Fall 2018

Capitalizing on Positive Emotional Experiences: A Gratitude Intervention as an Emotional Uplift Strategy

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CAPITALIZING ON POSITIVE EMOTIONAL EXPERIENCES: A GRATITUDE

INTERVENTION AS AN EMOTIONAL UPLIFT STRATEGY

by

AMANDA L. WALKER

(Under the Direction of Jeff Klibert)

ABSTRACT

Positive psychological interventions are well suited to build upon positive experiences to enhance positive affect and coping resources; however, experimental research is limited, especially regarding if and how gratitude practices can bolster positive affect and coping resources. As a result, the purpose of the current research was to determine (a) if self-reports of gratitude traits vary by important demographic categories (i.e., gender, ethnicity, socioeconomic status, rural status), (b) if gratitude interventions elevate reports of positive affect after accounting for the effects of positive memory recall, and (c) if gratitude interventions contribute to greater elevations on coping resources (i.e., resilience, coping self-efficacy) after accounting for the effects of positive memory recall. The study was completed in two phases with samples of university students. Results indicated significant gender and socioeconomic status (SES) differences on gratitude. Specifically, women reported higher gratitude traits compared to men and participants who described their SES as "high" reported greater levels of gratitude traits compared to participants who described their SES as "low." Results also revealed a significant time x memory recall interaction effect, where individuals who participated in the positive memory recall group reported substantially higher scores on positive affect compared to individuals in the memory control group. However, a non-significant memory recall X gratitude intervention X time effect was revealed, which suggests participating in the gratitude intervention did not contribute to any additive effects on positive affect after accounting for the effects of memory recall. In terms of resilience, individuals who participated in the positive memory recall group reported substantially higher scores on resilience compared to individuals in the memory control group. However, results revealed a non-significant gratitude main effect and a non-significant memory recall X intervention interaction effect. Only non-significant effects were revealed for coping self-efficacy. Overall, these results suggest individuals who participated in the positive memory recall task received a subsequent boost in positive affect and resilience. However, participation in a gratitude intervention did not generate any additive benefits to positive psychological resources. Such findings represent a significant extension to research on memory recall and offer some direction for future research for gratitude interventions as a mechanism to bolster positive psychological resources.

Keywords: Positive Memory Recall, Gratitude Interventions, Resilience, Coping Self-Efficacy, Positive Affect

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B.S., Georgia Southern University, 2013

M.S., Georgia Southern University, 2016

A Dissertation Proposed to the Graduate Faculty of Georgia Southern University in Partial

Fulfillment of the Requirements for the Degree

DOCTOR OF PSYCHOLOGY

STATESBORO, GEORGIA

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Electronic Version Approved:

December 2018

ACKNOWLEDGEMENTS

I attribute much of my success of the completion of my dissertation to the many individuals who were there for me along the way and who continue to support me.

First, I would like to thank my dissertation chair, Dr. Jeff Klibert, for his influence on my passion for Positive Psychology and his encouragement to pursue my scholarly interests. I also thank him for the significant amount of time he devoted to help me during all of the stages of this process; from the early stages of brainstorming the specifics of my dissertation, to providing timely, critical feedback on my writing, I express my deepest gratitude to his support and his dedication to help his students excel. I am also thankful for my committee members, Drs. Thresa Yancey and Nick Holtzman, who are also both my previous professors from undergraduate and graduate school. I'm grateful to have such respected professors who go above and beyond to help students meet their individual needs. Thank you for your contribution of thoughts, time, and revisions that allowed me to feel confident in the process of this dissertation.

I would also like to thank my cohort members, Kathleen May, Elisabeth Scott, Riley Benko, Lauren Lachica-Muschett, and Arthur Hatton, as they have been a huge part of my life within the past 4 years. I am grateful that I was able to be part of such a supportive cohort who never hesitates to offer their help in any way they can. I feel very lucky to not only have this group of individuals as peers, but also as some of my best friends. Thank you for your support, whether it was through consultation, helping to running participants in the lab, or providing me with stress relief during difficult times, you have helped me throughout this process more than you know.

Lastly, I want to thank my loving family, Sheila Walker, Eric Walker, Joshua Walker, Brittany Hanberry, Brad Hanberry, and Ella Hanberry. I am beyond grateful to have a family who stand behind me in everything I do. Mom and dad, thank you for always pushing me to do my best and motivating me to pursue my passion. While each of you did not contribute directly to this dissertation, you have all contributed to my success by providing me with the utmost support.

TABLE OF CONTENTS

CHAPTER

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Positive Psychology. Prior to World War II, the main purpose behind psychological

interventions was to alleviate distress by focusing on individual deficits, damage, and negative

attributes (Seligman & Csikszentmihalyi, 2000). After World War II, soldiers returned home

with various psychological problems, difficulties associated with reintegrating into civilian life,

as well as disruptions in family life due to stress and hardship (Magyar-Moe, 2009). This societal

shift resulted in a transformation of psychologists' perspectives to not only alleviate distress, but

bolster optimal human functioning by utilizing personal strengths and virtues as a buffer against

adversity. This shift of focus led to the realization that psychologists are well-informed regarding

how individuals break down under adverse conditions, but little is known about how individuals

flourish in the face of adversity and challenge (Seligman & Csikszentmihalyi, 2000). Whether an

individual is experiencing or free from psychopathology, positive psychological interventions

aim to help individuals cultivate and solidify resources as a means to achieve a higher quality of

life.

Currently, there is a wide assortment of positive psychological interventions aimed to

increase positive emotions (Sergeant & Mongrain, 2015). An emerging group of these

interventions focus on eliciting feelings of gratefulness, conscious efforts to attend to positive

aspects of life experiences and evoke thankfulness, appreciation, and elevated levels of

happiness. However, there are significant gaps in the literature regarding how these interventions

can be employed to mindfully enhance positive emotions and contribute to the development of

positive psychological outcomes, like resilience and coping self-efficacy.

Gratitude. Gratitude is typically recognized as exhibiting positive feelings of appreciation

and returning of kindness to another person (Emmons & McCullough, 2004). Generally when

gratitude is expressed to another person, the receiving person experiences elevated mood, specifically joy and pride from receiving recognition and acknowledgment. However, gratitude does not only benefit the receiving person. Instead the literature suggests there are intrapersonal benefits from being grateful. For instance, individuals who express gratitude are less unhappy and more unconditionally accepting, not only in their own eyes, but in the eyes of others as well (Tugade, Shiota, & Kirby, 2014). In addition, grateful individuals tend to experience positive emotions more frequently, enjoy greater satisfaction with life, and experience less depression and anxiety (Linley & Joseph, 2004). Research also suggests expressing gratitude toward others is linked to an increased ability to form and maintain social relationships (Algoe, Haidt, & Gable, 2008).

Gratitude is a multidimensional construct (Davis et al., 2016). Specifically, the expression of gratitude can manifest itself in different contexts and expressions. Most commonly, theorists contend gratitude is expressed toward other people; however, it can be expressed toward non-human stimuli as well. For instance, one can express consideration, appreciation, and thankfulness toward non-human resources, situations, and experiences helping an individual overcome a challenge to achieve a goal. According to Emmons and McCulloch (2003), expressing gratitude in any medium or context can lead to several psychological benefits including increased positive affect, energy, enthusiasm, and attentiveness. The benefits of gratitude appear consistent across various age groups including children, adolescents, and older adults (Tugade, Shiota, & Kirby, 2014).

Gratitude and Demographic/Cultural Groups. To a preliminary extent, research acknowledges the potential for different expressions of gratitude across unique cultural, developmental, and demographic groups. For instance, Tugade, Shiota, and Kirby (2014) posit

the expression of gratitude may depend on individual and cultural differences, such as one's ability to attend to and modify their experience in different situations as a means to control their emotional responses. Importantly, research continues to highlight the importance of demographic (Ritschel, Tone, Schoemann, & Lim, 2015), developmental (Blair et al., 2015), and cultural group (Matsumoto, Yoo, & Nakagawa, 2008) statuses in predicting variation in emotional regulation tactics. As a result, gender, socioeconomic status (SES), ethnicity, and rural status may be important contexts to understand the expression of gratitude.

Only a handful of studies have examined demographic and cultural variation in reports of gratitude. Boehm, Lyubomirsky, and Sheldon (2011) found participants' cultural background influences the effects of a gratitude exercise on well-being, which suggests different ethnic and racial groups may engage in grateful behavior and express grateful sentiments at different rates. Other research focuses on the disposition of gratitude across gender and suggests women are more likely than men to experience and express gratitude, as well as reap the benefits from gratitude (Kashdan, Mishra, Breen, & Froh, 2009). However, there are no known studies outlining whether or not gratitude traits vary by SES and/or rural status.

Determining whether or not gratitude traits are expressed differentially among diverse demographic and cultural groups can yield several benefits. For instance, unearthing variations in gratitude expressions among different subpopulations of people can help clinicians cultivate more in-depth and holistic case conceptualizations and treatment plans. For example, it is possible certain ethnic groups may rely more heavily on gratitude as a natural means of bolstering healthy interpersonal relationships. Armed with this knowledge, clinicians will be able to tailor and effectively employ treatment plans to ensure clients are able to activate and utilize gratitude to enhance relationship formation and maintenance. Overall, studies explicating

differences in gratitude traits and behaviors among differing demographic and cultural groups are needed.

Gratitude and Emotional Enhancement. Although gratitude appears to be an important correlate to a number of well-being and social competence outcomes, there is a scarcity of theoretical and empirical studies outlining the function of gratitude in reducing psychological distress and enhancing positive affect. Gratitude may be uniquely important in elucidating the process of how positive emotions are enhanced. According to the Broaden and Build Model (Fredrickson, 2004), the experience of positive emotions is not sufficient to bring about positive outcomes (e.g., well-being, resilience, life satisfaction) directly. Instead, positive affect needs to be reinforced by mindful and celebratory tactics to expedite the development of key positive psychological outcomes. It is possible gratitude-based interventions are important in explaining the connection between positive emotions and the development of positive outcomes. However, few researchers have examined gratitude-based intervention in this context. The current study is the first to consider a gratitude-based interventions as a viable mechanism to broaden and build upon the experience of positive emotions as a means to increase coping resources, like resilience and coping self-efficacy.

Purpose

The purpose of this study was to fill gaps within the positive psychology literature. My aim was to examine the contexts by which the field of applied psychology can employ gratitude-based interventions. Considering this overarching goal, this study examined the following questions:

a) Do self-reports of gratitude traits vary by important demographic categories (i.e., gender, ethnicity, socioeconomic status, rural status)?

b) Do gratitude interventions elevate reports of positive affect after positive memory recall?

c) Do gratitude-based interventions contribute to greater elevations on coping resources (i.e., resilience, coping self-efficacy) after accounting for positive memory recall?

Significance

The existing literature examines gratitude exclusively from an emotion-based standpoint. Research has yet to examine how gratitude can bolster positive emotions in a way that increases greater development in positive psychological functioning. The goal of the current study was to augment how theorists conceptualize gratitude and gratitude-based interventions. For instance, this study aimed to highlight the supportive and enhancing qualities of gratitude interventions in bringing about resilience and coping self-efficacy.

In addition, the current study holds promise in explicating how traditional approaches to therapy can be extended in a way that will bring about more holistic and positive change. Traditional therapy techniques are typically implemented according to the client's symptomology and dysfunctional thought patterns and behaviors (Seligman & Csikszentmihalyi, 2000). In other words, interventions are focused on client barriers and personal deficits. Treatment along these lines may help clients stabilize but does not offer much in the way to help clients flourish. Essentially, gratitude-based interventions may help clients expedite symptom remission and decrease future relapse. The current study may offer some unique insights into how clinicians can supplement traditional therapy techniques to promote more holistic and long-lasting mental health.

Definition of Terms

The current study examined the benefits of a gratitude intervention in the context of a memory recall task – achieving a personally meaningful accomplishment. All participants were randomly assigned to one of two memory recall groups – either the positive or neutral memory recall. The participants in each group were asked to engage in a memory recall task. Memory recall status served as an independent variable.

1. **Positive Memory Recall:** Participants in the positive memory recall task identified various accomplishments they have achieved within the past two to three years. The participants then chose one particular accomplishment and described their journey in completing their goal through a narrative-based exercise. The positive memory recall task was designed to activate different dimensions of positive affect.

2. **Neutral Memory Recall:** The neutral memory recall task was designed as a control task. Participants in the neutral memory recall task identified various neutral memories from the past two to three years. Neutral memories were described as memories not eliciting an overly positive or overly negative emotion. The participants then chose the memory eliciting the least amount of emotions and described the memory through a narrative-based exercise.

Once participants completed the memory recall task, they were randomly assigned to one of two intervention/control conditions. Condition status served as an independent variable.

1. **Emotional Uplift:** Participants assigned to the Emotional Uplift group engaged in a gratitude-based intervention intended to maintain/enhance positive affect. Participants

spent 15 minutes on an activity that involved identifying and mindfully attending to life components for which participants are thankful. After the activity, the participants were asked follow-up questions to further extend gratefulness in an active and mindful way.

2. **True Control:** Participants sat quietly for 15 minutes after completing the Positive Memory Recall Task. To ensure this condition was a true control, participants did not have access to their cell phones or any other instruments that could distract them during this time period.

Overall, there were three dependent variables associated with the implemented experimental design. These variables are inter-related, yet conceptualized as different facets of flourishing.

1. **Positive Affect:** Positive affect refers to a state in which one experiences emotions characterized by high energy, full concentration, and pleasurable engagement (Watson, Clark, & Tellegen, 1988). Some emotions underlying positive affect include joy, pleasure, contentment, and tranquility (Russell & Carroll, 1999). Research suggests positive affect is associated with resources and characteristics that parallel success and thriving, including confidence, optimism, self-efficacy, flexibility, and altruism (Lyubomirsky, King, & Diener, 2005). In the current study, it was expected the Positive Memory Recall Task would generate an elevation in the participants' mood. To ensure the task produced the expected outcome, a mood measure was administered as a manipulation check before and after the memory recall task. In addition, it was expected the gratitude intervention would increase positive affect further.

2. **Resilience:** Resilience is defined as a persistent force to help individuals overcome adversity and disruption (Richardson, 2002). Individuals who are resilient tend to have an optimistic view of life, are able to handle unpleasant emotions, and are able to adapt to life circumstances (Campbell-Sills & Stein, 2007). These behaviors of resilience were measured by a questionnaire (Campbell-Sills & Stein, 2007).

3. **Coping Self-Efficacy:** Coping self-efficacy refers to one's perceived ability to cope with life's challenges (Chesney et al., 2006). Individuals who achieve high levels of coping self-efficacy exhibit an ability to think objectively, obtain social support, and respond adaptively when faced with hardship, rather than experience unsuitable thoughts and behaviors (Chesney et al., 2006). In the current study, coping self-efficacy was measured after the study by use of a questionnaire (Chesney et al., 2006).

CHAPTER 2: LITERATURE REVIEW

Positive psychological interventions aim to activate positive emotions by focusing on individuals' personal strengths, which are defined as characteristics promoting well-being and success (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). A study conducted by Wood et al., (2011) reveals participants who reported greater use of their personal strengths show greater levels of well-being over time. There are several additional forms of positive psychological interventions designed to activate positive emotions and increase coping resources. Such interventions involve identifying positive aspects of an experience, reflecting on positive attributes of oneself, and valuing key people and resources to achieving success. Despite these findings, the development and validation of positive psychological interventions targeted to promote positive affect and coping resources is scarce. Insufficient examination of these intervention types appears related to the lack of psychological theories explicating how positive emotions and resources are developed and maintained. The Broaden and Build Model of positive emotions may be a fruitful theoretical source to develop more empirically validated interventions to promote positive emotional and coping development (Fredrickson, 2004).

The Broaden and Build Model

The Broaden and Build Model (Fredrickson, 2001) explains the development and maintenance of positive affect and coping resources from a unique evolutionary perspective. The theory argues negative and positive emotions benefit individuals in different ways. According to Fredrickson (2001), negative emotions are often linked to specific and narrow action tendencies. Specific action tendencies prompt the mind to perform a certain behavior by narrowing a person's momentary thought-action repertoire. For instance, when an individual experiences the negative emotion of fear, the immediate, decisive action may be to flee or escape from the situation. The specific action tendencies brought on by negative emotions hold evolutionary

value, as they likely assisted human ancestors in surviving life-or-death situations (Tooby &

Cosmides, 1990). The benefits of negative emotions are described as quick and instantly

gratifying and are often activated for some immediate, specific purpose.

On the other hand, the evolutionary role of positive emotions is less clear because the

benefits seemingly appear indirect and even inconsequential to immediate survival (Fredrickson,

2000). Unlike negative emotions, positive emotions do not narrow an individual's thought-action

repertoire. Instead, theory suggests positive emotions broaden momentary thought repertoires, a

process whereby thoughts and actions become more creative, flexible, and innovative

(Fredrickson, 2001). According to the model, the experience of positive emotions such as joy,

interest, contentment, pride, and love produce ongoing benefits (Fredrickson, 2001). For

instance, Frederickson (2000) describes the benefits of the positive emotion of "contentment" as

openness to momentary experience and savory, which contributes to a new sense of self and an

enhanced worldview. After experiencing a positive emotion, such as contentment, individuals

tend to be more open and willing to contemplate new ideas, reinterpret their situations, reflect on

behaviors, and initiate new courses of action and creative endeavors (Fitzpatrick & Stalikas,

2008). These processes comprise the *broadening* aspects of the model. Broadening positive

emotions is often associated with increased psychological growth and well-being (Frederickson,

2001). If individuals continue to broaden their positive emotional experience, they will likely

start to *build* important coping resources, like resilience and self-efficacy (Frederickson, 2000).

The Broaden and Build Model proposes the resources built from broadening positive experiences

can be cumulative and long-lasting, despite the momentary nature of the positive emotional

experience.

Emerging evidence supports a number of tenets associated with the Broaden and Build Model. For instance, previous research links positive emotions to positive outcomes across multiple life domains, including friendship development, higher marital satisfaction, higher incomes, a longer lifespan, and better physical health (Frederickson, Cohn, Coffey, Pek, & Finkel, 2008). Supporters of the Broaden and Build Model reason the broadened outlook and building of resources an individual accrues aids in effectively meeting life's challenges, which leads to success in life (Frederickson et al., 2008). In addition, these individuals are more likely to take advantage of life opportunities because of their acquired resources (Frederickson et al., 2008).

Frederickson and colleagues (2008) conducted one of the first studies to test the broaden and build hypotheses. In their study, 102 adults participated in a daily love and kindness meditation aimed at eliciting positive emotions for 9 weeks. Results indicated participants who participated in the daily meditation reported increased daily positive emotions, which in turn produced a wide range of personal resources (e.g., increased mindfulness, a sense of purpose, social support, decreased illness symptoms). Moreover, the effect positive emotions have on experiencing positive outcomes is recognized in therapeutic settings. The presence of positive emotions is often correlated to enhanced mental health. Individuals who activate positive emotions display fewer psychopathological symptoms and are less likely to consume drugs, engage in delinquent behaviors, and be subdued by stress (Quoidbach, Mikolajczak, & Gross, 2015).

Activating Positive Affect

Positive emotions can be activated through several different mechanisms. One way positive emotions can be experienced is through positive memory recall (Quoidbach et al., 2015).

Wildschut, Sedikides, Arndt, and Routledge (2006) demonstrated this concept by asking participants to complete a memory recall task and complete measures of positive affect. Results of the study indicated the participants who were asked to think and write about personally meaningful or nostalgic memories experienced increased levels of positive affect compared to those in the control group, who wrote about an "ordinary," recent event in their life. Several other studies demonstrate how reorienting one's attention to past positive experiences is an effective strategy to elicit positive emotions (Quoidbach et al., 2015). However, positive memory recall alone is not a sufficient task to elicit longstanding positive affect and promote the development of important coping resources (Gable, Reis, Impett, & Asher, 2004). Instead, Tugade and Fredirickson (2007) highlight the importance of how individuals capitalize on positive experience/activity (i.e., positive memory recall) to ensure prolonged positive affect and enhanced coping resource development.

Broadening Positive Experiences (Emotional Uplifting Strategies)

Mood and resource benefits tied to positive memory recall may be generated from an individual's ability to engage in positive emotional regulation tactics (Tugade & Fredrickson, 2007). The literature defines emotion regulation as "the process by which individuals influence which emotions they have, when they have them, and how they experience and express emotions" (Gross, 1998, pg. 275). Early research on emotion regulation strategies primarily concerned with reducing the experience of negative emotions through behavioral or mental control (Gross, 1998); however, emotion regulation research has since expanded to include strategies that increase the experience or expression of positive emotions. The assumption made within the research of positive emotion regulation is individuals strive to maintain positive affect (Gross, 1998). Early research on positive emotion regulation suggests expressive responses after

a positive event, such as sharing the event with others, seems to enhance the positive impact of those events (Wood, Heimpel, & Michela, 2003). Particularly, emotional uplifting strategies, efforts to extend or prolong positive affect after the experience of a positive event, are especially advantageous in eliciting longer periods of positive affect and increases in coping resource development (Tugade & Fredrickson, 2007).

Currently, emotional uplifting strategies are frequently researched and commonly used, especially in therapeutic settings (Quoidbach et al., 2015). Emotional regulatory processes are even considered to be central to mental health; emotional uplift strategies are often used as a way to improve mental health in individuals presenting with negative outcomes such as a higher risk of mental illness, poor occupational performance, less social competence, and decreased peer acceptance (Gross, 1998).

Gratitude as an Emotional Uplift Strategy

Overall, the literature is scarce regarding gratitude as an emotional uplifting strategy. However, a handful of studies theoretically link gratitude to a number of mood enhancing and up-regulation effects (Lee, Tong, & Sim, 2015). For instance, McCullough (2002) demonstrates a grateful disposition is positively correlated to multiple indicators of positive mood, including positive affectivity, vitality, happiness, and satisfaction with life. Moreover, McCullough concludes gratitude is a consistent barrier to extend negative affectivity.

Gratitude and Broadening Positive Affect. Some literature conceptualizes gratitude as a type of life orientation enhancing positive mood (Wood, Froh, & Geraghty, 2010). Specifically, eliciting feelings of gratitude can be used as a mindfulness technique. In fact, grateful individuals tend to possess the cognitive habit of savoring the good life circumstances that come their way (McCullough, 2002). Similarly, Rosenzweig (2013) describes gratitude as a sister of

mindfulness, along with compassion, acceptance, forgiveness, loving-kindness, and best-self visualization. Rosenzweig suggests practicing these "sisters" of mindfulness helps individuals to prolong positive mood by approaching negative aspects or events in life from a different angle. Rosenzweig's perspective operates from a stance that human pain and suffering is universal and unceasing, therefore changing how we relate to the experience of suffering is necessary to release ourselves from the pain associated with suffering; failure to accept the negative aspects of life is a barrier to optimal psychological functioning. For instance, gratitude techniques typically involve paying mindful attention to the gifts we receive in life, whether they are simple everyday pleasures, certain people in your life, personal strengths or talents, moments of natural beauty, or gestures of kindness from others (Rosenzweig, 2013). According to Rosenzweig, recollecting and acknowledging these gifts results in appreciating that which is already present in our lives, rather than wishing for something more or different than what we have. Experiencing gratitude acts as a buffer against the inevitable setbacks in life and has the potential to generate and prolong positive affect even in the face of trying circumstances.

Gratitude and Building Resources. Similarly, theoretical evidence pinpoints the unique contribution of gratitude in helping individuals develop and implement important coping resources (Wood et al., 2010). Research shows grateful individuals are more likely to seek out and use both instrumental and emotional social support when faced with distress. Similarly, research shows grateful individuals score higher on measures of spirituality and spiritual coping, including measures assessing their sense of connectedness to other people, nature, and their world as a whole (McCullough, 2002). Not only does experiencing gratitude build coping resources, it also serves as an intrapersonal resource in terms of boosting autonomy by appreciating the positive aspects and strengths of the self (Lee, Tong, & Sim, 2015). When faced

with adversity, grateful individuals are more likely to approach and deal with a problem, actively cope, and positively reinterpret the situation rather than disengage and turn to negative coping behaviors (Wood et al., 2010).

Gratitude is considered to be a mechanism to help people recover from various conditions such as Posttraumatic Stress Disorder (PTSD) (Vernon, Dillon, & Steiner, 2009) and cancer (Rosenberg, Yi-Frazier, Wharton, Gordon, & Jones, 2014). Findings from a study conducted by Vernon, Dillon, and Steiner (2009) suggest gratitude may be a protective factor against symptoms of PTSD. Their study found women who retrospectively reported greater gratitude in response to trauma reported fewer and less severe PTSD symptoms months and years post-trauma. The authors of the article support their findings by discussing how grateful individuals may focus on the benefits of the trauma rather than the losses, such as gaining an increased sense of one's life value and avoiding injury or death. Similarly, Rosenberg et al. (2014) found adolescent and young adult cancer patients often used gratitude as a way to remain optimistic in treatment. For instance, patients who described things for which they were grateful during their treatment process, such as friends, family, new perspectives, and periods of comparative physical wellness, were found to have greater abilities of positive coping and better adjustment. In total, gratitude behaviors appear to be an important aid in helping vulnerable individuals be efficacious and resilient in the face of overwhelming circumstances.

Overall, despite the lack of direct evidence for gratitude as an emotional uplift strategy, there are clear indications grateful behaviors and dispositions serve to broaden positive affect and stimulate positive resources. Gratitude interventions help individuals to mindfully broaden positive affect by prolonging different positive emotions (Rosenzweig, 2013). In addition, gratitude-based interventions are important in helping individuals build coping resources, such as

resilience and coping self-efficacy, to navigate through difficult life circumstances (Vernon et al., 2009). In light of such evidence, experimental research is needed to validate gratitude as an emotional uplifting strategy. Specifically, it is important for research to determine if a gratitude intervention can broaden positive affect and build coping resources after the experience or re-experience of a positive event.

Current Study

The scientific study of gratitude appears important in outlining pathways by which people learn how to thrive. However, there are a number of large gaps within the current gratitude literature. One such gap is whether or not gratitude-based interventions can serve as emotional uplifting strategies. The current study sought to fill this gap by experimentally determining whether a gratitude-based intervention can help individuals broaden positive affect and build coping resources after engaging in a positive memory recall exercise. In order to validate the emotional uplifting components of a gratitude intervention, I examined the effects of gratitude in the context of a positive experience or re-experience of a positive event. Essentially, I examined whether a gratitude intervention can maintain/prolong the experience of positive affect and strengthen the likelihood individuals will increase coping resource development.

Hypotheses. In the current study, I investigated demographic differences in self-reports of gratitude traits at an exploratory level. This study also investigated whether a gratitude intervention can broaden positive affect and build coping resources. In light of applicable theory and empirical evidence, I hypothesized: (a) individuals who participated in a positive memory recall task would report greater levels of positive affect, resilience, and coping self-efficacy, (b) memory recall would interact with gratitude interventions, whereby individuals who participated in both the positive memory recall and the gratitude intervention would report the highest levels

of resilience and coping self-efficacy, and (c) there would be a three-way interaction among the memory recall group, the gratitude intervention group, and time, whereby individuals who participated in the positive memory recall and gratitude intervention would report greater increases in positive affect across the duration of the study.

CHAPTER 3: METHODOLOGY

Participants

Phase 1. Participants in the current study consisted of undergraduate students enrolled in psychology courses at a large southeastern university. A total of 380 students participated in the study. Responses were excluded from 11 individuals in the final data set because they incorrectly responded to a check question or failed to complete 90% of the items. Both measures are indices of participant motivation and focus. The final sample consisted of 369 individuals. The average age of the sample was 19.55 years. In response to the gender prompt, 272 (73.3%) identified as women and 97 (26.1%) participants identified as men. Most (231) participants identified as White/Non-Hispanic (62.3%), 94 (25.3%) as African American, 9 (2.4%) as Mexican American, 5 (1.3%) as Asian American, and 2 (0.5%) participants identified as international students. Twenty-nine (7.8%) participants did not provide information regarding their race. One hundred and sixty-six (44.7%) participants reported being reared in a rural area and 204 (55%) participants reported being reared in a non-rural area. Differences in socioeconomic status (SES) was also assessed; 75 (20.2%) participants reported growing up with a "low" SES status, 171 (46.1%) as "mid" SES status, and 125 (33.7%) participants reported their SES status as "high".

Phase 2. Participants who participated in phase one of the study were excluded from phase two of the study. Data for the second phase of the study were collected from a sample of undergraduate students enrolled in psychology courses at a large southeastern university. A total of 79 students participated in phase 2 of the current study. Ten individuals' responses were excluded from the final sample because the research assistant noted motivational and/or concentration concerns (e.g., sleeping, confusion regarding instructions, failure to complete a

significant portion of the measures) during the implementation of the study. The final sample consisted of 69 individuals. The average age of the sample was 19.71 years. In response to the gender prompt, fifty-two participants identified as women (75.4%) and sixteen participants identified as men (23.2%). Forty-one participants identified as White/Non-Hispanic (59.4%), eighteen as African American (26.1%), five as Mexican American (7.2%), one as Asian American (1.4%), and one as American Indian (1.4%). Three participants did not provide information regarding their race (4.3%). Forty-two participants reported being reared in a rural area (60.9%) and twenty-five participants reported being reared in a non-rural area (36.2%). In regard to socioeconomic status (SES), five participants described growing up with a "low" SES (7.2%), seven as "low-middle" SES (10.1%), twenty-seven as "middle" SES (39.1%), twenty-three as "middle-high" SES (33.3%), and six as "high" SES (8.7%). One participant did not provide a response for SES.

All participants were randomly assigned to one of two memory conditions; thirty-four participants were assigned to the Neutral Memory condition (49.3%) and thirty-five participants were assigned to the Positive Memory condition (50.7%). All participants were also assigned to one of two intervention groups; thirty-four participants were assigned to the control intervention group (49.3%) and thirty-five participants were assigned to the gratitude intervention group (50.7%).

Research Design

Phase 1. The design for the first phase was descriptive and data was collected online. The purpose of this design was to explore how different subgroups of people differ in their expression of gratitude. Of note, this study examined potential demographic differences in

gratitude traits. Demographic and cultural differences in gratitude were examined by different gender, ethnicity, socioeconomic, and rurality subgroups.

Phase 2. An experimental design was implemented for the second phase of the current research. All participants were randomly assigned to complete either a Positive Memory Recall Task (see Appendix 1) or a Neutral Memory Recall Task (see Appendix 2). Once participants completed the task, participants were randomly assigned to one of two groups: the gratitude intervention group (see Appendix 3) or the control group (see Appendix 4). Within and between groups comparisons on different outcome variables were analyzed.

Procedure

Phase 1. Participants were recruited via the SONA system, an online software program providing a list of available studies being conducted in the Department of Psychology. By using this system, students are able to sign up for research studies they would like to participate in to obtain research credit. This study was one of the research opportunities to be listed on the SONA system. When students signed up for this study, they were directed to an online webpage to determine if they would like to participate in the study. Once on the online webpage, they read the informed consent document, which outlined the major tasks to be completed, risks, and benefits of volunteering to complete this portion of the study. If students agreed to participate in this portion of the study, they were directed to a series of surveys to be completed. The estimated time to complete the surveys is 15 minutes. Once the surveys were completed, the students were directed to a debriefing page. The debriefing page offered students free to low cost resources they can access if participating in the survey was distressing to them. Data were collected and stored via Surveymonkey.com. Once all data were collected, the primary researcher transferred

the data to an SPSS file for cleaning, maintenance, and analysis. Data were removed from the

Surveymonkey system once data were transferred.

   Phase 2. Similar to the first phase of the study, participants in the second phase of the

study were recruited via the SONA system. When the students signed up for this study, they

were provided with a date, time, and the room number for the lab of where the study took place.

When the students entered the lab, they were presented with an informed consent form. The

consent form explained to students the possible risks and benefits, confidentiality, resource

availability, and discontinuation policies associated with participation of this study. The students

read the informed consent form and signed it to indicate their consent to participate in the study.

Once the participants signed the informed consent, they placed their cell-phone and other

belongings in a secure locker for the duration of the study. They were also prompted to go to the

bathroom if needed.

   Once participants were free of distraction and seated comfortably, they completed the

Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) as a baseline measure of

mood. After the PANAS was completed, all participants were randomly assigned to either a

Positive Memory Recall Task or a Neutral Memory Recall Task. Positive memory recall tasks

are the most widely used method of stimulating short-term positive affect (Quoidbach et al.,

2015). For the Positive Memory Recall Task, the research assistant provided the participants

with a laptop and instructed them to type a list of memorable accomplishments they achieved in

the past two to three years. After one minute, the participants picked one of the listed

accomplishments to write a story about. The participants were asked to provide as many details

to the story as possible, and to write a complete story including a beginning, middle, and end.

The current positive memory recall task was derived from a similar task employed by Jalis and Gilbert (2010).

For participants randomly assigned to the Neutral Memory Recall task, the research assistant provided them with a laptop and instructed them to type a list of neutral memories from the past two to three years. "Neutral" memories were described to the participants as "memories that are neither good nor bad." After one minute, the participants were then instructed to pick a memory from their completed list that elicits the least amount of emotion. The participants were asked to provide as many details to the story as possible, writing a complete story including a beginning, middle, and end.

After 15 minutes of working on either the positive or neutral memory recall task, the participants were asked to stop. Participants then completed a post-activity mood measure – the *PANAS*. The participants were then randomly assigned into one of two groups; the control group or the gratitude intervention group. Individuals in the gratitude intervention group spent approximately 15 minutes engaging in listing and processing components of their story about which they are grateful. This gratitude intervention consisted of a listing and contemplation component. Specifically, participants listed several factors about which they are grateful. They were then asked to mindfully contemplate the impact and importance of the identified grateful factors in more depth. The development of this gratitude intervention was guided by the recommendation of Wood and colleagues (2010), who suggest gratitude interventions should be integrative and tied to a specific context. With this in mind, the gratitude intervention used in the current study integrates listing and contemplating components and is tied to the content of a specific memory.

Alternatively, individuals in the control group were asked to sit quietly and process their experience for approximately 15 minutes. The purpose of the control group is to stimulate normal processing of positive affect without the guided deployment of an emotional uplifting task. Once the participants completed their assigned interventions, they completed a series of surveys. Once the surveys were completed, the participants then completed an active debriefing process to alleviate any possible feelings of upset. Participants were also given a debriefing form with free to low cost resources to access if needed.

Measures

Demographic Form. In each phase of the study, participants responded to questions regarding their gender, ethnicity, socioeconomic status, class standing, age, sexual orientation, and rural status. Rural status was measured by a series of questions asking participants about the nature of their hometown setting, current residence, and zip code.

Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The PANAS is a 20-item self-report measure designed to assess current mood. The measure is comprised of two mood scales, the Positive Affect Scale and the Negative Affect Scale. Half of the items are descriptors of positive affect, while the other half are descriptors of negative affect. Each item on the PANAS is measured on a 5-point Likert scale (from 1 = *Very Slightly or Not At All* to 5 = *Extremely*) with total scores ranging from 10-50 for both the Positive Affect scale and the Negative Affect scale. A high score on the Positive Affect Scale indicates greater feelings of pleasure and joy, whereas high scores on the Negative Affect Scale indicate greater feelings of distress and agitation (Watson & Tellegan, 1988). The PANAS demonstrates good internal consistency for the Positive Affect Scale (α = .86 to .90) and the Negative Affect Scale (α = .84 to .87; Watson & Tellegan, 1988). Both scales also demonstrate excellent construct validity, as

they have been highly correlated with measures of general distress, depression, and anxiety

(Crawford & Henry, 2004). In the current study, the PANAS demonstrated solid internal

consistency across three different administrations (α = .78-.93)

    Brief Resilience Scale (BRS; Smith et al., 2008). The BRS is a brief 6-item measure

designed to assess one's ability to bounce back from adversity or recover from stress. Each item

on the BRS is measured on a 5-point Likert scale (from 1 = *Strongly Disagree* to 5 = *Strongly*

Agree) with total scores ranging from 6 to 30. Higher scores on the BRS are reflective of greater

resilience behaviors and resources. The BRS has good internal consistency (α = .80 – 91; Smith

et al., 2008) and excellent construct validity as evidenced by correlations with optimism, purpose

in life, positive social support, active coping, and positive reframing and negative correlations

with behavioral disengagement, denial, and self-blame. In the current study, the BRS

demonstrated solid internal consistency (α = .94).

    Coping Self-Efficacy Scale (CSES; Chesney et al., 2006). The CSES is a 26-item measure

designed to assess one's confidence in his/her ability to successfully cope. Each item on the

CSES scale is measured on an 11-point Likert scale (from 0 = *Cannot do at all* to 10 = *Certain*

can do) with total scores ranging from 0 to 260. Higher scores on the CSES indicate a higher

level of confidence in one's ability to effectively cope with life challenges. The CSES has

excellent internal consistency (α = .95; Chesney et al., 2006), as well as construct validity as

evidenced by high correlation with measures of positive coping. In the current study, the CSES

demonstrated solid internal consistency (α = .92).

    Gratitude Questionnaire (GQ-6; MuCullough, Emmons, & Tsang, 2001). The GQ-6 is a

6-item self-report measure designed to assess one's disposition to experience gratitude in

everyday life. Each item on the GQ-6 is measured on a 7-point Likert scale (from 1 = *Strongly*

Disagree to 7 = *Strongly Agree*) with total scores ranging from 6 to 42. Higher scores represent greater tendencies toward appreciation and thankfulness. The GQ-6 has good internal consistency (α = .76 - .84) as well as construct validity, as it is positively correlated with optimism, life satisfaction, hope, forgiveness, empathy, and prosocial behavior (McCullough et al., 2002). In the current study, the GQ-6 demonstrated solid internal consistency (α = .79).

Planned Analyses

The current study examined the identified questions through different sets of analyses. Demographic differences (i.e., gender, ethnic, SES, rurality) on gratitude traits were examined through a series of t-tests in Phase 1.

In Phase 2, a number of preliminary and planned procedures were analyzed. To determine if baseline differences in positive affect existed between neutral and positive memory group participants, I ran a t-test. With regard to my planned analyses, I ran a 2 (memory recall) X 2 (intervention) X 3 (time) mixed ANOVA on positive affect in order to examine the main effects of time, memory recall, and intervention as well as the interactions among the three variables. Of note, consistent with my hypotheses I am interested in evaluating the main effect for memory recall and intervention. I am also interested in evaluating the three-way interaction effect. Finally, I ran a series of 2 X 2 ANOVAs to examine the main and interaction effects of memory recall and intervention condition on coping resources (resilience and coping self-efficacy).

CHAPTER 4: RESULTS

Phase 1: Differences in Gratitude Traits

Gender. Differences in gratitude traits were examined between participants who identified as women ($n = 272$) and participants who identified as men ($n = 97$). Results indicate a significant main effect for gender on gratitude, $F(1,367) = 22.62$, $p < .05$, partial $\eta^2 = .058$. These findings suggest individuals who self-identify as women ($M = 37.14$, $SD = 4.84$) report higher levels of gratitude traits than individuals who self-identify as men ($M = 34.32$, $SD = 5.49$).

Ethnicity. From an exploratory level, I wanted to determine if different ethnic groups reported different levels of gratitude traits. Given the demographic makeup of the sample, I was only able to evaluate differences between individuals who identify as European American/White ($n = 231$) and those who identify as African American/Black ($n = 94$). There were too few participants who identified as Mexican American, Asian American, or as an international student to consider within the analysis. Results indicate a non-significant main effect for ethnicity on gratitude, $F(1,323) = .01$, $p > .05$, partial $\eta^2 = .01$. These findings suggest individuals who self-identify as European American/White ($M = 36.33$, $SD = 5.38$) report comparable levels of gratitude traits as individuals who self-identify as African American/Black ($M = 36.37$, $SD = 4.69$).

Rurality. I also examined whether individuals differed on self-report of gratitude based on rural status. Differences in gratitude were examined between individuals reared in a rural area ($n = 166$) and individuals reared in a non-rural area ($n = 204$). Results indicate a non-significant main effect for rural status on gratitude, $F(1,368) = .68$, $p > .05$, partial $\eta^2 = .01$. These findings suggest individuals reared in a rural area ($M = 36.61$, $SD = 5.13$) report comparable levels of gratitude as individuals reared in a non-rural area ($M = 36.17$, $SD = 5.24$)

Socioeconomic Status. In the current study, differences in gratitude traits were examined among individuals who reported a low SES ($n = 75$), mid SES ($n = 171$) and high SES ($n = 125$) status. Results indicate a significant main effect of SES on gratitude traits $F(2,368) = 6.68$, $p <$ .05, partial $\eta^2 = .04$. Pairwise comparisons were used to examine the differences between the three levels of SES (i.e., low, mid, high) on gratitude. Results from the pairwise comparisons indicate a significant difference in gratitude between individuals of low SES ($M = 34.57$, $SD =$ 6.13) and mid SES ($M = 36.51$, $SD = 4.63$), as well as a significant difference between individuals of low SES and high SES ($M = 37.28$, $SD = 5.06$). There was a non-significant difference between mid SES and high SES on reports of gratitude. These results suggest gratitude traits are more commonly reported among individuals with higher levels of financial resources.

Phase 2: Preliminary Analysis

Pre-Group Affect. In Phase 2, I examined baseline differences in positive affect between individuals randomly assigned to the two memory conditions (positive memory and neutral memory conditions). Self-reports of positive affect were examined for the Positive Memory group ($n = 35$) and the Neutral Memory group ($n = 34$). Results indicate a non-significant main effect of memory condition on positive affect, $F(1,67) = .06$, $p > .05$, partial $\eta^2 = .01$. These findings suggest individuals in the Positive Memory condition ($M = 488.77$, $SD = 180.13$) reported comparable levels of positive affect at baseline as individuals in the Neutral Memory condition ($M = 501.35$, $SD = 235.70$).

Primary Analysis

Positive Affect. In order to detect variations in positive affect scores, I analyzed a 2 (memory) X 2 (intervention) X 3 (time) mixed ANOVA. I hypothesized participants who

participated in the positive memory recall task would report greater levels of positive affect. Results indicate a significant time X memory recall interaction effect $F(2,130) = 12.068$, $p < .01$, partial $\eta^2 = .157$. These results suggest individuals in the positive memory recall group reported substantially higher scores on positive affect compared to individuals in the memory control group. Figure 1 provides marginal means for positive and neutral memory groups at time 1 and time 2 collapsed across gratitude intervention.

I also predicted a three way interaction effect, whereby individuals who participated in the positive memory recall and gratitude intervention would report greater increases in positive affect across the duration of the study. Results indicate a non-significant memory recall X gratitude intervention X time effect $F(2,130) = .759$, $p > .05$, partial $\eta^2 = .012$. These results suggest individuals who participated in a gratitude intervention did not experience any additive effects on positive affect after accounting for the effects of memory recall. Figure 2 provides marginal means of positive affect among memory and intervention groups across time.

Resilience. I also predicted memory recall will interact with gratitude interventions, whereby individuals who participate in both the positive memory recall and the gratitude intervention would report the highest levels of resilience. Results indicate a significant memory recall main effect $F(1,65) = 4.86$, $p < .05$, partial $\eta^2 = .07$. These results suggest individuals who participated in the positive memory recall group reported substantially higher scores on resilience compared to individuals in the memory control group. Results also reveal a non-significant gratitude main effect $F(1,65) = 1.81$, $p > .05$, partial $\eta^2 = .03$, and a non-significant memory recall X intervention interaction effect $F(1,65) = 1.89$, $p > .05$, partial $\eta^2 = .003$. These results suggest individuals who participated in the gratitude intervention did not receive a

subsequent boost in resilience after accounting for the effects of memory recall. Figure 3

provides marginal means for resilience among memory recall and intervention groups.

Coping Self-Efficacy. Finally, I predicted memory recall would interact with gratitude

interventions, whereby individuals who participated in both the positive memory recall and the

gratitude intervention would report the highest levels of coping self-efficacy. Results indicate a

positive trend toward a significant positive memory main effect. However, the effect was non-

significant, $F(1,65) = 3.60$, $p = .062$, partial $\eta^2 = .05$. Results indicate a non-significant gratitude

main effect, $F(1,65) = .63$, $p > .05$, partial $\eta^2 = .01$, and a non-significant memory recall X

intervention effect, $F(1,65) = .67$, $p > .05$, partial $\eta^2 = .01$. These results suggest individuals who

participated in the positive memory recall group did not receive a boost in coping self-efficacy

ratings. Similarly, individuals who participated in the gratitude intervention did not report greater

elevations in coping self-efficacy after accounting for the effects of memory recall. Figure 4

provides marginal means of coping self-efficacy among memory recall and intervention groups.

CHAPTER 5: DISCUSSION

Review of Purpose

The main purpose of the current study was to obtain a better understanding of the contexts (i.e., memory recall) by which gratitude-based interventions can be employed in applied psychology. Given the overarching goal of this study, the following inquiries were examined: (a) if self-reports of gratitude traits vary by important demographic categories (i.e., gender, ethnicity, socioeconomic status, rural status), (b) if gratitude interventions elevate reports of positive affect after accounting for the effects of positive memory recall, and (c) if gratitude interventions contribute to greater elevations on coping resources (i.e., resilience, coping self-efficacy) after accounting for the effects of positive memory recall.

Differences in Gratitude Traits

In the current study, I examined whether there were any differences in gratitude traits across different cultural contexts. I examined possible differences among gender, ethnicity, socioeconomic status, and rural status. Significant effects for gender and socioeconomic status were detected.

Gender. Mean comparisons for gender indicate women reported higher levels of gratitude traits than men. These findings are reflective of the existing literature on gender differences in gratitude, as previous studies suggest women might possess an advantage over men in experiencing and benefitting from gratitude (Kashdan, Mishra, Breen, & Froh, 2009). Research is limited in explaining such differences. Gender differences may be due to the perceived social acceptability aspects of expressing gratitude. Some research suggests men prefer to conceal their feelings of gratitude, rather than express it, for fear of being perceived as vulnerable, which may threaten their sense masculinity and social standing (Kashdan et al.; Levant & Kopecky, 1995).

On the other hand, women may be more likely to openly express feelings of gratitude because women tend to express more positive emotions compared to men (Kelly & Hutson-Comeaux, 2000). In addition, women evaluate the expression of gratitude more positively and less challenging compared to men (Kashdan et al., 2009). Future research needs to investigate the moderating effects of gender in explaining the conditions by which feelings of gratitude are experienced and expressed.

Socioeconomic Status. Significant differences were detected for socioeconomic status (SES), whereas participants who described their SES as "high" reported greater levels of gratitude traits compared to participants who described their SES as "low." Currently, there is limited literature available to explain SES differences in gratitude traits. Although, available resources associated with higher SES statuses may explain the detected effects. Specifically, one study investigated the antecedents of gratitude differences among adolescents (Reckart, Scott, Hills, & Valois, 2017); results suggest gratitude is positively related to perceived social support and inversely related to the occurrence of stressful life events. Research also indicates gratitude as an important correlate to a number of benefits commonly experienced with greater psychosocial resources including experiencing positive emotions more frequently, focusing on the positive aspects of life, engaging in more effective methods of coping, and experiencing greater feelings of being loved, cared for, and valued (Lin, 2015; Linley & Joseph, 2004). In light of the current findings, employing gratitude interventions may be especially beneficial for individuals of low SES who may have fewer resources, less perceived social support, and greater stressful life experiences. Future studies should further examine the conditions and benefits of experiencing gratitude among individuals of different SES statuses.

Effects of Memory Recall

In the current study, I examined the influence of positive memory building tasks on a variety of variables. Given the previous literature, I expected to find a main effect of positive memory recall on positive affect, resilience, and coping self-efficacy.

Positive Affect. Individuals assigned to the positive memory task reported higher levels of positive affect compared to individuals placed in the control memory task. This finding is consistent with previous literature, as studies highlight how reorienting one's attention to past positive experiences is an effective strategy to elicit positive affect (Quoidbach et al., 2015; Wildschut, Sedikides, Arndt, & Routledge, 2006). Philippe, Lecours, and Beaulieu-Pelletier (2014) suggest emotionally-arousing events are integrally linked in memory to the emotion experienced at the time of event, therefore an individual tends to experience similar emotions when an emotional memory is activated. While our findings confirm an extensively researched effect, it is important for future researchers to examine the impact of positive memory recall on positive affect using more complex and longitudinal designs. For instance, it would be beneficial to understand the longstanding effects of positive memory recall on positive affect. Moreover, it would be beneficial to determine if the frequency by which one engages in positive memory recall affects the strength of positive affect experienced.

This finding also validates the build tenet of the Broaden and Build Model (Frederickson, 2000). In my study, the positive memory recall task elicited in an increase of positive emotions. The Broaden and Build Model argues as an individual experiences positive emotions via a positive experience (e.g., memory recall), resulting positive emotions causes the building of important coping resources. Our finding provides further evidence for the effectiveness of positive emotions as a causal pathway by which individuals enhance their coping resources. In

addition, our results support the position that individuals experience greater levels of positive emotions through positive memory recall exercises. Future research needs to be conducted to confirm such findings, however my results offer some support for the Broaden and Build Model.

Coping Resources. I also investigated the effect of positive memory recall on self-report of coping resources, i.e., resilience and coping self-efficacy. In terms of resilience, results confirmed my expectation. Specifically, individuals who participated in the positive memory recall task reported higher levels of resilience compared to individuals who participated in the control memory recall task. This finding is consistent with previous literature and provides some confirmatory evidence for the Broaden and Build model, which suggests broadening a positive emotional experience will contribute to the formation or accumulation of important coping resources, such as resilience (Frederickson, 2000). It is important for future research to examine this effect further. Specifically, it may be important to determine if the effects of memory recall on resilience are moderated by the content of the memory. In the current study, I employed a positive memory recall task associated with the remembrance of an accomplishment. Recalling the process of accomplishing a task or goal may activate specific components (e.g., self-confidence, positive self-appraisals) which may more readily increase perceptions of resilience. However, different content themes (e.g., relaxation, fun) may affect the intensity by which self-perceptions of resilience are activated.

Alternatively, I did not find a similar effect with coping self-efficacy; individuals in the positive memory recall group did not report higher levels of coping self-efficacy compared to individuals in the control memory recall group. Despite this non-significant effect, results appear to be trending in the expected direction; therefore, it is possible the non-significant effect may be

directly related to low power. In the future, research may need to re-evaluate the causal link between positive memory recall and coping self-efficacy with a larger sample size.

Additive Effects of Gratitude Interventions

My findings suggest positive memory recall resulted in an increase of positive affect and some coping resources; however, results did not indicate participating in a gratitude intervention was beneficial in the context of positive memory recall. Specifically, participating in a gratitude intervention did not contribute to additional increases in positive resources (i.e., positive affect, resilience, coping self-efficacy). These findings are inconsistent with emotional regulation theory. Quoidbach and colleagues (2015) contend gratitude interventions are well suited to capitalize on positive experiences or recall of positive experience to extend and/or enhance positive affect and coping resources. Results of the current study did not support the up-regulation effects of gratitude on different positive psychological outcomes.

There are two possible reasons for the detected, non-significant effects. First, activating gratitude in the context of positive memory recall may serve as a maintenance process, rather than a process enhancing self-perceptions of positive resources. For instance, gratitude interventions may extend the time, but not increase the intensity, by which individuals experience positive resources. In the future, researchers should re-examine this study by evaluating the degree to which individuals maintain higher levels of positive affect as a means to determine the utility of employing gratitude interventions after positive memory recall. For instance, researchers can measure variation in positive affect and positive self-appraisals (resilience, coping self-efficacy) to determine if gratitude can maintain the resultant effects of memory recall over longer periods of time.

Second, psychological well-being of an individual may interfere with the effectiveness of a gratitude intervention. For instance, a gratitude intervention may be more effective for individuals who have fewer psychological resources. All of the individuals who participated in the current study were undergraduate college students; therefore, it is likely the participants presented with healthier levels of psychological functioning (e.g., psychological resources) compared to impoverished or clinical populations. In the future, researchers may need to conduct this study with a more diverse participant pool, such as lower SES and clinical outpatient samples to determine if results differ from the one's detected in the current study.

Rural Implications

In the current study, I examined rural status differences on gratitude traits. Results did not indicate gratitude varies based on rural versus non-rural upbringing. One possible explanation for the non-significant result is the population sample. The participants were all students from a large college campus, therefore our sample may not be completely representative of a rural population. It is important to re-examine these differences in a sample more reflective of rural culture.

This is one of the first studies to examine gratitude in a rural context. It is important for future research to examine gratitude within rural populations. Specifically, given rural culture, positive psychological interventions (i.e., gratitude tasks) may be more effective in terms of eliciting positive outcomes. For instance, positive psychological interventions may help individuals recognize their strengths and how personal strengths can be used to combat significant stressors associated with rural life. Such strategies may also reduce stigma associated with seeking mental health aid and promote greater client commitment to therapy – both key problems in rural mental healthcare. If individuals residing in rural communities report a

proclivity toward using gratitude as a personal strength, then mental health professionals can help develop gratitude based programs to help support movement toward therapeutic goals.

Clinical Implications

One goal of mental health professionals is to prevent negative psychological outcomes. Two ways to prevent such negative outcomes are to help clients increase positive affect and build resilience. The current study demonstrates how these two goals can be achieved by having clients engage in positive memory recall tasks. Positive memory recall involves identifying and reflecting on a past experience that elicits feelings of happiness. Recalling a positive past experience helps clients practice emotional regulation by re-experiencing and prolonging positive affect, as well as achieve increases in coping resource development (e.g., resilience). One way mental health professionals can implement a positive memory recall task involves asking the client to write a personal narrative about how major past achievements were accomplished. The client should be asked to write about specific details of their experience such as any barriers they were able to overcome, emotions experienced, and identified strengths present during their journey of their chosen achievement. Such cue prompts are important in enriching the memory recall experience. Overall, my results highlight the benefits of using positive memory recall tasks to build important resources, which may mitigate the negative effects of adversity, conflict, and challenge in daily life.

Limitations

The current study had several limitations. First, the low number of participants recruited in the study may have affected the power to detect significant effects. In the future, it is important studies re-evaluate the current research questions with double the amount of participants included in the current study. An easy way to increase power in a study is to collect

data from more participants. Second, the participant sample may limit the generalizability of the current study's findings. A large proportion of the population sample is made up of white women, which may restrict the ability to generalize findings to men and ethnic minorities. In addition, the sample was selected from a pool of college students from undergraduate psychology courses. Most college students generally report healthier levels of functioning compared to the general population; therefore, the results may not be generalizable to inpatient or outpatient clinical populations. Future studies should evaluate the legitimacy of these findings across diverse samples of community-based outpatient groups, inpatient groups, and culturally diverse populations.

Another limitation of the current study was the type of measures used. The use of self-report measures may contribute to a number of social desirability concerns (i.e., the desire to present oneself in a positive light). It is important future studies include behavioral or observational measures to record actions and reactions as they occur as a means to unearth more accurate findings. In addition, the measures used for measuring resilience and coping self-efficacy may be somewhat problematic. There is some literature suggesting such measures for resilience and coping self-efficacy are more trait-based rather than state-based. It is possible the trait-based measures may have been unable to accurately measure the variation in resilience and coping self-efficacy scores. It is important for future researchers to use validated measures for state-based resilience and coping self-efficacy and reevaluate the research questions using those measures.

Lastly, the gratitude control task may serve as a limitation; it is possible participants in the control group may have differed in their cognitive and emotional states when asked to "sit quietly for fifteen minutes," which in turn could have contributed to non-variation in post-

gratitude intervention self-report measures. Future researchers may want to employ a more structured control intervention to ensure participants' cognitive and emotional state.

Conclusions

The focus of the current study was to fill gaps within the positive psychology literature. Particularly, I examined the contexts by which the field of applied psychology can employ gratitude-based interventions as a means to increase positive affect and build psychological coping resources after a positive experience. In support of the literature, I found positive memory recall is important in activating positive affect and influencing individuals' perception of resilience. One way mental health professionals can implement a positive memory recall task involves asking the client to write a personal narrative about how a major past achievement was accomplished. The client may be asked to write about specific details of their experience such as any barriers they were able to overcome during their journey of their chosen achievement. Such a technique is one of the many ways in which mental health professionals can use positive memory recall to enhance clients' positive emotional regulation tactics.

However, results indicate participating in a gratitude intervention did not contribute to additional increases in positive resources (i.e., positive affect, resilience, coping self-efficacy) after accounting for the effects of memory recall. These results do not support the up-regulation theory. In the future, researchers should re-examine these findings by evaluating the degree to which gratitude maintains higher levels of positive affect and coping resources over longer periods of time. Such examination should provide greater clarity in terms of when and how to employ gratitude interventions after a positive experience to bolster positive psychological resources.

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APPENDIX 1

Positive Memory Recall Task

Pre-Task Activities: *The research assistant will give the participant a baseline measure of self-reported mood: the PANAS.*

Positive Memory Recall Task: *Once the participant returns the completed mood measure, the research assistant will prepare the participant for the recall task.*

> "I am going to ask you to complete some memory and journaling based tasks. Here is a computer with a blank word document. On the document, I would like for you to type a list of some of your past accomplishments. These accomplishments can be anything from the last two to three years. When ready, just start typing notes about your accomplishments you have achieved over the last two to three years. Type as many accomplishments down as you can think of for the next minute or so."

*After giving these instructions, the research assistant will stay in his/her seat and wait approximately **1 minute** for the participant to complete his/her list of accomplishments. Once the participant has completed his/her list, the research assistant will give the following instructions:*

> "Thank you for completing this list. Now, I want you to look at the list and pick out one accomplishment that stands out over all of the others. Choose the accomplishment that you are most proud of achieving; the one you invested a substantial amount of time and energy to complete. Please take a few moments to choose the one accomplishment that makes you feel the most happy and prideful. Please let me know when you have chosen one."

The research administer will wait for the participant to choose one accomplishment. When the participant has confirmed that he/she has chosen an accomplishment, give the following instructions:

> "Now that you have your chosen accomplishment, I would like for you to engage in a small writing task. Specifically, I would like for you to write a personal story highlighting your chosen accomplishment. On this computer, I would like for you to write about the journey of achieving your chosen accomplishment. Remember a good story should have a beginning, middle and an end. Also, good stories outline how important emotions change throughout the journey of completing a goal. When ready think about how you achieved your accomplishment. Specifically, reflect on the barriers you overcame and the emotions you experienced. Once you have the outline of your story in your head, please type it out on the computer. Please write at least 400 words."

After the participant has finished the writing task, leave the word document on the computer and ask the participant to complete the post-mood measure.

APPENDIX 2

Neutral Memory Recall Task

Pre-Task Activities: *The research assistant will give the participant a baseline measure of self-reported mood: the PANAS.*

Neutral Memory Recall Task: *Once the participant returns the completed mood measure, the research assistant will prepare the participant for the recall task.*

> "I am going to ask you to complete some memory and journaling based tasks. On this computer, I would like for you to type out some of your memories that elicit a neutral response – one that is neither positive nor negative. For example, recalling a memory about an event that did not elicit a lot of emotions. When ready, just start jotting down notes about neutral memories you have experienced over the past two to three years. Jot as many neutral memories down as you can think of for the next minute or so."

*After giving these instructions, the researcher will stay in his/her seat and wait approximately **1 minute** for the participant to complete his/her list of neutral memories. Once the participant has completed his/her list, the researcher will give the following instructions:*

> "Thank you for completing this list. Now, I want you to look at the list and pick out one neutral memory that stands out over all of the others. Choose the memory that you feel you had the least emotional response. Please take a few moments to choose the one neutral memory that elicits the fewest emotions. Please let me know when you have chosen one."

The researcher will wait for the participant to choose one neutral memory. When the participant has confirmed that he/she has chosen a memory, give the following instructions:

> "Now that you have your chosen neutral memory, I would like for you to engage in a small writing task. Specifically, I would like for you to write a personal story highlighting your neutral memory. On this computer, I would like for you to write about your journey of experiencing this neutral memory. Remember, a good story should have a beginning, middle, and an end. Also, good stories outline how feelings change throughout the storyline. When ready, think about how you experienced this neutral memory. Specifically, reflect on the actions you participated in so that you can recreate the entire memory. Once you have the outline of your story in your head, please type it out on the computer. Please write at least 400 words summarizing the story of your neutral memory."

After the participant has finished the writing task, leave the word document on the computer and ask the participant to complete the post-mood measure.

APPENDIX 3

Gratitude Intervention

Component #1. *Once the participant has completed the post-mood measure, the research assistant will prepare the participant for the gratitude task.*

> "Now that you have written your story, I would like for you to reflect back on your journey. Specifically, I would like you to think about different factors that you were grateful or thankful for as you achieved your accomplishment. For example, maybe certain individuals helped you along the way or maybe you possess a certain personal strength that contributed to your success. Here is a worksheet, pencil, and a clipboard. On this worksheet, there are 4 different domains (personal traits and strengths, people, personal beliefs and attitudes, other factors). For the next few moments, I would like for you to list a few factors underneath each domain that you were thankful for and contributed to your accomplishment."

Component #2. *After giving these instructions, the research assistant will stay in his/her seat and wait approximately 2 minutes for the participant to finish with the worksheet. Once the participant has completed his/her worksheet, the research assistant will give the following instructions:*

> "Now I would like for you to identify the degree to which these factor domains (i.e., personal traits and strengths, people, personal beliefs and attitudes, other factors) contributed to your success. On this next worksheet, there is a picture of an empty pie chart. Using the pencil, I would like for you divide the chart into sections to indicate the degree to which each of the 4 factor domains played a role in reaching your accomplishment. Here is an example of what a complete pie chart could look like. Your pie chart should reflect your own impressions about what factor domains contributed to your success. Different factor domains may contribute to your success in different proportions. For instance, maybe the personal beliefs and attitudes contributed to 40% of your success, while other factors contributed to 1% or no percent of your success. Once you have settled on the percentage by which each factor domain score contributed to your success, please color in each section using the 4 crayons provided. Use the red crayon for the *personal traits and strengths* domain, Blue for the *people* domain, green for the *personal beliefs and attitudes* domain, and yellow for the *other factors* domain. Let me know when you have completed the worksheet."

Component #3. *Once the participant has completed the worksheet, the research assistant will ask a series of follow-up questions. Read the following instructions and questions:*

> "Once you are ready, I would like to talk with you briefly about your success story. **Prompt 1**. If you do not mind, please identify the one person, strength, or belief that you were most grateful for in your pursuit of success. Please talk about why this person, strength, or belief was so important to your success. **Prompt 2**. How does this person, strength, or belief help you be the best version of yourself?

> **Prompt 3**. If you do not mind, please identify another person, strength, or belief that you were grateful for in your pursuit of success. Please talk about why this person, strength, or belief was so important to your success. **Prompt 4**. How does this person, strength, or belief help you be the best version of yourself?

Work Sheet #1

Personal Strengths/Traits

Please list strengths or characteristics of your personality/identity that are beneficial or distinctive to you as a good person, particularly ones that assisted you in achieving your goal.

1._____

2._____

3._____

4._____

5._____

Other People

Please list the names or relationship of individuals that you are thankful for in terms of helping you achieve success.

1._____

2._____

3._____

4._____

5._____

Attitudes/Beliefs

Please list personal perspectives, ways of thinking, or values/morals that you are thankful in terms of helping you achieve success.

1._____

2._____

3._____

4._____

5._____

Other Factors

Please list any other factor(s) that you are thankful for in helping you achieve success. These factors do not readily fit under any of the other categories.

1._____

2._____

3._____

4._____

5._____

Worksheet #2
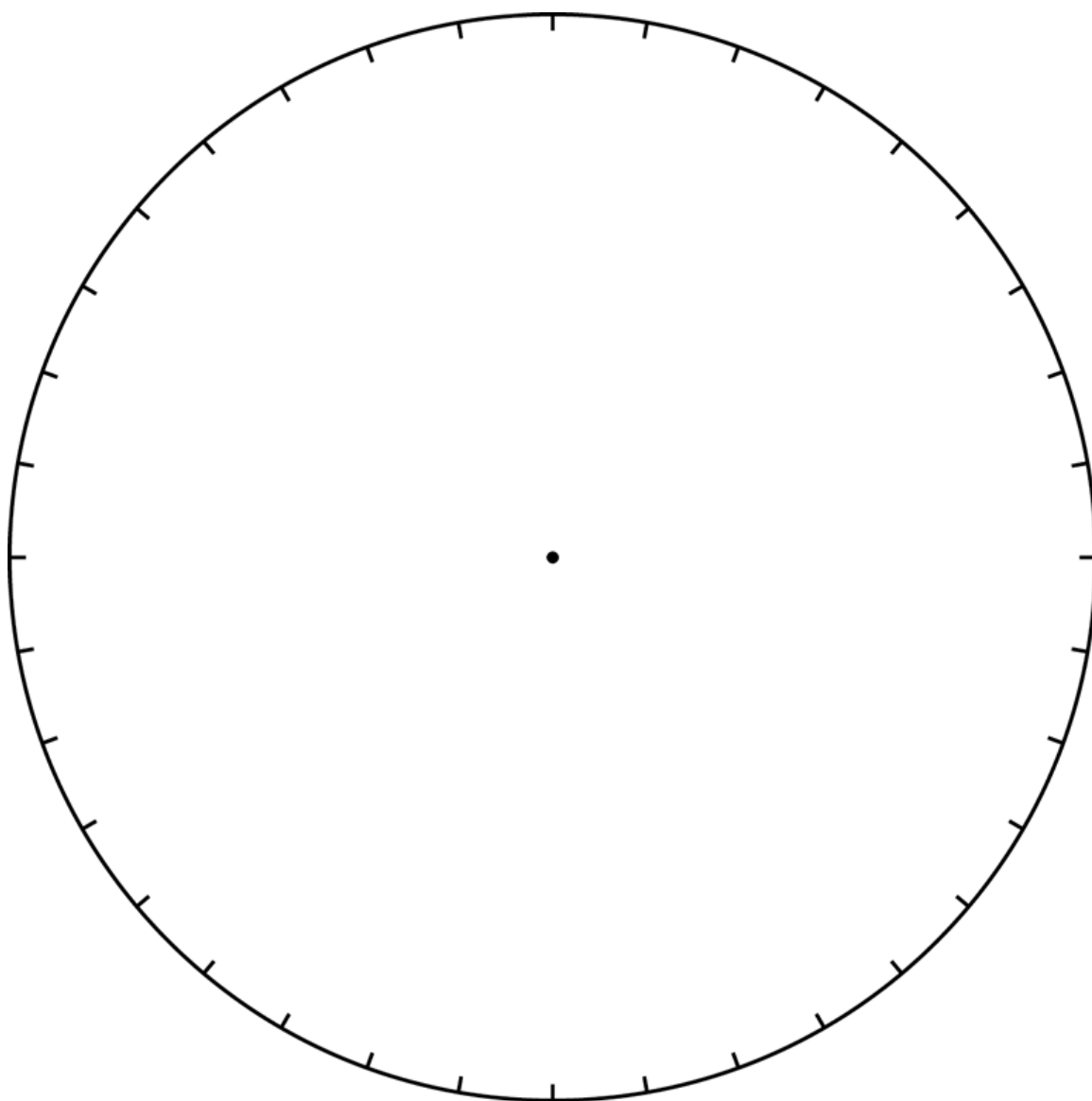
Legend:

Personal Strengths/Traits = Red

Other People = Blue

Attitudes/Beliefs = Green

Other Factors = Yellow

APPENDIX 3

Control Group Task

Prompt: Thank you for participating in the previous exercise. We need to take care of some things that are important to the study. Please wait here until we get back.

FIGURE 1

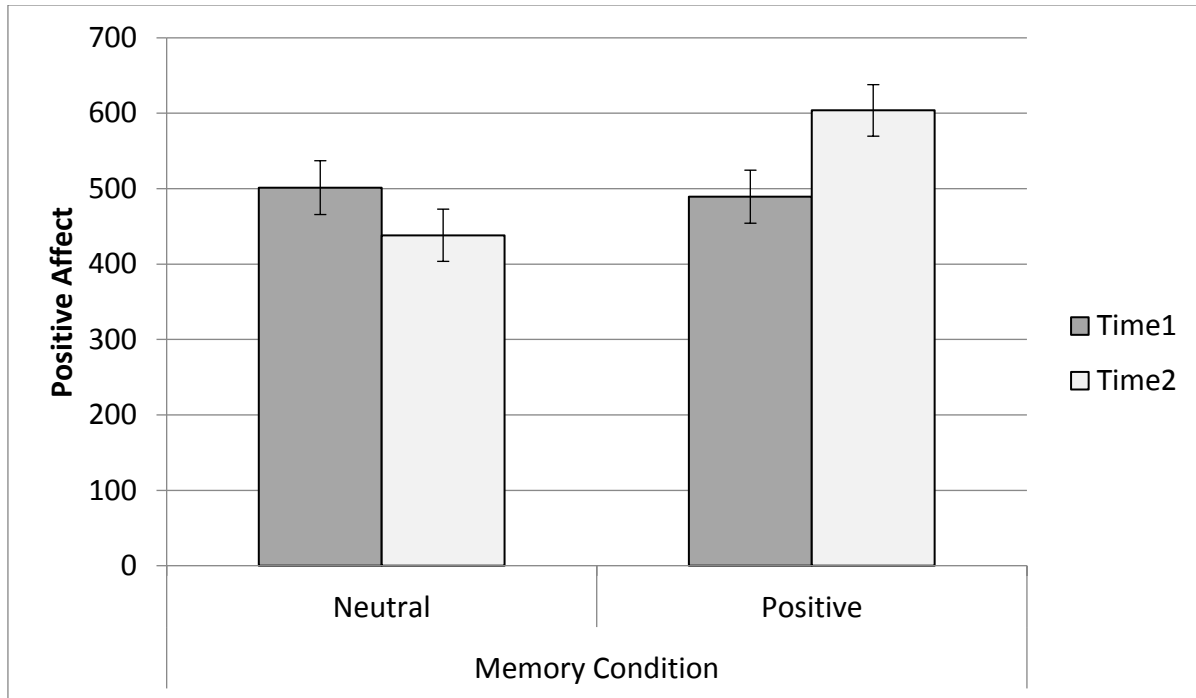Figure 1: The Effects of Memory Task on Positive Affect Collapsed Across Gratitude with Means and Standard Errors

FIGURE 2

Figure 2: The Interaction Effects of Memory Recall, Gratitude, and Time on Positive Affect with Means and Standard Errors
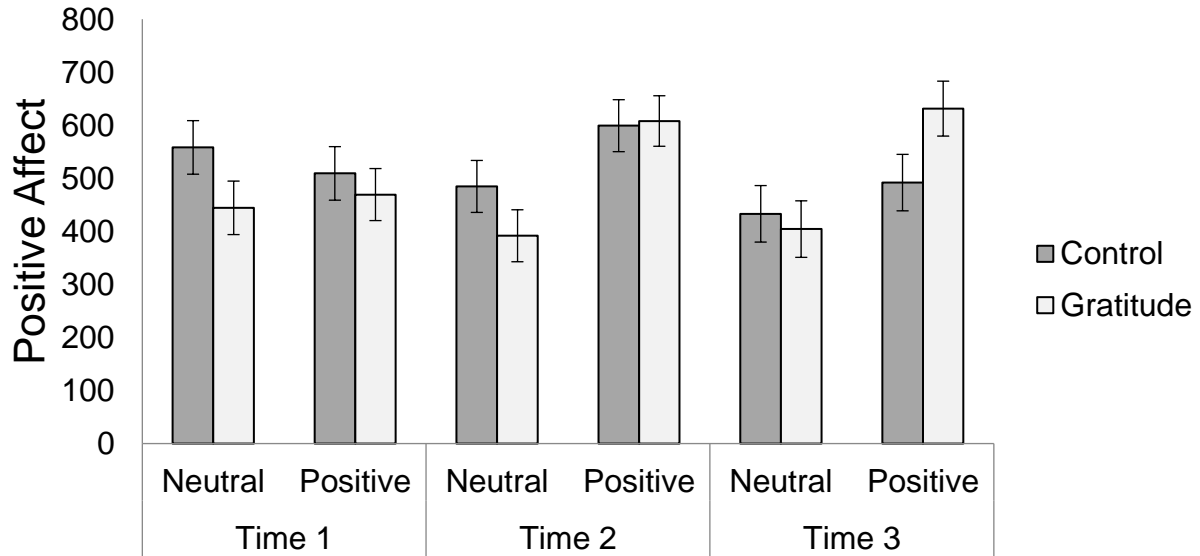
FIGURE 3

Figure 3: The Interaction Effects of Memory Recall and Gratitude Intervention on Resilience with Means and Standard Errors
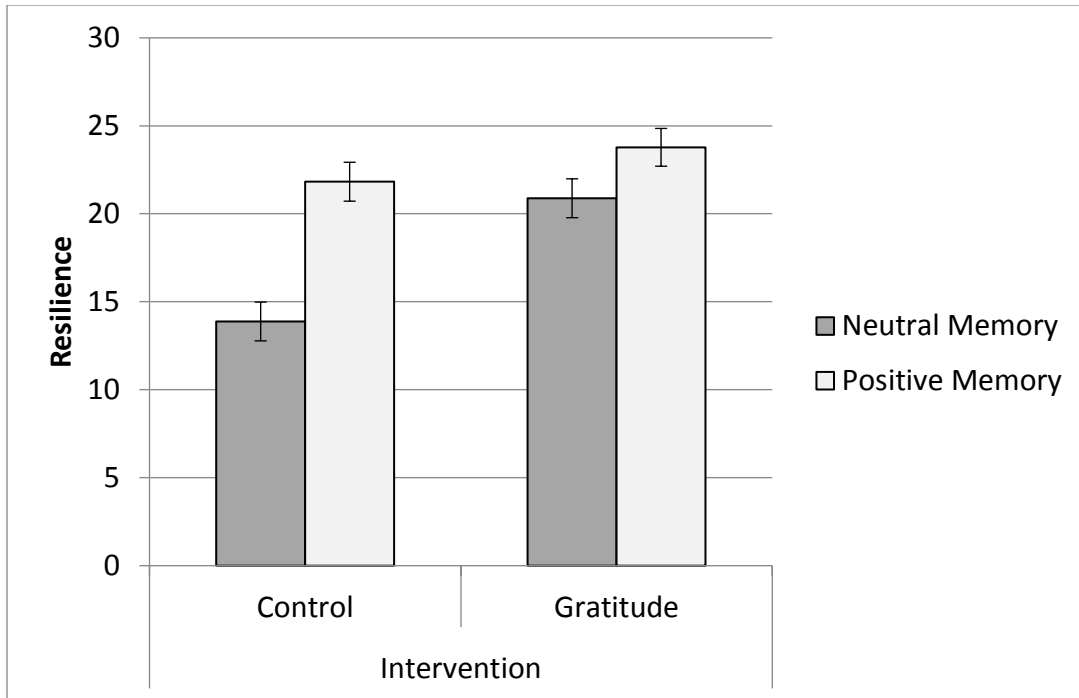
FIGURE 4

Figure 4: The Interaction Effects of Memory Recall and Gratitude Intervention on Coping Self-Efficacy with Means and Standard Errors