Perceived control	-0.009 (0.006)	-0.165	-1.4	0.164	-0.021 (0.005)	-0.503	-4.01	<0.001
Model adjusted R <sup>2</sup>	<b>0.116</b>				<b>0.237</b>			

one or difficulties in close relationships. However, participants who did not report using any type of reappraisal mostly recalled loss-related memories.

As summarized in Table 3, anxiety-related memories differed across regulation strategies. Among participants who used reconstrual or repurposing, memories most often centered on academic demands and performance-related stressors. Conversely, participants who did not report using reappraisal were more likely to recall health-related concerns.

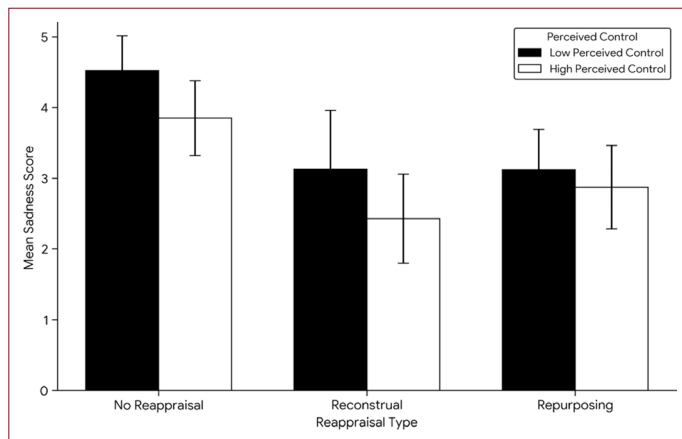
### Role of Appraisal Dimensions in Emotion Score Prediction

Two linear regression analyses were conducted to examine which appraisal dimensions were associated with sadness and anxiety intensity. In both analyses, a common set of theoretically relevant appraisal categories (coping, external accountability, threat/relevance, perceived controllability, and self-accountability) were used as predictors to ensure conceptual comparability across emotions.

The first regression predicting sadness was significant ( $p=0.005$ , adjusted  $R^2=0.161$ ), with relevance/threat emerging as the only significant predictor ( $p=0.037$ ). The model for anxiety was also significant ( $p<0.001$ , adjusted  $R^2=0.240$ ), with lower perceived control ( $p<0.001$ ) and coping ( $p=0.016$ ), lower external accountability ( $p=0.041$ ), and higher self-accountability ( $p=0.007$ ) significantly predicting anxiety (Table 4). Item-level linear regression analyses (i.e., analyses conducted using 10 single appraisal items and perceived control) are reported in the Appendix for transparency.

### Main and Interaction Effects on Emotion Levels

Two 3 (reappraisal type: no reappraisal, reconstrual, and repurposing) 2 (perceived control: high vs. low) factorial ANOVAs were conducted to examine the effects of reappraisal type and perceived control on current sadness and anxiety levels. There was a significant main effect of reappraisal type ( $F(2, 92)=13.825$ ,  $p<0.001$ ,  $\eta^2=0.23$ ) and Perceived Control



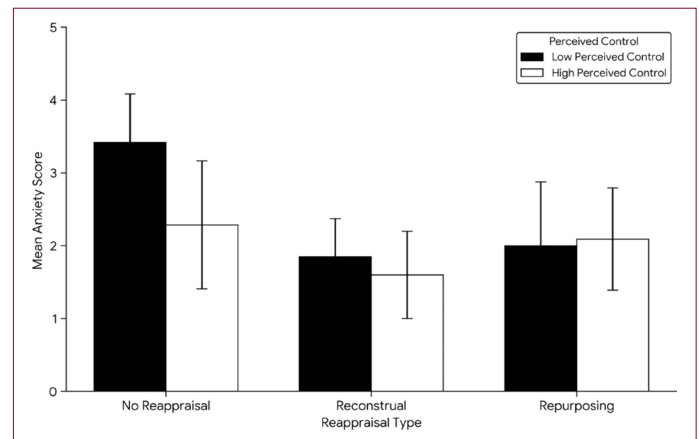
**Figure 1.** Sadness levels across types of reappraisal at low and high perceived control.

( $F(1, 92)=4.462, p=0.037, \eta^2=0.05$ ) for sadness. Post hoc analyses revealed that both the reconstruct and repurposing groups reported significantly lower levels of sadness than the no reappraisal group (Fig. 1). No significant difference was observed between the reconstruct and repurposing groups ( $p=1.00$ ). The interaction between the appraisal type and perceived control was not significant ( $F(2, 92)=0.366, p=0.694$ ).

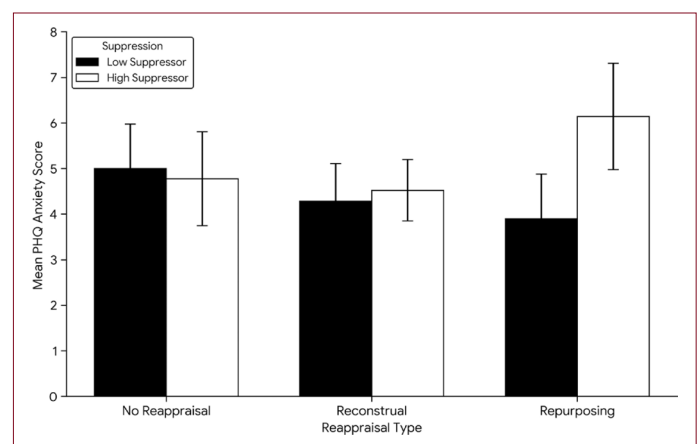
Significant main effects of reappraisal type ( $F(2, 66)=5.480, p=0.006, \eta^2=0.14$ ) on anxiety levels were found, whereas the main effect of perceived control was not significant ( $F(1,66)=2.131, p=0.149, \eta^2=0.031$ ). As shown in Figure 2, both the reconstruct and repurposing groups reported significantly lower anxiety levels than the no reappraisal group. No significant difference was found between the reconstruct and repurposing groups ( $p=1.00$ ), and the interaction between the appraisal type and perceived control was not significant ( $F(2, 66)=1.323, p=0.273, \eta^2=0.039$ ). Therefore, Figures 1 and 2 are presented only for descriptive purposes, showing the pattern of means across perceived control levels. Notably, higher perceived control was associated with lower sadness and anxiety levels, especially in the reconstructs condition, although this pattern was not statistically significant. Additional analyses using continuous perceived control yielded similar patterns.

### Additional Analysis

Research shows that habitual preferences for certain ER strategies may interact with ER strategies they use in specific situations and determine the success of these individual strategies (Ladis et al., 2022). Therefore, the use of reappraisal in the regulation of specific memories in the current study may differ for individuals with high and low trait suppression. Individuals who habitually suppress emotions often use



**Figure 2.** Anxiety levels across reappraisal types at perceived control levels of low and high.



**Figure 3.** PHQ-4 anxiety levels across reappraisal types at low and high levels of trait suppression.

cognitive strategies to keep emotions away rather than to process them (Che et al., 2015). Therefore, an exploratory 3 (reappraisal type) 2 (low trait suppression and high trait suppression) ANOVA was conducted to determine whether the effect of reappraisal type on anxiety scores differs depending on the individual's trait suppression level. The findings showed a significant interaction between trait suppression and reappraisal type on anxiety symptoms,  $F(2, 65)=3.22, p=0.046, \eta^2=0.09$ . As shown in Figure 3, among participants with low trait suppression, repurposing was linked to lower anxiety ( $M=3.90, SE=0.49$ ) compared with reconstruct ( $M=4.29, SE=0.41$ ) and no reappraisal ( $M=5.00, SE=0.49$ ). In contrast, repurposing was associated with the highest anxiety ( $M=6.14, SE=0.58$ ), higher than both reconstruct ( $M=4.52, SE=0.34$ ), and no reappraisal ( $M=4.78, SE=0.52$ ) among those with high levels of suppression.

## DISCUSSION

This study aimed to examine how situational and appraisal-based factors are associated with emotional experiences and how two reappraisal strategies (reconstruction and repurposing) relate to sadness and anxiety across different contexts. First, we explored whether reconstruction and repurposing strategies differed across sadness- and anxiety-inducing situations. Second, we tested the associations between sadness and anxiety and distinct appraisal dimensions by drawing on appraisal theories. Third, we examined whether reconstruction and repurposing were associated with lower levels of negative emotion compared with a no-reappraisal condition. Fourth, we investigated whether these associations varied with perceived control.

The descriptive results revealed a strategic preference pattern, with repurposing being used more frequently for sadness-related memories, while reconstruction was more frequently employed for anxiety-related memories. These findings align with those of (Rompilla et al., 2022; Vishkin et al., 2020), who suggested that sadness, often viewed as a past-oriented emotion linked to irreversible events and a loss of personal control (Frijda et al., 1989), may be associated with the use of acceptance-based strategies (David & Suls, 1999). Since repurposing involves aligning one's internal goals with the external world (Uusberg et al., 2023a), it may help individuals gain secondary control over the situation by adjusting their expectations and adapting to what cannot be changed (Rothbaum et al., 1982). Anxiety is a future-oriented emotion that may involve opportunities for change (Eysenck & Fajkowska, 2017). Therefore, reconstruction may allow individuals to regain a sense of control by modifying the perception of future threats and enhancing coping potential (Gallagher et al., 2014).

Partially supporting the second hypothesis, sadness was linked to a higher perceived importance of the situation. As expected, sadness is closely tied to perceived loss or unmet goals and desires that are personally meaningful to individuals. Previous research has also shown that sadness arises when people face situations that are significant for their goals but are perceived as unchangeable or inevitable (Frijda et al., 1989; Lazarus, 1991).

Another main finding of the current study revealed that anxiety was negatively associated with coping potential and perceived control. Previous research has also found that anxiety is characterized by a perceived threat to significant goals and a belief in insufficient resources to manage this threat (Britton et al., 2011; Chorpita & Barlow, 1998). This finding is also consistent with appraisal models in which perceived threat combined with low perceived coping ability increases anxiety (Chu et al., 2022).

Self-accountability was positively associated with anxiety in the current study, whereas accountability by others was negatively associated with anxiety. This pattern aligns with the findings of Avard and Garratt-Reed (2021), who showed that inflated responsibility beliefs, particularly the belief that one is personally responsible for preventing negative outcomes, are strong predictors of GAD but less strongly associated with depressive symptoms. These results suggest that individuals who perceive themselves as highly responsible for potential threats are more likely to experience anxiety. Conversely, when responsibility is attributed to others, individuals may feel less personal pressure, which may be linked to lower anxiety levels.

Consistent with our expectations, we found that both reconstruction and repurposing strategies were significantly associated with lower levels of sadness and anxiety compared with no reappraisal, supporting the general adaptive quality of CR as an ER strategy (Dawel et al., 2024). However, no significant differences were found between reconstruction and repurposing strategies in decreasing negative emotions. The lack of difference between the two strategies is in line with the limited number of existing studies and earlier studies that reported mixed results on the distinctiveness of reappraisal and acceptance-based strategies (Hofmann et al., 2009; Wolgast et al., 2011). Although theoretically distinct, these two strategies may overlap or produce similar effects in various situations (Wang et al., 2025) because both strategies may help individuals decrease the intensity of negative emotions, whether by reinterpreting meaning or by modifying expectations or goals.

Although we hypothesized that associations between reappraisal type and negative emotional intensity would vary as a function of perceived control, no significant interaction was found between reappraisal type and perceived control. The lack of a significant finding may be related to certain methodological issues, such as the reliance on retrospective reports of perceived control over the situation. Moreover, the use of a single item for assessing perceived control may have influenced the results, reducing the sensitivity to find subtle effects.

Even though the interaction was not significant, we noticed a trend indicating that reconstruction may be linked to relatively lower levels of sadness and anxiety than repurposing for situations perceived as high in control. Although this argument should be evaluated cautiously, when individuals feel a sense of control over a situation, strategies that aim to change the interpretation of the situation may be more contextually appropriate or associated with more favorable emotional outcomes. Conversely, strategies involving acceptance, such as repurposing, might be better suited for situations perceived as less controllable, consistent with prior work (Troy et al., 2018). This finding might highlight the importance of matching ER strategies to the perceived control context.

Additionally, the exploratory analysis results revealed that participants who were higher in trait suppression reported higher anxiety scores when using repurposing compared with those who used no reappraisal or reconstrual. This is in line with research showing that people with high suppression scores tend to experience difficulty in recruiting cognitive resources for reappraisal, thus reducing negative affect through CR is harder for them (Che et al., 2015). However, only repurposing, not reconstrual was linked to higher levels of anxiety in the current study. This finding can be explained based on the association of trait suppression with emotional processing problems, such as emotional experience avoidance and reduced emotional clarity, in addition to inauthenticity (John & Gross, 2004; English & John, 2013). Repurposing (e.g., “That’s how the world works,” “I learned from this experience,” and “It is normal to experience such things”), when used as purely cognitive acceptance without experiential contact with emotions (Chawla & Ostafin, 2007) may not be sufficient to reduce negative emotions and may even maintain anxiety (Wang et al., 2024).

This study contributes to the literature by examining two distinct theoretically grounded reappraisal subtypes rather than treating CR as a unitary construct. The findings revealed the role of specific appraisal dimensions in shaping emotional experience and strategy choice. Although this exploratory study offers useful insights, several limitations may constrain the strength and generalizability of the findings. Relying on retrospective memory recall may introduce biases in the reporting and evaluation of events. Future research could benefit from the use of experience sampling methods to capture real-time emotional experiences and strategies for ER. Second, because the current study focused only on two emotions, future studies should examine other emotions, such as guilt, to gain a more comprehensive understanding of emotional differences. Third, the sample size was relatively small and included a non-clinical group, which may limit the generalizability of the findings. Future studies should aim for larger and more diverse samples to enhance the results’ external validity. In addition, although we identified a trend regarding perceived control and reconstrual, the interaction was not statistically significant. Perceived control was measured using a single self-report item in our study. Although this approach limits statistical power, it also raises concerns regarding construct validity. Future research would benefit from employing a multi-item and validated measure of perceived control, alongside larger sample sizes to allow for a more reliable examination of these interactions. Furthermore, the absence of a formally reported inter-rater reliability statistic limits the ability to fully quantify agreement in coding decisions. Additionally, the sample’s gender imbalance (predominantly female) limits the generalizability of the findings, the cross-

sectional and retrospective design precludes any causal inferences, and the exclusion of participants who reported using both strategies may oversimplify real-world ER processes and reduce ecological validity and sample size.

Conducting studies that combine both reconstrual and repurposing strategies, or even developing a new category that integrates both, could provide deeper insights into their combined effects on ER. Future work should also examine how reconstrual and repurposing function differently for people who tend to suppress their emotions. Reconstrual is about changing how we see the situation so that it fits our expectations, while repurposing includes adjusting our expectations or goals to fit what is actually happening. Since repurposing requires more emotional openness and a willingness to rethink one’s goals, it may be especially challenging for high suppressors, who often avoid emotional experiences. Studies using longitudinal or daily life methods could test whether high suppressors consistently struggle with repurposing and whether this difficulty contributes to their higher anxiety. Moreover, it is important to examine the interaction of reappraisal tactics with other ER strategies to better understand their effects on anxiety and depression (McMahon & Naragon-Gainey, 2018) and develop ways to assess whether reappraisal is genuine or more of a surface level. Without making this distinction, the real cognitive change may be confused with strategies that simply avoid emotion.

## CONCLUSION

Overall, these findings suggest that both sadness and anxiety are linked to specific appraisals, and targeting emotion-specific appraisals via reappraisal may be relevant in understanding differences in negative emotional intensity. Reappraisal as a single, uniform process may obscure important differences in the way people manage these emotions. By separating reconstrual and repurposing, this study showed that these strategies may have potential differences in how they relate to emotional experiences depending on other situational and individual factors. For clinicians, considering certain factors, such as perceived control or habitual suppression, when using these strategies may help identify appropriate reappraisal interventions for individuals.

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

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**Appendix 1.** Descriptive statistics for emotions across time points (T1 and T2)

Emotion	Sadness memories T1	Anxiety memories T1	Sadness memories T2	Anxiety memories T2
	(SD)	(SD)	(SD)	(SD)
Distress	4.47 (0.97)	4.83 (0.48)	2.63 (1.24)	2.44 (1.29)
Anxiety	4.20 (1.20)	4.89 (0.32)	2.01 (1.17)	2.15 (1.27)
Unhappiness	4.64 (0.81)	3.86 (1.26)	3.12 (1.47)	2.07 (1.37)
Guilt	2.59 (1.54)	2.68 (1.59)	1.65 (1.19)	1.76 (1.17)
Sadness	4.76 (0.74)	3.72 (1.48)	3.42 (1.38)	2.17 (1.33)
Fear	3.14 (1.67)	3.85 (1.43)	1.45 (0.92)	1.68 (1.19)
Anger	2.82 (1.65)	2.75 (1.62)	1.93 (1.38)	1.82 (1.24)
Uneasiness	3.47 (1.50)	4.56 (0.73)	1.60 (1.00)	1.86 (1.27)
Shame	1.91 (1.40)	2.25 (1.59)	1.26 (0.73)	1.43 (0.78)

**Appendix 2.** Descriptive statistics for themes in sadness and anxiety-related memories

Emotion	Theme	n	%	Emotion	Theme	n	%
Sadness	Death of a loved one	46	38.3	Anxiety	Exam-related stress	22	30.6
	Friendship difficulties	16	13.3		Academic issues	13	18.1
	Health-related issues	13	10.8		Health-related issues	10	13.9
	Family relationship difficulties	12	10.0		Environmental/situational stressors	8	11.1
	Romantic relationship difficulties	10	8.3		Romantic/social relationship issues	7	9.7
	Failure	7	5.8		Work-related issues	4	5.6
	Separation	4	3.3		Other	4	5.6
	Other	12	10.0		Financial stressors	2	2.8
Total	120	100	Family relationship difficulties	2	2.8		
			Total	72	100		

Percentages are calculated within each emotion category (Sadness: N=120; Anxiety: N=72).

**Appendix 3.** Linear regression results predicting sadness and anxiety scores from item-level appraisal dimensions

Appraisal dimensions	Sadness				Anxiety			
	B (SE)	$\beta$	t	p	B (SE)	$\beta$	t	p
Relevance	0.229 (0.13)	0.182	1.71	0.091 <sup>†</sup>	-0.127 (0.12)	-0.125	-1.06	0.290
Congruency	0.129 (0.23)	0.057	0.56	0.574	0.037 (0.12)	0.036	0.31	0.759
Incongruency	0.107 (0.19)	0.114	1.12	0.266	0.203 (0.094)	0.250	2.16	0.035*
Self-accountability	-0.085 (0.14)	-0.069	-0.6	0.548	0.317 (0.11)	0.344	2.88	0.005*
Other accountability	-0.047 (0.11)	-0.055	-0.4	0.660	-0.326 (0.11)	-0.369	-2.91	0.005*
No accountability	-0.122 (0.11)	-0.136	-1.1	0.280	-0.178 (0.10)	-0.196	-1.68	0.097
Outlook certainty	0.088 (0.096)	0.092	0.92	0.360	0.133 (0.11)	0.136	1.21	0.230
Situational coping potential	-0.134 (0.11)	-0.143	-1.2	0.218	0.029 (0.12)	0.032	0.24	0.811
Emotional coping potential	0.223 (0.11)	0.206	2.01	0.048*	-0.307 (0.13)	-0.323	-2.33	0.023*
Outlook valence	-0.325 (0.11)	-0.294	-2.9	0.004*	-0.005 (0.11)	-0.005	-0.05	0.964
Perceived control	-0.007 (0.006)	-0.128	-1.1	0.287	-0.023 (0.005)	-0.548	-4.52	<0.001*
Model adjusted R <sup>2</sup>		<b>0.163</b>				<b>0.329</b>		

Model fit: Sadness – F(11, 88)=2.75, p=0.004, R<sup>2</sup>=0.256; Anxiety – F(11, 60)=4.16, p<0.001, R<sup>2</sup>=0.433. \*p<0.05, †p<0.1.