

**Words of the Past Reflect Present Well-Being:
Effects of Depression, Life Satisfaction, Cognitive Bias, and Time on Redemptive Identity**

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Abstract

Our narrative identity consists of our life stories, how we describe them, and what they mean about us. Narrative identity studies analyze interpretations of subjective life events and mental health trajectories. Redemption, a subcategory of narrative identity, explores interpretations of significant negative life events as producing either a positive outcome (i.e., redemptive) or only negative outcomes (i.e., non-redemptive). Previous research correlated redemptive interpretations to fewer depressive symptoms and greater life satisfaction, but existing literature has not yet examined redemption's relationship with cognitive bias or time since a negative life event. This study assessed the predictive power of depression, life satisfaction, interpretation bias, and temporal distance on participants' level of redemption in a narrative about a negative life event. Participants were 95 English-fluent adult U.S. residents using an online data collection platform. Life satisfaction was a significant predictor of redemption, but depression, interpretation bias, and temporal distance were not. Our results may indicate that how we view our present life relates to how we interpret our past. This study strengthens existing literature describing strong relationships between life satisfaction and redemption and encourages further study of the effects of interpretation bias and temporal distance on redemption.

Keywords: redemption, depression, life satisfaction, interpretation bias, time

Effects of Redemptive Identity on Depression, Life Satisfaction, Cognitive Bias, and Time

Our life stories reflect our lived experiences and interpretations of those experiences. The narrative identity we create for ourselves follows this story, allowing us to make meaning and find purpose in life (McAdams, 2001; Singer & Blagov, 2004). In studying narrative identity, we analyze past events to explain present well-being and predict its future trajectory. Redemption narratives are one way to categorize the evaluation people make of significant negative events (i.e., low point events) from the past in their lives. When one views a low point as producing *only* negative outcomes, one has a non-redemptive story. Alternatively, if one views a low point as having *any* positive outcome, or a silver lining, one has a redemptive arc to their story (McAdams, 1999).

Narrative identity and redemption research largely investigate redemption in relation to well-being factors, such as depression and life satisfaction (Corcoran & Alea, 2021; McAdams et al., 2001). This study aims to strengthen redemption research by additionally studying interpretation bias and temporal distance since the event. Interpretation bias refers to a positive, neutral, or negative valence to interpretation on ambiguous stimuli (Murphy et al., 2009). Analyzing it in relation to redemptive identity reflects if interpretations of the past mirror those of the present. Additionally, analyzing temporal distance with redemptive identity tells us if redemption can improve, worsen, or stagnate based on how long ago a low point occurred. By analyzing how multiple factors are impacted by redemptive identity, we may be better equipped to understand how redemption can influence our past, present, and future identity.

We will investigate redemption in relation to depressive symptoms, life satisfaction, interpretation bias, age, and temporal distance since a negative life event. We hypothesize that participants with redemptive narratives will have significantly lower depressive symptoms,

higher life satisfaction, and higher positive interpretation bias, and higher temporal distance since event compared to those with non-redemptive narratives.

Narrative Identity and Redemption

Narrative identity is not simply a life history. Instead, narrative identity is an individual's evolving narrative of the self that follows changing motivation, purpose, and meaning in one's life (McAdams, 2001). Just like narratives in books and movies, our life stories are constructed by characters, settings, and themes. Different people may interpret the same story differently. In other words, we make choices from available alternatives in our life history to construct our life story (Rosenthal, 1993; Spector-Mersel, 2011).

Life stories have been collected for research using a variety of methods. However, the common approach has been to ask people to recall personal stories and meanings they have derived from life events. Therefore, narrative questions investigate the explicit and implicit content of stories, looking both at the content of the event and how it is interpreted (Adler et al., 2017). By analyzing various narrative identity research methods, Adler et al. (2017) noted that narrative identity examinations reveal the extent to which participants feel that their lives are meaningful. Additionally, reflecting on past life events allows participants to demonstrate and develop meaning in their lives (Adler et al., 2017).

Redemption is a subsection of narrative identity. Adler et al. (2016) classified narrative variables related to psychological well-being into four categories: motivational themes, affective themes, themes of integrating meaning, and structural aspects of narratives. Redemption is a subcategory under affective themes (Adler et al., 2017; McAdams & McLean, 2013). As a characteristic of being in the affective themes category, redemption describes emotional

experiences, which have been analyzed in relation to a variety of well-being outcomes (see Adler et al., 2016 for a review of redemption-related well-being outcomes).

Redemption focuses on the valanced transition from negative to positive and lack thereof in reflections of significant negative life events. Someone with a redemptive narrative perceives an emotionally negative circumstance as having negative outcomes but also as leading to an emotionally positive outcome (McAdams & McLean, 2013). In contrast, someone with a non-redemptive narrative does not perceive this latter silver-lining. To constitute a redemptive narrative, a positive interpretation of a negative experience (e.g., grief, failure, discrimination) would need to alter oneself (e.g., resilience), one's relationships (e.g., deepened connections), or one's life philosophy (e.g., new sense of purpose) (Josselson & Lieblich, 1999; McAdams & McLean, 2013).

Redemption, Well-Being, and other Clinical Outcomes

In its simplest form, creating a redemptive narrative is a two-step process: First, an individual thoroughly explores a negative life event, analyzing its origins, what led up to the event, how the experience felt, and how the event may impact one's overall life story; second, the individual articulates and commits to a positive mental representation of the event (McAdams & McLean, 2013; Pals, 2006). In doing so, one may dedicate themselves to patterns of thinking that produce better mental health outcomes.

Redemption is correlated with less negative affect, fewer depression symptoms, greater psychological adjustment, and more meaning in life among early and midlife adults (Corcoran & Alea, 2021), cancer patients (Wollman & Felton, 1983), stroke victims (Thompson, 1991), infertile women (Tennen, Affleck, & Mendola, 1991), parents of children with Down Syndrome (King et al., 2000), and recovering alcoholics (Dunlop & Tracy, 2013). The results support that

greater well-being can be found across diverse populations who find positive outcomes in negative life events.

Since its conceptualization (McAdams, 1985), redemption and its correlative well-being outcomes have been an subject of scientific inquiry. For example, researchers used redemption to understand stories of 9/11 attacks and their impact (Adler & Poulin, 2009). They found themes of nation-wide redemptive narratives were positively associated with well-being, even after controlling for age, gender, ethnicity, education, income level, and pre-9/11 psychological distress. Additionally, redemption has been positively correlated with hedonic well-being and life satisfaction, controlling for gender and race (McAdams et al., 2001); eudaimonic well-being for early adult low-point narratives (McLean & Lilgendahl, 2008); and life satisfaction, self-esteem, sense of life coherence, and low depressive symptoms for midlife adults (McAdams et al., 2001).

Change over Time and Age

Narrative identity research focuses on meaning-making to predict future well-being across the lifespan. This has been investigated at ages ranging from adolescence to midlife adulthood. McLean & Pratt (2006) found that advanced identity development (i.e., self-conceptualization of one's beliefs and values) during adolescence resulted in greater meaning-making during early adulthood. The study reaffirmed that meaning-making was positively associated with redemption. In other words, those who attempted to make meaning of their lives had more redemptive narratives.

Early adulthood is an important period for identity and redemption development. Booker et al. (2021) recruited undergraduate students to describe a significant negative life event and coded their responses for redemptive agency (i.e., a redemptive arc in the motivation to

accomplish goals). Narratives with identity exploration during negative life events were positively associated with redemptive agency. This agency also correlated with higher student identity development and subjective well-being (Booker et al., 2021). This research suggests that emerging adulthood and maturity increase redemption formation.

Meaning-making can be predictive of mental health outcomes in early and midlife adults. In adults, narratives that show positive meaning-making in high and low life points predict positive emotional regulation two years later. In the same study, non-redemptive narratives predict negative emotion regulation (Cox & McAdams, 2014). General life change across transformative periods of early adulthood may lead to increased redemption, as redemptive stories are observed to increase throughout college (Dunlop et al., 2016).

Older and younger adults have different relationships with redemption and well-being. McLean and Lilgendahl (2008) had older (ages 59 – 83) and younger (ages 17 – 34) adults describe a low point and complete a psychological well-being scale. Among those with redemptive narratives, younger adults had higher well-being scores than older adults. Interestingly, older adults largely described the death of loved ones during low point narratives, the majority of which were non-redemptive. McLean and Lilgendahl (2008) suggest that older adults may resist redemption in favor to preserve stability in later life. However, the authors did not collect data regarding the time that had passed since the described negative event. Since older populations are more likely to experience deaths of loved ones, they may have been more likely to describe recent negative life events. Considering these limitations, it remains possible that more life experiences would render older populations capable of greater redemption when viewing temporally distant events.

Research has yet to explore redemption in relation to temporal distance from a negative life event and well-being. We lack understanding on redemption across age groups since either redemption or temporal distance from a negative life event are not measured. This study will provide insight on how age and temporal distance may impact the development of redemption.

Redemption and Interpretation Bias

Cognitive bias is a systematic error in thinking, reflecting a person's subjective construction of reality as they interpret information. Interpretation bias, a type of cognitive bias, is the tendency to analyze ambiguous information in a particular way. In this study, we measure positive and negative bias. For example, if participants typically interpret ambiguous statements (e.g., "You are starting a new job that you very much want. You think about what it will be like.") in a positive way, they have a positive interpretation bias (Murphy et al., 2009).

According to Aaron Beck's cognitive model of depression, depressed individuals maintain their depression through systematic biases in their processing of information (Beck, 1987). They tend to have greater awareness for and attend to negative stimuli than non-depressed individuals, leading to more negative perceptions of their environment and mental state (Disner et al., 2011).

While there is ample literature on relationships between cognitive bias and well-being, research has yet to examine the relationship between cognitive bias and redemption (see Disner et al., 2011 for a review on depression and cognitive bias). This is surprising considering 1) the emphasis on interpretation and bias on life narratives in narrative identity research and 2) the existence of interdisciplinary research drawing from clinical and cognitive models. This study will be the first to analyze possible relationships between interpretation bias and redemption.

Conclusions

Redemptive narratives are associated with lower depressive symptoms and greater life satisfaction (McAdams et al., 2001). However, redemption has not been measured in relation to cognitive bias or temporal distance. This study aimed to fill these gaps in the literature by recruiting diverse age groups, capturing redemptive and non-redemptive low-point narratives, collecting temporal distance data, and measuring interpretation bias. By analyzing well-being measures, cognitive bias, and temporal data, we created a more holistic understanding of redemptive identity, an emerging field of study within narrative identity. This study described below analyzed the effects of redemptive identity on depression, life satisfaction, interpretation, and temporal distance since the event.

Methods

Study Overview

This study examined the relationship between redemption and depression (Patient Health Questionnaire-8), life satisfaction (Satisfaction with Life Scale), interpretation bias (Ambiguous Scenarios Test-Depression), and time (temporal distance since the event). Redemption was captured using a modified question from the Life Story Interview-II, a methodological approach to collecting personal narratives, and measured using the Coding Narrative Accounts of Autobiographical Scenes for Redemption Sequences, a coding scheme for low-point narratives. Participants were 95 English-fluent adults residing in the U.S. We predicted that redemption would have a negative relationship with depression and a positive relationship with life satisfaction, positive interpretation bias, and temporal distance.

Participants

This study collected data from 100 participants who were adult U.S. residents and English literate. Recruitment took place on Prolific, a research platform that allows vetted participants to complete studies (www.prolific.com). Participants were paid \$1.70 per every 10 minutes for a rate of \$10.20 per hour.

A power analysis on G*Power indicated that a minimum of 89 participant data sets must be analyzed for a 0.95 power and 0.85 effect size for a linear model with three independent variables (e.g., depression, life satisfaction, interpretation bias) (Faul et al., 2007; Faul et al., 2009). This study collected more than the minimum sample in order to account for unusable data.

Participants (n=5) were excluded from data analysis if they did not provide sufficient responses or failed the attention check, which requested participants to select a specific answer

choice. Of the included participants (n=95), 72.6% were heterosexual, 61.1% were Caucasian white, and 46.9% were male (see Table 1). The average age was 36.6 years (SD = 12.3).

Table 1

Demographics Across Redemption Scores

	Score 0	Score 1	Score 2	Score 3	Total
Total Participants	53	26	13	3	95
Gender Identity					
Male	28	11	5	2	46
Female	24	13	7	1	45
Non-Binary	0	1	1	0	2
Transgender Male	1	1	0	0	2
Sexuality					
Straight	39	19	8	3	69
Bisexual	8	3	2	0	13
Gay	2	2	1	0	5
Asexual	2	0	1	0	3
Pansexual	2	1	0	0	3
Queer	0	0	1	0	1
Lesbian	0	0	1	0	1
Race					
Caucasian White	35	13	7	3	58
Black	6	2	1	0	9
Biracial	3	4	1	0	8

Table 1 cont.

	Score 1	Score 2	Score 3	Score 4	Total
Southeast Asian	2	1	0	0	3
East Asian	1	3	1	0	5
Non-Caucasian White	2	1	2	0	5
Middle Eastern/ North African	1	0	0	0	1
American Indian	0	1	0	0	1
Ethnicity					
Non-Hispanic	45	23	12	3	83
Hispanic	8	3	1	0	12

Note. All biracial participants selected both Caucasian White and Black.

Materials and Measures

The Life Story Interview

The Life Story Interview (LSI) was developed to understand whether and how people make sense of their lives (McAdams, 2008). It consists of 22 narrative questions and asks participants to describe key scenes in their lives: high point, low point, turning points, positive childhood memory, negative childhood memory, vivid adult memory, spiritual experience, and wisdom event. Participants are further asked to imagine the future chapters of their lives, specific challenges, personal ideology, and a general life theme. In this study, redemption was measured by modifying the low-point question from the LSI.

As previous studies have, we used the low point question to measure redemption (Cox & McAdams, 2014; Dunlop et al., 2016; Alea, 2017). We modified the question to fit the context of the study:

“Thinking back over your entire life, please identify a moment that stands out as a low point, if not the lowest point in your life. What happened in the event, where and when, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment was so bad and what the scene may say about you or your life.”

Pertinent parts of the instructions were bolded or underlined (see Appendix).

The LSI is considered the gold standard for narrative collection that produces extensive narrative data (Adler et al., 2015). We chose the LSI because the nature of these prompts yields lengthy responses, producing sufficient data even in studies with small sample sizes (Lilgendahl & McAdams, 2011). We recommended participants to type at least seven sentences, but there was no minimum requirement. Responses with four or fewer sentences were deemed insufficient and excluded from data analysis.

Coding Narrative Accounts of Autobiographical Scenes for Redemption Sequences

Created in tandem with the LSI, the Coding Narrative Accounts of Autobiographical Scenes for Redemption Sequences is used to code responses about a significant life event for redemption (McAdams, 1999). Redemption is coded based on the presence of a shift from a negative event to positive outcomes indicating redemption in the narrative. The absence of this shift (i.e., non-redemption) yields a score of 0, and the presence (i.e., redemption) starts at 1. A redemptive narrative may also indicate enhanced agency (i.e., enhancement of one’s personal power or insights into personal identity), enhanced communion (i.e., enhancement of one’s relationships of love, friendship, family, etc.), or ultimate concerns (i.e., change in fundamental existential issues). For each additional factor a redemptive participant indicates, the overall

redemption score increases by 1 for a maximum of 4 points. We analyzed overall redemption scores (e.g., scores 1 - 4).

Patient Health Questionnaire-8

The Patient Health Questionnaire-8 (PHQ-8) is a brief questionnaire that allows adults to self-report depressive symptoms (Kroenke et al., 2009). The PHQ-8 is an adapted version of the PHQ-9 (Kroenke et al., 2001). The PHQ-8 omits a question about suicidal ideation. The eight items of the PHQ-8 ask about the frequency of depressive symptoms over the past two weeks (e.g., little pleasure in doing things, sleeping issues). Each answer is coded on a scale from 0 (Not at all) to 3 (Nearly every day). The overall PHQ-8 score is a summation of each item's score. Higher scores indicate greater depression symptoms and severity. The PHQ-8 has high internal consistency (Cronbach's alpha = 0.83), convergent validity with other depression measures, and discriminatory validity (Kroenke et al., 2009; Levis et al., 2019). Overall PHQ-8 scores (scores 0 – 24) was used in data analysis.

Satisfaction with Life Scale

The Satisfaction with Life Scale (SWLS) is a five-item inventory that assesses one's overall satisfaction with life (Diener et al., 1985). Participants rate their agreement with statements (e.g. "The conditions of my life are excellent") on a Likert scale from 1 (strongly disagree) to 7 (strongly agree). The overall SWLS is the summation of each item's score. Higher scores indicate greater life satisfaction. The PHQ-8 has high internal consistency (Cronbach's alpha = 0.87) and convergent validity with other life satisfaction scales (Hills & Argyle, 2002; Pavot & Diener, 1993). Overall SWSL scores (scores 5 – 35) were used in data analysis.

Ambiguous Scenarios Test

The Ambiguous Scenarios Test for Depression (AST-D) was developed to measure cognitive bias in depressed adults (Murphy et al., 2009). The 24-item test consists of short ambiguous scenarios (e.g., “It’s New Year ’s Eve. You think about the year ahead of you.”). Participants are asked to form a mental image of each scenario and follow the image that comes to mind. Answer choices vary based on the intent of the study. Since we intend to identify positive and negative interpretation bias, the current study will ask participants to rate how pleasant their mental image is using a 7-point Likert scale from -3 (Extremely unpleasant) to +3 (Extremely pleasant), with a middle rating of 0 (Neither unpleasant or pleasant). This scale is adapted from a 9-point pleasantness Likert scale (Murphy et al., 2009). All item scores are summed to yield a score from -72 to +72. Negative scores indicate negative interpretation bias, a score of 0 indicates no interpretation bias, and a positive score indicates a positive interpretation bias.

Since the AST-D answer choices differ based on the objective of the study, there are no reviews validating the reliability of the AST-D pleasantness scale. However, the AST-D with pleasantness ratings has good validity in distinguishing participants with and without depression (Berna et al., 2011).

Procedures

Consenting participants were given a demographics questionnaire to identify gender identity, sexual orientation, race, ethnicity, religion, religiosity, and age. They then completed the PHQ-8 to measure depressive symptoms and the SWLS to measure subjective life satisfaction. Following this, participants completed the AST-D to measure interpretation bias. An

attention check was built into the middle of this task by instructing participants to select a specific answer for the item.

Lastly, participants were asked to describe a negative life event and indicate how long ago the event took place in years and months. Participants were encouraged to type at least seven sentences. In order to encourage detailed responses, participants were required to stay on this page for a minimum of four minutes, and a timer counted down the time. Participants could continue to the next part of the survey after the timer ran out.

Participants were asked to provide any study feedback, comments, or concerns if they had any. Upon submitting the survey, participants were given a thank-you page with a study completion code, which they submitted to us to confirm survey completion.

Statistical Analysis

Following an assumptions test, a multiple linear regression analysis was used to assess relationships between independent variables depression, life satisfaction, interpretation bias, and temporal distance and dependent variable redemption. This method was used to test the relationship between multiple independent variables and one dependent variable. We wanted to assess how redemption changed as the independent variables did. Additionally, all independent variables were continuous.

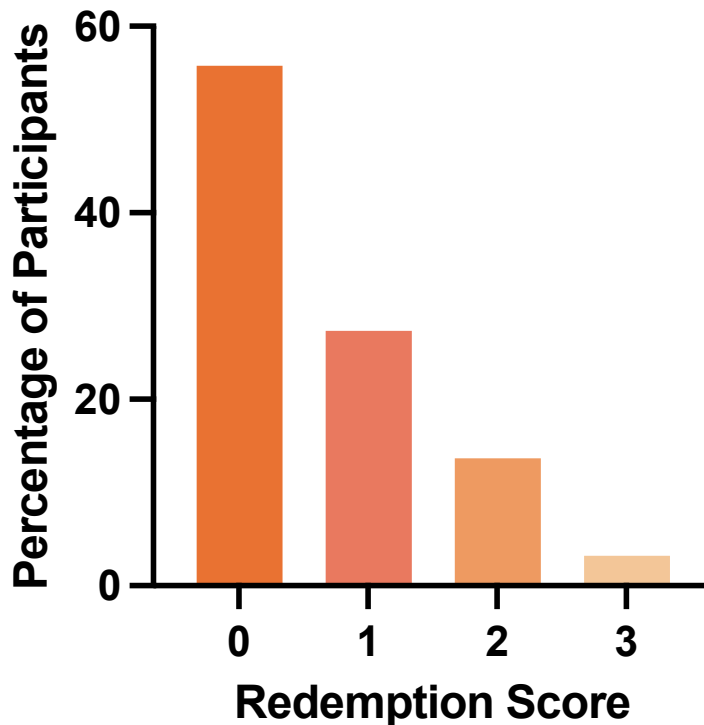
Results

Distribution of Redemption

The higher the redemption score, the fewer participants fell into those categories. This pattern was expected, as non-redemption is more common than redemption in general populations (McAdams et al., 2001).

Figure 1.

Participants Per Redemption Score



Note. The majority of participants ($N = 53$) had a redemption of 0.

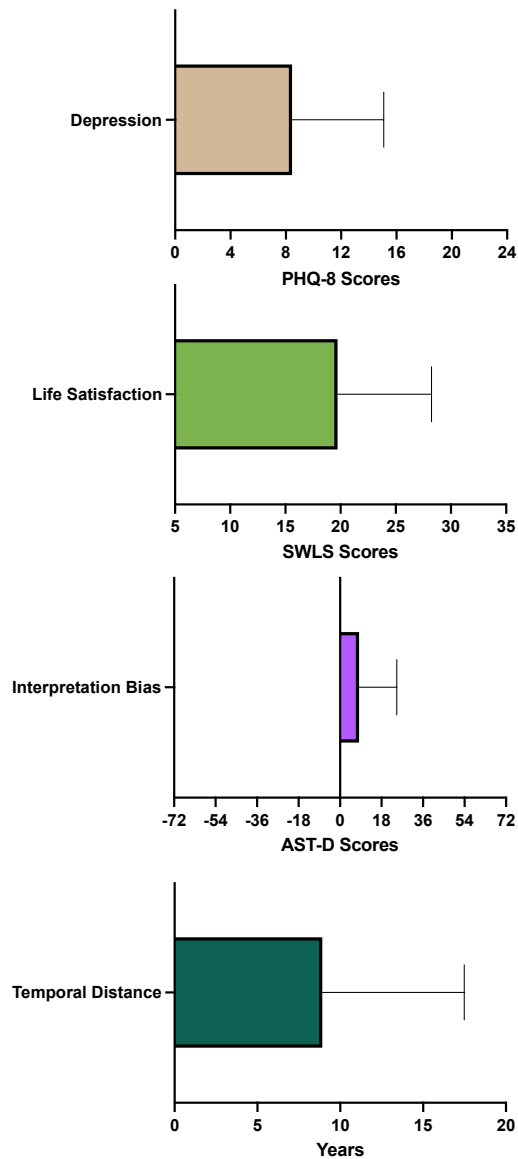
As such, 55.8% of participants scored a 0 redemption score, 27.4% scored 1, 13.7% scored 2, and 3.2% scored 3 (see Figure 1). Of the total participants ($N = 95$), none scored 4, the highest redemption possible.

Distribution of Independent Variables

Across all participants, distributions of depression ($M = 8.46$, $SD = 6.62$), life satisfaction ($M = 19.73$, $SD = 8.51$), interpretation bias ($M = 8.25$, $SD = 16.36$), and temporal distance ($M = 8.92$, $SD = 8.57$) were assessed using box plots (see Figure 2).

Figure 2.

Distribution of Independent Variables



Note. Distribution of each independent variable scores: depression, life satisfaction, interpretation bias, and temporal distance. The y axes for depression, life satisfaction, and interpretation bias graphs represent the range of possible scores per measure.

Participant scores varied from the lower and higher ranges of the PHQ-8 and SWLW respectively. Participants largely had positive interpretation bias, as opposed to neutral or negative bias. Temporal distance distribution also varied from 0 to upwards of 20 years.

Effects of Independent Variables on Redemption

After an assumptions test, a multiple linear regression analysis was used to predict redemption from depression, life satisfaction, interpretation bias, and temporal distance. Because temporal distance varied a great deal, age was also a factor of interest and included in the analysis. This resulted in an insignificant model, $F(5,89) = 1.797$, $p = 0.1215$, $R^2 = 0.6718$.

Table 2.

Multiple Linear Regression Analysis

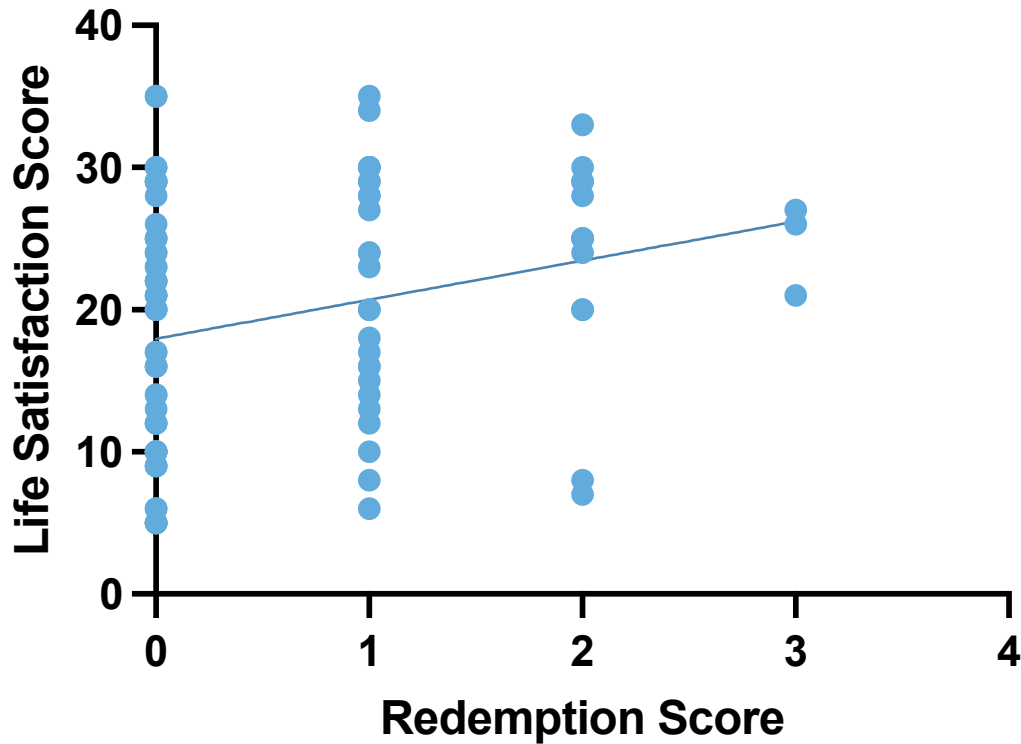
Effect	Estimate	SE	95% CI		p
			LL	UL	
Intercept	0.2695	0.4955	-0.7150	1.254	0.5879
Depression	0.006799	0.01826	-0.02948	0.04307	0.7105
Life Satisfaction	0.03143	0.01440	0.002815	0.06005	0.0317*
Interpretation Bias	-0.0007913	0.005972	-0.01266	0.01108	0.8949
Temporal Distance	-0.003191	0.01078	-0.02461	0.01822	0.7679
Age	-0.007376	0.007450	-0.02218	0.07426	0.3248

Note. CI = confidence interval, LL = lower limit, UL = upper limit. * = statistically significant.

The analysis indicated that life satisfaction ($t = 2.182, p < 0.05$) was a significant predictor, but depression ($t = 0.3724, p = 0.7105$), interpretation bias ($t = 0.1325, p = 0.8949$), temporal distance ($t = 0.2960, p = 0.7679$), and age ($t = 0.9901, p = 0.3258$) were not (see Table 2).

Figure 3

Simple Linear Regression of Redemption and Life Satisfaction



Note. Individual points represent each participant and their corresponding redemption and life satisfaction score.

A simple linear regression indicates that a higher life satisfaction score predicted a higher redemption score (see Figure 3).

Discussion

In this study, life satisfaction predicted redemption such that increasing life satisfaction scores had a statistically significant effect on increasing redemption scores. In contrast, depression, interpretation bias, and temporal distance since a negative life event did not predict redemption.

Distribution of Variables

The majority of participants (N = 53) provided non-redemptive narratives (see Figure 1). This finding is consistent with redemption literature finding that people tend to be non-redemptive than redemptive (McAdams et al., 2001). Participants had redemption scores of 1, 2, and 3. Despite no participants scoring a 4, there were enough participants in the redemptive scoring range to pass an assumptions test and complete statistical testing.

Participants scores varied across the depression and life satisfaction measures, with participants in the low, medium, and high score ranges. Additionally, participants had an approximately two decades-long range in temporal distance. Participants largely had more positive interpretation bias than negative.

Effects on Redemption

Our hypothesis was partially supported by the study results. Contrary to our hypotheses, depression, interpretation bias, and temporal distance did not predict redemption. However, life satisfaction was a statistically significant predictor of redemption.

Depression scores have been found to have a negative relationship with redemption scores (Dunlop & Tracy, 2013). We suspect that not assessing current or past depression diagnoses in participants contributed to this study not finding an existing relationship. Additionally, it may be that depression controlling for life satisfaction does not yield a pattern in

redemption, which depression and redemption research largely doesn't control for (Corcoran & Alea, 2021; Dunlop & Tracy, 2013; Thompson, 1991; Wollman & Felton, 1983). A replication of this study should consider isolating depressed and non-depressed participants to assess differences in redemption patterns. It may be that individuals with depression may have a stronger negative relationship with redemption, as seen in Dunlop & Tracy (2013), than non-clinical individuals. However, it's also possible that there exists no relationship. Depression creates negative perceptions of environmental stimuli, and this effect may only exist strongly for the present and not at all for past (Disner et al., 2011).

Life satisfaction has been found to have a positive relationship with redemption, and this study strengthens this body of literature (McAdams et al., 2001). When people can positively frame their present state, they can project that same optimism onto perceptions of the past. In other words: When we are satiated with our current state, considering all the good and the bad, we can reanalyze past trauma, no matter how bad, as contributing to our present contentment. This doesn't necessarily mean that negative life events produced life lessons that grandly influenced us to the point of current life satisfaction; it may mean that we carry our satisfaction and optimism across time. Additionally, in reverse, a worsening outlook on life status can deepen negativity for past trauma. Life satisfaction does not indicate a life wealthy in money or relationships but, instead, wealthy in appreciation and gratitude. Thus, people understand that negative life experiences, while traumatizing at the time, compromised a previous chapter in their life story that led to a currently satisfying one.

While this study does not examine change in redemption, life satisfaction predicting redemption supports the idea that by actively reframing negative life experiences in the present, we may develop redemption for the past. The reverse may also be true. Retrospectively

understanding that negative life experiences led to a positive result may encourage people to believe that current unfortunate circumstances will eventually yield fortunate results.

Literature shows that younger adults are prone to having redemptive narratives after turning points, while older adults tend to have non-redemptive narratives (Dunlop et al., 2016; McLean & Lilgendahl, 2008). This study was the first to compare temporal distance, instead of age, and redemption. While no statistically significant results were found, we predict that more participants across age groups are needed to better study time and redemption. For example, a future replication can consider having a consistent number of participants within young, middle-aged, and older adults.

This study was also the first to study the effect of interpretation bias on redemption, and there was no statistically significant effect. This may be due to the lack of range in the interpretation bias measure, as most participants reported positive bias. This is interesting because most participants also provided non-redemptive narratives. If there exists no relationship, interpreting ambiguous stimuli may not indicate a specific pattern with interpreting negative past experiences. However, we see that depressed individuals maintain depression through cognitive biases that cast negative perceptions onto the past, current, and future (Disner et al., 2011). The current investigation did not capture mental health diagnosis, so it is possible that a combination of depressed and non-depressed participants skewed the results. Considering the differences in cognitive biases in clinical and non-clinical populations, we predict that future studies may find that depressed participants will have negative interpretation bias that will project onto their reflections of past traumatic events, predicting low redemption scores. We encourage further inquiry into the relationship between interpretation bias and redemption.

Limitations

Most of our limitations are in data collection. We analyzed data from 95 English-fluent adult U.S. residents. While gender identity, sexuality, and ethnicity distributions were largely representative of the U.S. population, the race distribution were not (see Table 1). The majority of our sample was Caucasian white ($N = 58$). A lack of racial diversity coupled with a small sample size may inform variable distributions. Additionally, we did not have data on if our participants had any past or current mental health diagnoses.

Our data collection took place online, while the Life Story Interview is intended to be administered in person (McAdams, 2008). A virtual modality could increase malingering in the narrative collection part of the survey. Additionally, narrative length varied greatly, ranging from the minimum five sentences to 23 sentences. Participants who provided more detail may have increased their chances of collecting redemption points, boosting their score in comparison to those who perhaps had a higher degree of redemption but were not scored as such because of short narratives. In-person interviewing may encourage participants to elaborate on their negative past experiences, especially since people can generally communicate more information by speaking than by typing in the same time period.

While an in-person modality is recommended, future replications should consider the comfortability of the participants. Confidentiality was emphasized in this study's Prolific advertising, consent form, and instructions for the low point narrative. Additionally, participants may feel more secure explaining traumatic events via a screen than in front of an unknown person. Rapport must be developed in-person to encourage vulnerability in a study that requests recalling trauma. However, once trust and confidentiality processes are established, we predict that in-person interviewing will yield more elaborate narratives and higher redemption scores.

Conclusion

This study supported previous literature that found that people tend to be non-redemptive. Additionally, life satisfaction and redemption have a positive relationship. A statistically significant interaction was not found with depression, which is in contrast to previous research, and this could be attributed to study limitations. No effects were found with interpretation bias and temporal distance on redemption. Since this was the first study to study these two variables, we encourage further investigation. Future replication studies should consider increasing sample size and diversity, having large and similar participant numbers within age groups, isolating participants with and without mental health diagnoses, and administering the Life Story Interview in-person.

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Appendix

The following question was adapted from the Life Story Interview:

“Thinking back on your entire life, please identify a moment that stands out as a low point, if not **the lowest point of your life.**

What happened in the event, where and when, who was involved, and what were you thinking and feeling?

Also, please say a word or two about why you think this particular moment was so bad and what the scene may say about you or your life.

Please try to write 8+ sentences in your response.

This form is completely **anonymous**, and your information will be kept confidential.”