2023

The Effect Of A Positive Story Intervention On Positivity, Stress, Hope, And Trauma Symptomatology: A Longitudinal Randomized Controlled Trial

Allison Dukes
College of William and Mary - School of Education, atdukes17@gmail.com

THE EFFECT OF A POSITIVE STORY INTERVENTION ON POSITIVITY, STRESS, HOPE, AND TRAUMA SYMPTOMATOLOGY: A LONGITUDINAL RANDOMIZED CONTROLLED TRIAL

A Dissertation

Presented to the

Faculty of the School of Education

The College of William & Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

By

Allison Dukes

March 2023

THE EFFECT OF A POSITIVE STORY INTERVENTION ON POSITIVITY, STRESS, HOPE, AND TRAUMA SYMPTOMATOLOGY: A LONGITUDINAL RANDOMIZED CONTROLLED TRIAL

By

Allison T. Dukes

_____

Approved March 21, 2023 by

_____

Stephanie Dorais, Ph.D., Committee Member

_____

Daniel Gutierrez, Ph.D., Committee Member

_____

Spencer G. Niles, Ed.D., Chairperson of Doctoral Committee

To the owners of the stories in this project: for sharing their stories of love, connection, and inspiration with a world in need of light in the darkness.

ACKNOWLEDGEMENTS

So many people helped me get here, and I could NOT have done this without their unwavering belief in me. Doug: I don't know how you are still here. Through every up and down of this program, you have been there to pick me back up and celebrate my successes. Thank you for the countless mugs of tea and coffee, for the snacks and baked goods to uplift my spirits, and for reading every character typed in this dissertation (among other articles and assignments). Thank you for making it possible for me to do this, your support has been a blessing. You are the best friend, cheerleader, supporter, and partner someone could have. This accomplishment is just as much yours as it is mine.

To my parents, Debbie and Paul, for everything they have done to support me in this never-ending educational journey. From helping me cram for Reading Olympics, watching me psych myself out of spelling bees, and calling anyone you knew to help me with my homework when you couldn't; you've been there for everything and have supported me through it all. Thank you for reminding me I can do this, and for always making me laugh when I needed it most. To my brother Zach for the laughs, the FaceTime calls, and for always being my partner-in-crime. Thank you for the unending love and kindness you share with me and spread to others. I'm so proud to be able to tell others that I'm your sister. I love you all so much.

I also wouldn't have made it this far without the support of stellar faculty. To my committee, Drs. Niles, Dorais, and Gutierrez: your unwavering belief in me and encouragement of my ambitions is why I am here today. Deanio, thank you for being my "academic dad" and for showing me the ways in which Counselor Education can (and *will be*!) a rewarding career. Steph, you went from triadic supervisor to practicum supervisor, to professor, to research colleague, occasional statistics professor, and (most importantly) to great friend. This has been a

wild five years, and I'm so happy we were on our journeys together. Daniel, thank you for reminding me not to take things so seriously, that this career can also be silly, and for always pushing me to reach my potential; your dedication to your students is part (I could go on) of what makes you a treasure to this profession. To Dr. Mullen for always having his door open to help any student, and for always being a beacon, mentoring students along this (weird) journey. To Esther Benoit (and the Benoit family) for being part of both my foundation and flourishing. To Dr. Burgin for being there when I needed someone to talk to, and of course for the fruit snacks. To Drs. McAdams, Foster, Sheffield, and Gressard, thank you for being part of my journey to become a counselor, and for shaping a wonderful program that I will be forever grateful for. I'm so lucky to have been mentored by you all.

To my ginormous families: I'll never be able to thank you all for the support you have offered me for my entire life, especially during this period. You all have served numerous roles along the way: cheerleader, friend, mentor, and teacher. Without your influence, I do not know where I would be. I would be remiss to not specifically thank my first teacher and godmother Natalie for encouraging me to love learning. From coming over every night with Uncle Chris to teach me to read, to teaching me how to structure and write my first essay, you have been a crucial element of my foundation as a lifelong learner. You have far surpassed the responsibilities as godmother, and I will be forever grateful to you.

To the Devitt clan for your unending kindness and for inspiring me to be my best in higher education and beyond. Jojo, Connor, Cora, and whoever may come next, know that your family is extraordinary and you will always be supported and celebrated to reach your potential. To the family members that aren't with us anymore: Poppop Nelson, Poppop Dukes, Grandmom Dukes, and Fran Troy, my heart hurts knowing we can't celebrate this accomplishment with you,

as you all lifted me up and rooted for me. Wherever you are, please feel the love and hugs I'm throwing to you. I love you all so much.

To Jenny Niles (the better half of Jellison)—thank you for riding this coaster with me. Your passion for counselor education, your students, your family, and your future inspires me every day. On the darkest days of this program and dissertation process, you always brought the brightest light, encouraging me to keep going. You are a rockstar; E & O are so lucky to have you to look up to. To Philippa, Aishwarya, and MK, thank you for always reminding me of my ability to complete this degree and for teaching me about the educator I want to become. To Aiesha, Morgy, Kenson, Unity, Kaitlin, Leila, Nathaniel, Okenna, Adrienne, Michelle, Jeremy, Nancy, and Kat, and the wonderful alumni that came before me, thank you for modeling what this journey can look like. To Stefan, Jadams, and Young, I can't wait to see where you all go and how you continue shaping counselor education. To Michelle Morel for being my partner-in-crime, both in and out of the schooling we keep signing ourselves up for. Simply put, you are amazing and inspirational, and your tenacity to continue through your program and difficult phases of life challenges me to be a better person every day.

Finally, I wouldn't have made it this far without the support and encouragement from my soul teachers along this journey. To Tom Marte for teaching me that reading and writing could be fun, for giving me permission to be creative in schoolwork, and for ultimately inspiring me. To Steve McAloon for bringing a humanness in the classroom, and for showing me what it feels like to be enamored by learning. To Erin Markey for introducing me to psychology with your creativity and quick wit, and for showing me that teaching is something I could be interested in one day. To Meredith Malburne-Wade for seeing my potential and always being a beacon of support, and to Patricia Pytleski for bringing me into the Writing Center and sharing your grace

and kindness; you both challenged me to always strive to better my writing. To Jason Lanter for showing me that I can learn, be challenged, and love the process. To Jes Matsick for introducing me to social psychology and advocacy, and for serving as a guide throughout the Ph.D process. To Dever Carney, Henry Xiao, Rebecca Janis, Ryan Kilcullen, and Louis Castonguay, thank you for bringing me into your team, for teaching me about the research process, and (most importantly) that cheese in your fridge is (almost) always okay to eat at any time of day. To the women of the WAITT program, thank you for welcoming me into your space every week and trusting me to walk through this process with you, even if just for a short while. Your perseverance inspires me to be better every day. I am unconditionally grateful for you all.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The Coronavirus (COVID-19) pandemic brought many adverse effects to the global community. One effect was decreases in the mental health of college students due to forced isolations. College counseling centers, which had been experiencing long waitlists pre-pandemic, struggled to meet the demand as most had to switch to offering telehealth therapy services. Thus, the field of college counseling made a call for additional clinicians and interventions to support this population during this period of heightened need.

The field of positive psychology, made popular in 2000 by Seligman and Csikszentmihalyi, focuses on how positive emotions and positivity influence our wellbeing. Additionally, positive psychology looks to understand the mechanisms of how positive emotions and positivity can build our resilience against adverse experiences, such as stress and trauma. Given these theories, several positive psychology theories (e.g., Transactional Theory of Stress and Coping, Broaden and Build) serve as the theoretical framework for the present study. One form of promoting positivity is the cultural art of storytelling. Storytelling has existed for centuries and continues to serve as a tool to pass down generational wisdom and to teach. Storytelling has also been found to increase connection between groups and individuals, build resilience, and even protect against negative mental health outcomes, such as suicidal ideation.

Considering the isolations brought on by the pandemic, the aim of the present study was to determine whether listening to short stories of individuals overcoming adversity twice per day for four weeks impacted hope, stress, positivity, and trauma symptomatology. Namely, based on existing literature, the author hypothesized that the story intervention would contribute to increased hope and positivity and decreased stress and trauma symptomatology. The current study used a quantitative daily diary design to answer the research questions. After recruiting the

sample through multistage cluster sampling and purposive sampling, the participants were randomly assigned to either the treatment group or control group. A final sample of college students (n = 159) completed most of or the entire treatment and were thus analyzed. The treatment group was asked to watch a brief video on StoryCorps, an open-access library of digital stories, then answer a brief questionnaire twice per day; the control group complete the questionnaire with no video at the same schedule.

Using growth curve analyses and time series analyses to answer the study's five research questions, the author found that positivity in the treatment group increased at a higher slope when compared to the slope of the control group. Stationary R^2 values indicate a potential relationship between the independent and dependent variables; in this analysis, the scores on the Positivity Scale reported by the treatment (R^2 = .30) and control (R^2 = .38) groups indicate an adequate relationship in the model. In other words, the model accounted for 30% and 38% of the variance between the treatment and control groups, respectively. The results to the rest of the questions did not yield statistically significant results. The results of each research question are discussed, and implications are described with regard to positive psychology and college counseling. Further, limitations of the present study are presented, and areas warranting future research are highlighted.

Keywords: positive psychology, positivity, stress, trauma, storytelling, StoryCorps

THE EFFECT OF A POSITIVE STORY INTERVENTION ON POSITIVITY, STRESS, HOPE, AND TRAUMA SYMPTOMATOLOGY: A LONGITUDINAL RANDOMIZED CONTROLLED TRIAL

CHAPTER ONE: INTRODUCTION

On March 11, 2020, the World Health Organization (WHO) declared the coronavirus (COVID-19) outbreak to be a global pandemic (Cucinotta & Vanelli, 2020). Global lockdowns and stay-at-home orders not only impacted the workforce, but the wellbeing of people around the world (Hiscott et al., 2020). In the US, alcohol and firearm sales increased, and domestic abuse call centers reported increases in numbers of calls (Hiscott et al., 2020). School systems around the world were forced to urgently move education online (Onyema et al., 2020), and the drastic losses of jobs demanded the US government to prepare aid packages to support families and individuals, ultimately supporting the suffering economy (Nicola et al., 2020). Because of the pandemic's impacts on all aspects of human health, the mental health sciences began looking at ways to bolster positive emotion in the wake of the surge of negative emotion and isolation (e.g., Varma et al., 2022).

The pandemic also presented substantial mental health challenges. Demands for social distancing and stay-at-home orders increased loneliness and isolation (Hiscott et al., 2020), and worries about the future and grief felt for lost loved ones put strains on individuals' mental health. The results of people not having their interpersonal needs met leads to increased experiences of depression, anxiety, stress (Horigian et al., 2020; Pfefferbaum & North, 2020), and substance use (Horigian et al., 2020; Panchal et al., 2021). Additionally, Czeisler et al. (2020) reported elevated levels of substance use, anxiety, depression, and suicidality in adults in the US; these findings have been echoed by other scholars and organizations (e.g., Substance Abuse and Mental Health Services Administration [SAMHSA], 2021). With an estimated 1 in 5 Americans experiencing the death of a loved one during the pandemic (Lee & Neimeyer, 2022),

millions are experiencing grief and hopelessness during a seemingly never-ending pandemic (Clinton, 2020).

Early in the pandemic, Titov et al. (2020) reported an 89% increase (from September 2019 to March 2020) in calls from individuals seeking online mental health services in Australia for increased anxiety. Additionally, people already seeking mental health services may experience a reduction or loss of care, as facilities (i.e., in-patient, out-patient) implement COVID-19 protocols (e.g., elimination of group services, reduction of available beds due to social distancing measures, etc.; Moreno et al., 2020). With reduced options to ensure the safety of clinicians and people seeking services, increased waitlists for services have been reported by mental health care workers (e.g., Sammons et al., 2021). Despite the increased negative mental health symptoms experienced due to the pandemic, there is a lack of mental health care workers available to provide support services to those seeking help in alleviating their anxiety and reported hopelessness. Thus, creating alternate ways to increase one's overall wellbeing has become imperative for the helping professions.

Background

Pandemic-Related Trauma

Due to the concerns brought forth by the pandemic, international scholars have begun to consider whether the pandemic can be considered a traumatic experience on its own due to its continuous stressors. The isolation from others, fears over the health of individuals and their loved ones, and grief experienced due to the death of loved ones has created continuous, prolonged bouts of stress for the global population. For a period during the pandemic, Italy and the United States suspended funeral services, complicating cultural bereavement processes, thus negatively impacting our abilities to grieve loved ones (Masiero et al., 2020). COVID-19

mandates and consequences have resulted in not only individual daily traumas, but collective as well (Masiero et al., 2020). Kira et al. (2021) utilized a series of hierarchical multiple regression analyses and structural equation modeling to determine the predictability of both (a) cumulative stressors and traumas and (b) COVID-19 traumatic stress and its subscales (e.g., fears of present or future infection, economic impact, disruption to routine, etc.; Kira et al., 2020) on PTSD, depression, and anxiety. Their findings emphasize the predictability of COVID-19 on PTSD, depression, and anxiety, thus underlining our ability to classify the pandemic as a trauma (Kira et al., 2021). Unfortunately, urging mental health professionals to meet the demands of groups (e.g., nurses; Chen et al., 2021) struggling in the pandemic is not enough to enact needed change. Arañez Litam et al. (2021) describes the impact of trauma on professional counselors working during the pandemic. Specifically, counselors have struggled navigating stress and vicarious trauma since before the pandemic (Trippany et al., 2004); Arañez Litam and colleagues (2021) found this ongoing struggle, compounded by counselors themselves experiencing the trauma of the pandemic and increase in trauma-related content discussed in counseling sessions, contributes to greater perceived stress, which was found to be a significant predictor of burnout alongside resilience. If we are to consider the pandemic a trauma, we must consider the ways in which various groups have been impacted by COVID-19.

College Students in the Pandemic

Like nearly every group, college students have been impacted by the pandemic. College students typically face challenges related to high academic demands, establishing new relationships, and financial strain. For most traditional students (i.e., students entering college after high school), this is their first time away from their families-of-origin, and they begin differentiating themselves and taking on more “adult” responsibilities (Pedrelli et al., 2015). Pre-

pandemic, students were reporting high rates of mental illness, specifically anxiety and depression (Lipson et al., 2019). Within the population of traditional college students, suicide is the second leading cause of death (Turner et al., 2013). Pedrelli and colleagues (2015) report anxiety disorders, depression, eating disorders, self-harm, and attention-deficit/hyperactivity disorder (ADHD) are among the most experienced mental illnesses faced by college students. Additionally, non-traditional students (i.e., students returning to college after a period has passed since completion of high school) often have outside relationships and responsibilities, thus placing large demands on them in addition to academic work; this population risks increasing preexisting mental health concerns (Pedrelli et al., 2015).

The pandemic negatively impacted students exploring their newfound freedoms associated with being in college. Students away on their spring breaks were told break would be extended to minimize social gatherings to stop the spread; this resulted in many students staying home, completing coursework online in their homes, away from their friends and social supports. Some students did not have a home to return to, some were forced into volatile living situations, and students working to support their wellbeing while in college faced job loss and layoffs, exacerbating financial strain on students (Lederer et al., 2021). Wang and colleagues (2020) explored the impact of the pandemic on a sample of Texas undergraduate and graduate students; in their sample of 2031 participants, nearly 50% reported a moderate-to-severe level of depression, nearly 40% reported moderate-to-severe anxiety, and 18% of the sample reported suicidal ideations. Alarmingly, 71% of the participants also indicated the pandemic had contributed to an increase in their anxiety and depression; reasons include academics and difficulty transitioning to online learning, financial concerns, and concerns for the health of themselves and others (Wang et al., 2020). Due to these factors, researchers have made calls to

the field for interventions to help this population (Son et al., 2020). To complicate these calls-to-action, the issue of staffing shortages in college counseling centers has been exacerbated by the pandemic (Salimi et al., 2021); thus, establishing interventions to help students cope with increases in anxiety, depression, and suicidality has been placed at the forefront of supporting students navigating college.

Positive Psychology

Positivity and positive emotions are the hallmark constructs of positive psychology. Positive psychologists' goal is to understand the conditions and processes that contribute to human flourishing in people, groups, and the communities they inhabit (Gable & Haidt, 2005). The 20th century, largely due to the effects of World War II on returning soldiers, featured psychologists looking to understand the contributors to mental illnesses such as depression, post-traumatic stress disorder, and anxiety; in other words, the field of psychology positioned itself around the disease model, looking to understand and decrease the contributors to negative mental health experiences (Seligman & Csikszentmihalyi, 2000). The aim of positive psychology is to urge psychologists to consider the role and function of positive emotions in everyday life (Fredrickson, 1998). Frederickson (1998) urges psychologists to consider positive emotions as ways of expanding our thought-action repertoire, increasing our ability to think creatively, thus widening the possibilities of adapting to situations or experiences (Frederickson, 2009). Positive psychology is more than people choosing to do things to feel good or better in a moment; rather, Seligman (2019) argues that positive psychology is about "helping cultures and individuals better achieve what they already value" (p. 10), and that positive psychologists focus on what humans choose to do when not faced with an imminent situation or threat. Chapter two of this dissertation will describe several of the leading theories guiding the progression of positive

psychology: Seligman's Authentic Happiness Theory (2002), Well-Being Theory (2011), and ten emotions that make up positivity (Frederickson, 2009); further, the theoretical framework of this dissertation will continue in describing positivity, discussing the Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984), Barbara Frederickson's (1998, 2009) Broaden-and-Build theory of positive emotions, and the Revised Transactional Theory of Stress and Coping (Folkman, 2008).

Adversaries to Positivity

Since its inception in the early 21st century, researchers have looked to the relationship between positivity and its adversaries, including within college students. For example, Horiuchi et al. (2018) looked to understand the mediating effects of perceived stress on the negative relationship between positivity and negative affect. To examine this, Horiuchi and colleagues (2018) recruited a sample of 200 undergraduate students in Japan and administered the Japanese versions of the Positivity Scale (Caprara et al., 2012), The Perceived Stress Scale (Sumi, 2006), and the Positive and Negative Affect Schedule (Sato & Yasuda, 2000). Horiuchi et al. (2018) then analyzed the data using mediation analyses to test their two hypotheses. Both hypotheses were confirmed: positivity is negatively associated with perceived stress, which is positively associated with negative affect and negatively associated with positive affect (Horiuchi et al., 2018). This finding highlights the significant relationship between positivity (i.e., positive orientation) and stress. Additionally, the differentiation of positivity from positive affect emphasizes that these concepts are not the same; rather, positive affect can often be a part of positivity, which also takes into consideration factors such as well-being and life satisfaction in individuals (Seligman, 2012; Seligman & Csikszentmihalyi, 2000).

Since COVID-19 was associated with increases in depression, anxiety, and stress, this conceptualization has been tested with students experiencing the pandemic. Researchers in Turkey **(**Ocal et al., 2022), noting the higher amounts of reported hopelessness and anxiety in college students, looked to examine the depression, anxiety, and stress of undergraduate students and their contributing factors. The authors used the Positivity Scale (Caprara et al., 2012) to assess the relationship between reported positivity and depression, anxiety, and stress in a sample of 2153 students (Ocal et al., 2022). They observed that as participant scores on the Positivity Scale decreased, their depression, anxiety, and stress increased, in addition to their anxiety surrounding the pandemic (Ocal et al., 2022). These findings build on the existing literature regarding the inverse relationship between positivity and mental health concerns, such as depression, anxiety, and stress. Further, the pandemic exacerbated these existing concerns in college students (Bakioğlu et al., 2020), calling attention to scholars and mental healthcare professionals to help this population.

Hope

Lynch (1974) has defined hope as one's knowledge that negative situations will resolve, optimism for the future, and the ability for humans to balance intra- and interpersonal realities. Snyder (1995), one of the most influential hope scholars in the social sciences, defined hope as one's ability to create pathways to achieving goals, and to motivate themselves to accomplish them and their belief in themselves to do so. High hope has been long-established as a therapeutic factor contributing to client change in psychotherapy (Larsen & Stege, 2010a, 2010b, 2012; Snyder et al., 1999). Adding to this understanding, Larsen and Stege (2012) emphasize the relational experience of hope, with the therapeutic relationship being identified as a source of hope for clients. Additionally, clients feeling their therapist has hope for their outcome is

associated with greater client outcome in therapy (Larsen & Stege, 2012). Outside of therapy, hope can serve as a protective factor for daily conflict, especially within interpersonal conflicts (Merolla et al., 2021).

The opposite of experiencing hope is hopelessness. Bartholomew et al. (2021) write that hope can vary across domains; someone can express hope in their career goals, but experience hopelessness regarding alleviation of their depressive symptoms. Alloy and Clements (1998) describe hopelessness occurring when someone believes that negative experiences are due to chronic and global causes. Beck et al. (1974) described hopelessness as a hallmark symptom of depression, substance use, and physical illness. Beck et al. (1975) describe hopelessness resulting from a myriad of factors: feeling stuck in a situation with no solution to escape, hostility towards self, etc. (Beck, 1963). Hopelessness is often coined as a theory of understanding depression (see Abramson et al., 1989, 1995; Liu et al., 2015). According to Snyder et al.'s (1991) hope theory, hopelessness and suicidal ideation occurs when an individual's goals have been blocked or they struggle in attaining them. Zhang and Li (2013) found hopelessness to be a stronger predictor of suicide than depression in a sample of Chinese adolescents and young adults. Zuo et al. (2021) found during the pandemic, social support was negatively associated with hopelessness in an online sample conducted in China. With limitations on humans' ability to socialize and interact with others, and inabilities to access mental health care due to increased demand, hopelessness is on the rise, decreasing mental health around the world (Veldhuis et al., 2021). Understanding these constructs as being two ends of a continuum may prove helpful for mental health professionals. Moving clients on this continuum towards hope, away from hopelessness, may create more resilient individuals, ultimately aiding in suicide prevention (Huen et al., 2015).

Stress

Stress refers to demands (e.g., environmental, social, internal, etc.) presented to an individual or group that requires life adaptations to be made in response (Holmes & Rahe, 1967). Thoits (1995) describes three major forms of stress being identified in the literature: life events, chronic strains, and daily hassles. Life events are often acute, demanding sudden (often behavioral) changes in a short period of time (e.g., marriage, divorce, welcoming a new child, etc.); chronic strains are typically prolonged bouts of stress, consistently making demands over a period of time (e.g., poverty, marital problems); daily hassles are day-to-day stressors requiring minor behavioral changes throughout a day (e.g., traffic, making plans with a friend; Thoits, 1995). Since 1995, researchers have incorporated new concepts into the field's conceptualization of stress, such as the impact of social networking (Wolfers & Utz, 2022), college on young adults (Beiter et al., 2015), and divorce on family members (Shafer et al., 2017). Now in the pandemic, researchers have examined the impact of COVID-19 on stress. COVID-19 has contributed to increased fears surrounding health, illness, and mortality, contributing to greater reported stress in the global population. With greater stress has been accompanied by greater anxiety and overall mental health problems (Arslan et al., 2021; Yıldırım & Solmaz, 2020). In view of the relationship between stressful situations and increased anxiety (McLaughlin & Hatzenbuehler, 2010), offering individuals interventions and activities to mediate their stress may decrease negative symptoms (i.e., anxiety) brought on by the pandemic.

Trauma

When Felitti et al. (1998) published their world-renowned adverse childhood experiences (ACE) study on the impact of childhood trauma on the body, scholars began to shift their focus to build health professionals' knowledge of treating clients with experiences of trauma. In their

study, they conceptualized and assessed childhood trauma across two categories: category of abuse (e.g., physical, psychological, etc.) and household dysfunction by category (e.g., substance abuse, mental illness, etc.). The 10-item ACE measure assesses for prevalence through "yes" and "no" questions; the number of "yes" responses is equal to the number of ACEs an individual has experienced in their lifetime before the age of 18 years old. The number of reported ACEs have shown to negatively predict life outcomes later in life (e.g., smoking, experienced multiple depressive episodes, experienced an illness like hepatitis or jaundice, etc.; Felitti et al., 1998).

Since then, the dialogue surrounding trauma has expanded to adulthood as well. Trauma is commonly conceptualized in counseling today as the experience of a distressing event that temporarily demands complete allocation of internal resources, often resulting in long-term psychological impacts on an individual (Briere & Scott, 2015). Childhood adverse experiences have been suggested to not only later result in additional trauma experiences, but increases in stress experiences as well (Ortiz & Sibinga, 2017). Boals et al. (2020) argue that college students are a population in need of trauma and stress research; they describe the vulnerabilities and difficulties of navigating college and cite Frazier and colleagues' (2009) research finding 80% of students entering college having experienced at least one traumatic event. These findings, one can infer, have likely increased as students are entering or continuing in college after experiencing the traumatic nature of the pandemic. Based on this inference, scholars should continue exploring this area to better support students in the pandemic with experiences of trauma.

Theoretical Framework

Theories in research aid the audience in understanding concepts and relationships between constructs. They are tools to help scholars attempt to understand a portion of our

realities (Connelly, 2014). Theoretical frameworks in intervention research allow for researchers to understand and justify their rationale for their hypotheses, questions, intervention, and methodologies used (Connelly, 2014). Thus, in addition to the constructs, several frameworks will be discussed to illustrate the progression of theories supporting the intervention of listening to positive, pre-selected stories on an individual's positivity, hope, stress, and trauma symptomatology: Snyder's Hope Theory (Snyder, 1994; Snyder et al., 1991), Lazarus and Folkman's (1984) Transactional Model of Stress and Coping and Frederickson's (1998, 2013) Broaden-and-Build Theory, and the Revised Transactional Model of Stress and Coping (Folkman, 2008), of which the latter is used to bolster this study.

Transactional Theory of Stress and Coping

Lazarus and Folkman's (1984) *transactional theory of stress and coping* theorizes individuals are consistently appraising their environments and relationships for stimuli. Cognitive appraisal is the process of evaluating a stimulus or situation and ascribing meaning based on that process (Biggs et al., 2017). Lazarus and Folkman (1984) describe two forms of appraisal that can occur during this process: primary and secondary appraisal. *Primary appraisal* refers to the meaning-ascription process of appraising a stimulus, *secondary appraisal* involves the individual determining "what can be done to manage the stressor and its resultant distress" (Biggs et al., 2017, p. 353). When the appraised stimuli are perceived to be challenging or threatening, the resulting emotions, such as fear or disgust, lead the individual to utilize coping strategies to decrease the emotions bringing discomfort. Coping is described by Lazarus and Folkman (1984) as the body's process of modifying cognitive and behavioral efforts to resolve a perceived stressor; they highlight two forms of coping undergone during this process: problem-focused and emotion-focused. *Problem-focused coping* involves directly managing the stressor,

whereas *emotion-focused coping* involves the individual managing their emotions brought on by the perceived stressor. When implemented successfully, the individual experiences positive emotions, gains feedback regarding their outcome efforts, and learns new information regarding their environments; this is referred to as *cognitive reappraisal*. According to Lazarus and Folkman (1984), this cycle is a continuous, cyclical transactional process between individuals and their environments.

Hope Theory

Snyder et al. (1991) defines hope as a motivational state resulting from individuals having both the agency to reach goals and the ability to identify pathways towards accomplishing them. Snyder (2002) created the Hope Theory to illustrate his theory. Snyder (2002) describes that individuals learn the importance of developing pathways and agency throughout their development beginning in infancy. Those who are not encouraged to reach their goals or have barriers placed in their way towards achieving goals, he argues, tend to lack hope, and this deficit influences the way they matriculate through the cycle. Similar to Lazarus and Folkman's (1984) Transactional Theory of Stress and Coping, we appraise an anticipated outcome of reaching a goal to decide if we will engage in goal pursuit. Snyder (2002) argues those who have successfully reached their goals are likely to have higher trait hope and are more likely to pursue "stretch goals" based on past performance in similar pursuits (p. 253). Further, some may not understand the outcome until they start working towards the goal, then deciding if they would like to continue with the pursuit.

Broaden-and-Build

Barbara Frederickson's (1998, 2001, 2013) *Broaden-and-Build Theory* emphasizes the role of positive emotions in helping individuals adapt to challenges. Instead of focusing on

negative emotions and determining how to remedy them as suggested by past scholars, Frederickson (2013) posits positive emotions can serve a protective role, *broadening* our ideas about possible actions, ideas, and thoughts to encourage individuals to become more receptive and creative. Further, Frederickson (2013) adds that positivity helps people across cultures feel connected to people and communities, straying from "me" versus "them" mentalities and towards "us" and "we." As a result of broadening our mindsets through positivity, we are then able to *build* our resources, such as psychological strengths (i.e., resilience, confidence), good mental habits (i.e., increased mindfulness and self-awareness), social connections (i.e., increased relational satisfaction), and physical health (i.e., lower blood pressure, better sleep hygiene; Frederickson, 2013). These are all contributors to one's overall positivity (Folkman, 2008; Seligman & Csikszentmihalyi, 2000), improving their ability to appraise stimuli and situations and cope appropriately and successfully. Through this theory, Frederickson suggests focusing on positivity allows individuals to broaden-and-build their mindsets, allowing them to flourish.

Revised Transactional Theory of Stress and Coping

In response to the rising influence of Positive Psychology, Folkman revisited the Transactional Theory of Stress and Coping to include meaning-focused coping and positive emotions (Folkman, 2008). This inclusion allowed for the model to further illustrate the processes that we undergo when a situation has not been "favorably resolved" (p. 5). *Meaning-focused coping,* compared to emotion-focused and problem-focused coping, does not require a situation; rather, it can emerge for an array of reasons (i.e., because of a failed resolution to a situation or stressor). The urge one may feel to find new pathways to continue working towards an identified goal may trigger positive emotions, which in turn help us sustain the process of coping and thus rebuilding our coping skills. Compared to the original model, positive emotions

can emerge during the appraisal and coping process, even when faced with failure, as opposed to being solely an outcome of reaching successful or favorable resolution. This revised model takes into consideration the literature (e.g., Frederickson, 1998, 2009, 2013; Seligman, 2011; Seligman & Csikszentmihalyi, 2000) surrounding the role of positive emotions in prevention and healing; sheds additional light on the processes and individual differences underlying Snyder's Hope Theory (2002; Snyder et al., 1991); and extends our understanding of coping to consider the ways in which we attribute meaning to situations, and what motivates people to work towards a goal despite any obstacle or challenge. Due to the concerns outlined at the beginning of this chapter, individuals affected by the pandemic are applying the positive faculties to cope with daily and chronic stressors. Because of this, these frameworks were identified to account for the leading theories in positive psychology, their progression based on the literature, and to provide a foundation for the present study.

Jeong et al. (2020) gave 35 college students a positive coaching robot. The robot was kept in the students' rooms over the course of one week; once per day, the robot would greet the participant, have them take a brief survey, conduct a brief positive psychology session, administer another study, and then thank them for their participation. Over the week, the researchers found that the students' wellbeing, mood, and willingness to change increased (Jeong et al., 2020). Additionally, Lattie et al. (2019) conducted a systematic review of interventions to support college students' mental health. The authors found 89 interventions; based on their findings, they found that 80% of the pre-existing intervention were implemented online (Lattie et al., 2019). Further, Tucker and colleagues (2020) conducted a study to examine whether listening to a story of someone overcoming suicidal ideation would contribute to the listener then seeking mental health assistance and information. They found that listening to just one story contributed

to a small increase in information-seeking in college students. Although diverse in goals and findings, these studies suggest the power of stories and positive psychology, as well as the efficacy of administering treatments or interventions online to support college students.

Proposed Intervention

This study will test the effectiveness of a story-focused intervention for college students. Specifically, the intervention will ask student participants to watch a story embedded from StoryCorps twice per day for four weeks. StoryCorps is a nonprofit organization whose mission is to collect stories from Americans across the country. Since beginning in 2003, StoryCorps has become the largest collection of human voices ever collected (StoryCorps, 2023). Stories vary across categories, including September 11th, Stonewall Outloud, and Military Voices Initiative, and range from two to five minutes in length. I selected stories focused on positive content (i.e., stories featuring human connection, gratitude, overcoming a period of adversity) as opposed to content that may be upsetting to some viewers (i.e., a woman discussing her final conversation with her husband who passed away in the 9/11 World Trade Center attacks). The videos were then uploaded to Qualtrics (2020) and tested with a small group (n = 2) of college students from a Northeastern university. The purpose of piloting the group was to collect opinions of the videos. After receiving positive responses (see chapter three for examples), the videos were then entered into individual surveys to send out to study participants for the four weeks.

The participants assigned to the experimental group were emailed a link to a story (every email reminder will take participants to the same video for that day and time). Control group participants will be asked to just complete the surveys. The daily surveys include items from two measures: the Positivity Scale (Caprara et al., 2012) and the Stress Numerical Rating Scale (Kartvounides et al., 2016). Participants will need to complete 50% of the surveys (watching the

video allows participants to continue to answer the survey questions) to receive that week's compensation. On the seventh day of each week, participants will be asked to complete an assessment battery comprising the aforementioned scales, in addition to the Adult Hope Scale (Snyder et al., 1991) and the Trauma Symptom Checklist-40 item (Briere & Runtz, 1989). This schedule will continue for the four weeks of data collection to assess the impact of listening to stories on individuals' positivity, hope, stress, and trauma symptomatology.

Purpose

This randomized controlled trial's primary aim is to examine the effectiveness of listening to a positive story on an individual's positivity, hope, stress, and reported trauma symptomatology over the course of a four-week intervention. Based on the theoretical frameworks outlined, participants may experience increased positivity, which in turn may assist them in engaging in meaning-focused coping, sustaining coping in the face of a stressor, and restoring resources to equip them to face another stressor. If stress is reduced, then additional stressors and experiences are likely to not be registered as a traumatic experience, thus leading to trauma symptoms (Stanley, 2019). Provided these aims, the research questions below guided the present study.

Research Questions

1. Is there a significant difference in the levels of positivity, hope, stress, and trauma symptomatology in college students receiving a four-week story intervention as compared to a waitlist control group?
2. What is the effect of the positive story intervention on the slope and intercept of the trauma trajectory, and are these effects explained by participant level positivity?

3. To what extent does the positive stories intervention serve as an exogenous variable in increasing positivity and reducing stress?
4. Will positivity, as measured by the P Scale, function as a state or trait over the course of a four-week story intervention?
5. Will stress, as measured by the SNRS-11, function as a state or trait over the course of a four-week story intervention?

Significance

The proposed study will add to the literature on the temporal dynamics of positivity, hope, stress, and trauma symptomatology in college students. If successful, the proposed intervention will offer clinicians and college counselors a solution to increase positivity and decrease stress and trauma symptomatology in college students without offering direct counseling services. Further, the implementation of a time series design will illustrate the daily fluctuations of positivity and stress throughout the course of a day and a week. Daily diary designs also allow counselors and mental health researchers to reduce the risk of retrospection bias, and to better examine the fluctuations in an individual's daily life, ultimately better understanding the human experience (Iida et al., 2012). Utilization of this design to assess the efficacy of the proposed intervention will offer a thorough evaluation of treatment, better assisting clinicians in supporting the clients they serve.

Summary

Chapter one provides a detailed overview of the problem facing college students and college counseling centers during and emerging from the COVID-19 pandemic. Additionally, this chapter offers an overview of the constructs involved in the proposed study, the theoretical frameworks justifying the rationale for this intervention, and the research questions posed to

accomplish the described aims. If successful, this intervention study will offer clinicians an additional source to utilize with the college students they serve in their centers. Collecting data at various time points will offer counselors information regarding the fluctuations of positivity, hope, stress, and trauma symptomatology over a four-week intervention, and the relationships between the three constructs.

CHAPTER TWO: LITERATURE REVIEW

Chapter two starts with an overview of the college population, then describes the relevant theories regarding positivity, stress, and trauma symptomatology and empirical gaps in the existing college counseling literature. I then discuss the practice of storytelling across cultures, and the impact storytelling and listening to others' stories of overcoming adversity has on individuals. Further, I expand on the theoretical frameworks of the Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984), Hope Theory (Snyder, 1996; Snyder et al., 1991), the Broaden and Build Theory (Frederickson, 2001, 2004, 2009, 2013), and the Revised Transactional Theory of Stress and Coping (Folkman, 2008) to illustrate the impact of listening to a positive story on one's ability to navigate stressful situations and regulate functioning. Lastly, I discuss the importance of the proposed intervention and the potential implications for counseling and intervention research.

Positive Psychology

After World War II, the field of psychology and social sciences focused on the negative outcomes of experiencing trauma for soldiers returning from war (Seligman & Csikszentmihalyi, 2000). With the field redirecting its focus onto the negative, less research attention was given to preventative factors like the impact of positivity on people's lives. Thus, positive psychology entered the research sector to focus on these individual differences. The primary aim of positive psychology is to understand how differences in individuals' outlooks can impact individual differences and life outcomes (Caprara et al., 2012; Seligman & Csikszentmihalyi, 2000). Seligman and Csikszentmihalyi (2000) describe the field of positive psychology as centering around:

> valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic. (p. 5)

Additionally, Seligman (2002) describes the three pillars comprising positive psychology: positive emotion (e.g., confidence, hope), positive traits (e.g., strengths and virtues), and positive institutions (e.g., strong families, free inquiry) that in turn support positive emotions and strengthen positive traits to help one when facing distress.

Caprara et al. (2012) describe the impact of a positive outlook on one's life, including its ability to predict "depression, positive and negative affectivity, and quality of friendships and health" (p. 702); further, studies such as Ocal et al. (2022) have demonstrated through their study of global college students after the pandemic that positivity (as measured by the Positivity Scale; Caprara et al., 2012) had a strong, statistically significant inverse relationship with depression, anxiety, and stress. While this inverse relationship exists, this does not mean that positive psychology exists under the pretense that the rest of psychological research is inherently negative; rather, positive psychology looks to better understand people's virtues, what brings people joy, and what influences positive outlooks in order to ensure psychology captures the full range of the human experience (Gable & Haidt, 2005). When discussing positivity, Frederickson (2009) posits six facts:

1. Positivity feels good, helping us feel lighter and more motivated;

2. Positivity changes how your mind works, broadening your mindscape and increasing the possibilities you can envision for yourself;
3. Positivity transforms your future, helping you to locate resources (e.g., coping skills, resilience) to cope with the adversities we face daily;
4. Positivity puts the brakes on negativity, helping us calm our bodies in the moment to make positive choices and decisions for the future;
5. Positivity obeys a tipping point, and that encouraging positivity amidst negative feelings can result in extraordinary outcomes (as compared to linear relationships with proportionality); and
6. You can increase your positivity. (pp. 9-11)

Despite scholars attributing positive psychology's entrance into psychological research to Martin Seligman's 1998 Presidential Address to the American Psychological Association, the holistic approach of positivity has always been with us; it just has not been researched exclusively like it is today (Linley et al., 2007). Linley and colleagues (2007) describe evidence of its unrecognized existence in the early work of psychology's "founding fathers": William James' (1902) writings on "healthy mindedness," the field's overlap with humanistic psychology and the emphasis on the "fully functioning person" (Rogers, 1961), and Maslow's (1968) hierarchy centered around self-actualization as the goal for human happiness. Because of these early allusions to positivity and the major players now in the field (e.g., Martin Seligman, Barbara Frederickson, Charles Snyder), different scholars will likely offer different definitions of positive psychology, each placing differing amounts of emphasis on its aspects (Linley et al., 2007). Thus, the following sections will describe several positivity theories that still guide the work of positive psychologists today.

Authentic Happiness Theory

The Authentic Happiness Theory was postulated by Martin Seligman in 2002 to suggest three routes to happiness: positive emotion, engagement, and meaning (Seligman, 2011). Positive emotions include joy, inspiration, gratitude, hope, warmth, and comfort, and are what one commonly thinks of when they hear "positivity" (Seligman, 2002). Engagement within this theory refers to act mental act of experiencing, "flow" (Seligman, 2002, 2011). Flow refers to the time one spends focused on and absorbed by a task (Csikszentmihalyi, 1990; Seligman, 2002, 2011). What may surprise an individual is that we can experience flow without feeling one or more of the positive emotions described by positive psychology researchers. In fact, as Seligman notes (2011), "if you ask people who are in flow what they are thinking and feeling, they usually say, 'nothing'" (p. 11). As we increase our involvement with a task or activity, Seligman describes that we in turn reduce our cognitive and emotional resources (2011). The third piece of the theory, meaning, regards the meaning or value we attribute to the tasks we choose to become involved with. For example, one could work on a dissertation for a year and find moments of flow throughout their many work periods. If the candidate does not enjoy the topic or see the merit in what they are doing long-term, they are likely to experience less positive emotion and question their engagement. Thus, all three work together at varying degrees to contribute to our overall happiness.

Well-Being Theory

Nine years after publishing *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment*, Seligman revisited Authentic Happiness Theory due to three shortfalls (Seligman, 2011). The first reason for shifting theories is because "happiness" is societally equated to being in a "cheerful" mood, something that positive

emotions does not quite equate to; additionally, engagement and meaning do not particularly explain how or why we feel the emotions we feel. The second reason Seligman identifies is that life satisfaction, a key indicator of authentic happiness, is largely indicated based on the mood one is in when asked about their overall life satisfaction. Many people may not feel particularly cheerful in every moment but are able and choosing to engage in meaningful activities that bring them joy. The final reason Seligman offers for straying from Authentic Happiness Theory is that the original theory does not account for the choices and decisions people make to feel achievement, which in turn contributes to overall life satisfaction. Because of these reasons, Seligman shifted to what he called Well-Being Theory (WBT).

WBT regards well-being as a "construct" with many contributing variables or element that comprise it (Seligman, 2011, p. 14). Seligman (2011) argues that for an element to be considered a contributor to well-being, it must have three properties: (1) the element contributes to a person's well-being; (2) people pursue the element for the sake of the element, as opposed to obtaining it to get another of the elements; and (3) it is measured exclusively as opposed to a contributing or dependent factor (p. 16). Thus, Seligman (2011) offered five elements that comprise WBT: (a) positive emotion, (b) engagement, (c) meaning, (d) positive relationships, and (e) accomplishments. Collectively, these elements are often referred to in the theory (Seligman, 2011) and within existing literature as "PERMA" (e.g., Coffey et al., 2016; Juna et al., 2022; Umucu, 2021).

WBT has been used widely by scholars to apply the theory to various populations, including college students (Coffey et al., 2016; Kovich et al., 2022), student veterans with and without disabilities (Umucu et al., 2021), and individuals who have retired (Asebedo & Seay, 2014); further, it's been applied to understand well-being's relationship with countless

constructs, including compassion for self and for others (Tendhar et al., 2022), and to measure the effects of interventions and experiences on individuals' well-being (e.g., effect of a positive psychology course; Smith et al., 2021). For example, a recent qualitative study recruited a sample (n = 3) of Finnish university students to understand whether autonomous sensory meridian response (ASMR) experiences increased participant well-being using to the PERMA model (Chan & Uusiautti, 2022). ASMR is a newly researched phenomenon which describes the "tingles" felt by individuals due to various external (e.g., sounds) and internal (e.g., meditating, thinking about a trigger) sensory experiences (Chan & Uusiautti, 2022; Tihanyi et al., 2018). The tingling sensation is often described as starting in the scalp, working its way down the spinal cord, and spreading to the person's limbs (Cash et al., 2018); further, not every person reports being able to experience the sensation (Chan & Uusiautti, 2022; Valtakari et al., 2019). In their study, Chan and Uusiautti (2022) recruited university students that reported experiencing the effects of ASMR, interviewed them about their experiences, and used PERMA as a guide for coding domains within the interview transcriptions. They found that participants experiencing and describing the effects of ASMR were able to identify the ways in which ASMR has contributed to Seligman's five elements of well-being (Chan & Uusiautti, 2022). Their findings suggest that university students who can experience and engage with ASMR, a mindfulness practice, may experience increases in their overall well-being (Chan & Uusiautti, 2022).

Ten Emotions of Positivity

When looking to understand PERMA, various emotions and experiences influence our perceptions of the elements comprising the WBT. In her book *Positivity: Discover the Upward Spiral That Will Change Your Life*, Barbara Frederickson (2009) describes positive emotions that fuel our broadening and building of our psychological resources to cope with stressors. While the

Broaden-and-Build Theory of Positive Emotion (Frederickson, 1998, 2001, 2009) will be discussed in depth within this chapter, this section will focus primarily on the ten emotions described by Frederickson. She identified these forms of positivity for several reasons: (1) they are being focused on in Frederickson's research and in the research of other positive psychologists, and (2) they are the ten most common emotions that people describe experiencing, regardless of the population (e.g., college students, working individuals; Frederickson, 2009). As you will see, these emotions are often experienced within relationship, and can contribute to Seligman's (2011) elements of WBT. The emotions described include joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe, and love (Frederickson, 2009). Frederickson (2009) offers them in this specific order to illustrate the frequency with which these emotions are described by others; love, however, is a product of the other nine emotions, hence its placement as last in this list.

Joy

Joy as a construct has accrued several varying definitions throughout research over the years. While commonly conceptualized as a positive emotion, joy can also be seen as a dispositional state; some people can be more joyful than others, and individual dispositional differences can influence how we experience joy within our lives (Johnson, 2020). Joy is characterized as a state experienced by good events (e.g., receiving a bonus, being surrounded by good friends) that can bring other good feelings with it (Johnson, 2020) and can result in changes in our visual perception, motor behavior, and cognitive processes (Frederickson & Levenson, 1998; Johnson, 2020). Joy can (a) make "colors seem more vivid," (b) lead to us smiling involuntarily, and (c) broaden our cognitive faculties that can expand our resources and learning of different thought processes (Frederickson, 2009, p. 41; Johnson, 2020). Through joy, we can

learn new skills and relationships and can contribute to how we experience the five elements of WBT (Johnson, 2020).

Gratitude

Gratitude is commonly described as being within the family of other moral emotions, such as empathy and guilt (McCullough et al., 2001) due to its ability to motivate us. It differs from the feeling of indebtedness in that gratitude can motivate us to "give back" to others that may have helped us (Frederickson, 2009, p. 41). Gratitude does not arise when we feel we *owe* kindness to another individual because of kindness they showed us; it is altruistic and done freely (Frederickson, 2009). McCullough and colleagues (2001) discuss that gratitude can look different across various cultures and geographical areas, so to create a universal description of the concept is difficult. Additionally, gratitude can also be considered as a state and trait; some individuals may wake up and feel the urge to give back despite not having received kindness from another person (Wood et al., 2010). Those that describe feeling gratitude are more likely to feel loved and cared for by others; therefore, it is reasonable to consider gratitude as a contributor to one's overall well-being (Frederickson, 1998, 2009; Frederickson & Levenson, 1998; Gulliford et al., 2013; McCullough et al., 2001).

Serenity

Serenity is compared to joy in that we can experience the warmth and happiness brought on by joy; the difference is that serenity brings an inner peace and calmness (Floody, 2014). The experience of serenity has been described across various areas, including psychology, nursing, and spirituality (Floody, 2014). Frederickson (2009) describes serenity as a feeling where we can stop and reflect on the processes and experiences that have contributed to create a certain moment. Commonly referred to as the "afterglow emotion" (Frederickson, 2009, p. 42), serenity

can create a sense of retreat for us, allowing us to calmly look back after experiencing bouts of other positive emotions and consider what is important and meaningful to us (Yih et al., 2020). This can allow us to determine what brings us joy and spark creativity.

Interest

Interest, according to Sylvia (2010), is a "knowledge emotion," due to its ability to pique our attention and curiosity (p. 57). When we experience interest, we may be experiencing a curiosity about a potential possibility(s), or we may find something fascinating, leading to us devoting attention to it. Although similar to curiosity, interest is different in that it can occur no matter the levels of knowledge a person has about different topics and skills; curiosity is considered to be a subset of interest which occurs when we lack information or understanding of a topic or experience (Grossnickle, 2016; Tang et al., 2022). Experiencing interest can broaden our horizons, allow us to consider different possibilities, and learn different skills (Frederickson, 2009).

Hope

Hope is a unique positive emotion in that it can occur without other positive emotions accompanying it (Frederickson, 2009). We can experience hope alongside fear, hoping that a situation can get better despite the contributing fear factors (Frederickson, 2009). When we experience hope, we may be longing for a favorable outcome to a situation (Yih et al., 2020). Hope, like other emotions within this section, can motivate us to make change or acquire skills that may contribute to a desired outcome. It is because of hope that we can identify and work towards meaning-focused goals without being intimidated by our eventual demise (Frederickson, 2009).

Pride

Pride is a positive emotion we experience after completing a goal or task. These goals and tasks must be perceived to the individual as meaningful or congruent with themselves or their long-term goals (Nakamura, 2013). Pride can be experienced when we are able to reflect and see that our efforts produced a meaningful difference (Frederickson, 2009). Pride, compared to other emotions discussed in this section, is more self-focused, offering us self-evaluative information regarding our skills and motivates us to continue with behaviors that contributed to us experiencing pride (Haidt, 2003, Nakamura, 2013). Additionally, pride can be experienced by perceived competence in a skill or activity, through engaging in virtuous behaviors that result in increased connection with others, and by accomplishing a task deemed morally good by greater society (Nakamura, 2013). By pursuing tasks, behaviors, and skills that contribute to experiencing pride, we are pursuing a life filled with meaning and greater satisfaction (Nakamura, 2013).

Amusement

Amusement is characterized by joviality which is often shared when in relation with others. Amusement is unique in that is an emotion we can see others experiencing: Duchenne smiles (i.e., raised cheeks), laughter, and sometimes open jaws when laughing (Sauter, 2017). While some may confuse amusement for joy (Sauter, 2017), several emotions can be experienced at one time; one may be laughing and experiencing amusement which contributes to greater joy in a period. When experiencing amusement with others, you are likely feeling safe and secure within your environment (Frederickson, 2009). Those that experience amusement are more likely to report greater relationship satisfaction and overall well-being (Lazzaro et al.,

2022), emphasizing the emotion's contributions, like with other emotions described in this section, to one's well-being.

Inspiration

When we experience someone doing something that emphasizes humanity, connectedness, and selflessness, we are likely to report feeling inspired by these actions (Frederickson, 2009). Inspiration can in turn motivate us to engage in activities that are considered morally good and kind (Thrash et al., 2014). Frederickson (2009) describes inspiration as being an emotion that can motivate us away from self-absorption and expand our focus outward to help others. There are multiple conceptualizations of inspiration: the tripartite conceptualization, the component model, and the transmission model (Thrash et al., 2014). The tripartite model describes three core characteristics needed to fully define inspiration: transcendence (e.g., becoming aware of other possibilities), evocation (e.g., we are inspired by others), and approach motivation (e.g., considering transcendence and evocation and motivating oneself to act; Thrash & Elliot, 2003; Thrash et al., 2014). The component model considers inspiration to occur as a two-stage process: being inspired *by* and inspired *to* (Thrash & Elliot, 2004); the process of being inspired by is similar to the relationship between transcendence and evocation in the tripartite conceptualization, and being inspired to act is like approach motivation (Thrash et al., 2014). Lastly, the transmission model conceptualizes inspiration as the driving force that helps us translate intrinsic motivation to action (Thrash et al., 2010, 2014). Regardless of conceptualization considered, inspiration involves us feeling inspired to act based on actions done by others, thus resulting in greater motivation to engage in skill-building and action-taking.

Awe

Awe, like amusement, is an emotion we can see experienced by other people; it's characterized by raised eyebrows, open jaw, and audible inhalations (Sauter, 2017). Similar to inspiration, awe can result from witnessing a person or action that transfixes us and stops us in our tracks (Frederickson, 2009). Experiencing awe can be considered the first piece to then experience inspiration. Additionally, if we find ourselves reflecting in serenity because of a great moment (e.g., seeing a beautiful sunset), we may also experience awe because of the beauty and greatness of the sight. Frederickson (2009) notes that despite awe being considered a positive emotion, it has the potential to venture into negativity if awe results in us feeling small in comparison to the object of attention; additionally, we can experience awe and fear simultaneously depending on the foci. When accompanied by other emotions (e.g., serenity, joy, amusement), it can serve as a source of inspiration and pride.

Love

As mentioned, love is described last because it encapsulates all other positive emotions (Frederickson, 2009). We can experience joy when with others we love, be grateful for something kind done by someone we love, serenity and pride when we reflect on the joy shared with friends and family, interest in something that a loved one is interested in, hopeful for more time for more possibilities with loved ones, share laughter with one another, experience awe and subsequent inspiration by the goodness shown by loved ones (Frederickson, 2009). When experiencing love, we can also find that we smile more, leading to crow's feet forming by our eyes, a more open posture, engagement through more head nods, a slowing of the speed at which we talk (Sauter, 2017). We can also show love because of a situation or environment we find ourselves in. For example, a man that has lost his wife who loved sunsets may eventually love

going outside every day to capture a picture of a sunset and may find comfort while in awe. We may also experience a love of life (Abdel-Khalek, 2007), or a love of a hobby because of the positive emotions the hobby brings. Regardless of the source, love is universal and our ability to experience love knows no bounds.

Hope Theory

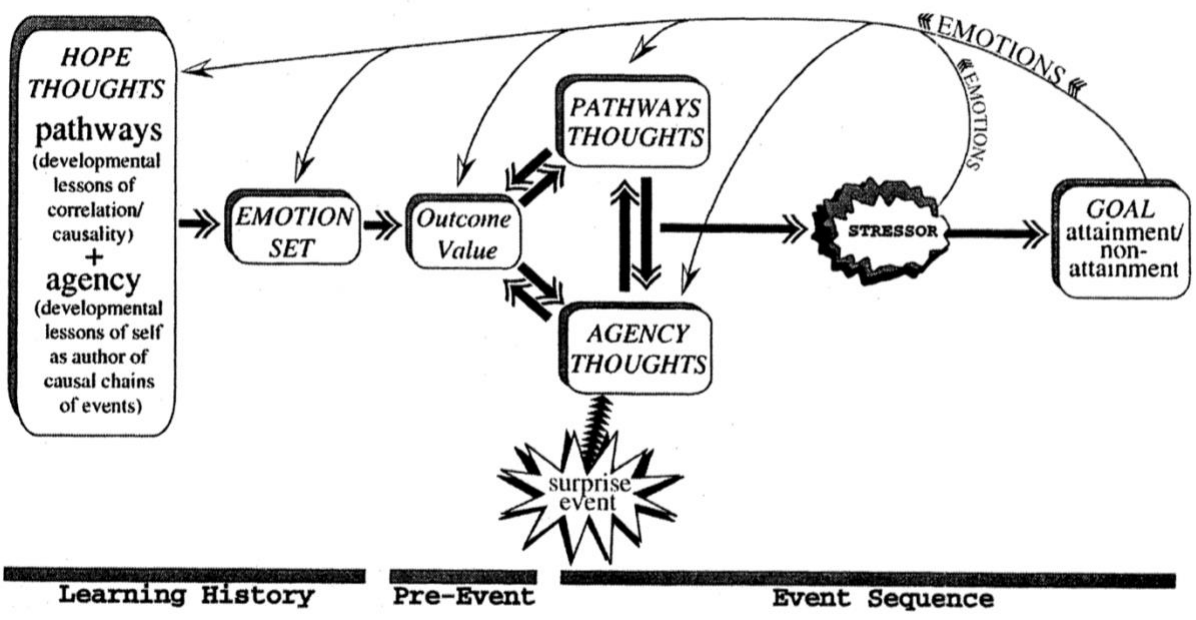
Although described briefly as an emotion in the previous section, hope (like other positive emotions) has a body of literature and theories that serve to better understand the construct. The concept of hope has been historically looked at by scholars from various fields and paradigms. Lynch (1974) describes hope as one's (a) understanding that negative situations will resolve themselves, (b) optimism for the future, and (c) ability to balance intra- and interpersonal realities. Frederickson (2009) defines hope as a sustaining force, arising "precisely within those moments when hopelessness or despair seem just as likely," and is "fearing the worst but yearning for better" (p. 43). Snyder et al. (1991) define hope as the result of the interaction between agency (determination) and pathways (finding ways to meet goals). Although hope is desired, it cannot last forever and can be difficult to sustain (Weingarten, 2010).

One of the leading theoretical frameworks of hope is by Charles R. Snyder. Snyder et al. (1991) defines hope as a motivational state resulting from individuals having both the agency to reach goals and the ability to identify pathways towards accomplishing them. Snyder (2002) created Figure 1 to illustrate his theory. Snyder (2002) describes that individuals learn the importance of developing pathways and agency throughout their development beginning in infancy. Those who are not encouraged to reach their goals or have barriers placed in their way towards achieving goals, he argues, tend to lack hope, and this deficit influences the way they

matriculate through the cycle in Figure 1. Like Lazarus and Folkman's (1984) Transactional Theory of Stress and Coping, we appraise an anticipated outcome of reaching a goal to decide if we will engage in goal pursuit. Snyder (2002) argues those who have successfully reached their goals are likely to have higher trait hope and are more likely to pursue "stretch goals" based on past performance in similar pursuits (p. 253). Further, some may not understand the outcome until they start working towards the goal, then deciding if they would like to continue with the pursuit.

Figure 1

Snyder's (2002) model of feed-forward and feedback functions of agency and pathways thinking



Once someone decides to pursue a goal, Snyder (2002) argues the emotional reaction of "getting started" sets the pursuit process into action. Those with higher hope may have cognitions that encourage them to continue the process, such as, "you can do this," to continue with the process. Individuals with lower hope may have cognitions in the process, such as, "I'm not doing well at this task," cueing negative self-talk and rumination, distracting the pursuit

process. As noted in Figure 1, the individual may encounter a stressor along the way. Snyder argues that if the person has lower hope, the stressor has a high likelihood of distracting the person from goal attainment. On the other hand, if the person has higher hope, they may view the stressor as a challenge, finding new pathways and feeling motivated and determined to follow them. After overcoming the challenge, pathways and agency continue to "aggregate" and "alternate" throughout the sequence until the person reaches their goal, repeating the cycle each time they pursue a goal (p. 255).

Agency

Agency in Snyder's (2002) model refers to one's determination to pursue a goal. It encapsulates one's belief in their capacity to pursue a certain goal. Snyder argues agency thinking is what pushes us to continue in the cycle when we encounter obstacles. Agency thinking refers to the "voice" telling us whether we can complete or achieve a task or goal (e.g., "I can do this," or "I'm not doing well at this task"). Those with higher hope are likely to pursue more challenging goals in the future. Those with lower hope are likely to (a) not pursue a goal because it is deemed too challenging or not worth the pursuit, or (b) become distracted by rumination or stressors. Snyder argues that when this happens, individuals with low hope may experience anxiety (Snyder et al., 2002), and those with depression may have low agency, suggesting they are less likely to pursue goals.

Pathways

Pathways refer to our ability to identify *how* to pursue our goals. Those with higher levels of hope are likely to determine better articulated routes to reach their goals than individuals with lower hope (Snyder, 2002). When challenges and stressors are encountered, people with low hope are likely to have a difficult time finding an alternate route. When someone with high hope

encounters a similar obstacle, they are more likely to find an alternate route to reaching the end goal. Snyder (2002) also describes that as we continue through the cycle outlined in Figure 1, our pathways become more refined as we get closer to reaching our goals. This suggests that people with higher hope are likely to also reach their goals faster than those with lower levels of hope. In Snyder's (2002) model, equal emphasis is placed on the roles of pathways and agency thinking, and the process works across situations as opposed to being solely situation-based.

Goals

Goals in Hope Theory drive the hope cycle. Snyder (2002) argues goals can have time (e.g., short-term v. long-term), vary in specificity, and can be visual or mental images we strive to reach. When we perceive a goal to be worth undergoing the process, our emotions initiate the relationship between pathways and agency until the goal is reached. Snyder describes two types of goals we can work towards: positive and negative. *Positive goals* include (a) goals we set for a first time (e.g., getting your first house), (b) goals to sustain the effects or benefits of another goal (e.g., maintaining a grade point average to continue benefitting from a scholarship for college), and (c) going further in a goal to make additional progress (e.g., getting a promotion at a dream career). *Negative goals* include (a) goals to avoid something negative from happening (e.g., working hard to avoid getting dismissed from college), and (b) goals to deter something from happening for a period (e.g., working hard to not get fired until one can become eligible for their pension). Whatever the type, goals in Snyder's Hope Theory cause individuals to decide whether they want to engage in the cognitive set that alternates between pathways and agency until we reach the desired outcome despite any stressors or obstacles.

Because of the planning and motivation involved in hope, hope has been considered exclusively compared to the other aforementioned emotions described earlier in this chapter. We

can experience awe, inspiration, serenity, joy, interest, love, gratitude, and amusement that increases our agency or motivation to pursue a goal. On the other hand, interest, inspiration, and pride can help us identify pathways to our goals. The resulting goals can produce a wide array of positive emotions. Thus, Snyder's Hope Theory (Snyder et al., 1991) has been identified as a framework for understanding hope within this dissertation.

Inspiration of Hope

When one thinks about their perceptions of hope, they may recall a time they met someone that inspired them or caused a positive shift in their mindset. Inspiration is less explicitly named within Snyder's definition of hope, yet researchers discuss the inspiration of hope in literature related to substance abuse counseling (Koehn & Cutcliffe, 2012), bereavement counseling (Cutcliffe, 2004), counseling with victims of domestic violence (Crain & Koehn, 2012), and counseling with individuals struggling with chronic illnesses such as HIV/AIDS (Harris & Larsen, 2007; Zinck & Cutcliffe, 2013) and cancer (Yohani & Larsen, 2012). Frederickson (2009) describes inspiration resulting from people witnessing other people doing good and wanting to do the same thing for others. She argues that inspiration is the opposite of disgust, drawing people toward others and away from self-absorption (Frederickson, 2009). Further, inspiration is a self-transcendent form of positivity, not only leaving people feeling good, but with an urge to do their best so they can do the most good (Frederickson, 2009).

Stress and Trauma

Stress is an internal response experienced by the body when people perceive an obstacle that may be challenging or threatening (Stanley, 2019). Stress is also experienced when one perceives an insufficiency of internal resources to respond to a stressor (Cohen et al., 1983). As a result of this perception, people allocate internal resources to work toward returning to

equilibrium; this process of reaching baseline is referred to as allostasis (Stanley, 2019). When people encounter a chronic or prolonged stressor, they force the body into an extended activated stress response. If our internal systems involved in allostasis are activated too long, people risk becoming dysregulated, building allostatic load. Once dysregulated, there is an increase in the likelihood of deleterious outcomes, including depression, post-traumatic stress disorder (PTSD), insomnia, and chronic pain (Stanley, 2019). Additionally, if during a stress response a person feels powerless or that they lack control in a situation, they risk the accumulation of a traumatic response (Stanley, 2019). This response is magnified if the experience shares similarities to past experiences. It is because of this continuum relationship that stress and trauma are often intertwined within the literature (e.g., Friedberg et al., 2005; Garami et al., 2019). Trauma experiences contribute to symptoms of trauma later in life (Kalamakis et al., 2015); if left unaddressed, the individual becomes susceptible to mental health problems, including substance use, anxiety, depression, PTSD, substance use, and suicidality (Boals et al., 2020; Briere & Scott, 2015; Karatekin & Hill, 2019).

Stress

Stress in its most basic description regards the process involving a stressor, or stimulus, that causes us to experience a disruption to homeostasis or functioning, i.e., a stress response. Cohen and colleagues (2016) describe three traditions of stress research: epidemiologic, psychological, and biological. The epidemiologic tradition posits that different stressors affect individuals equally, and the objective amount of stress an event has can be measured based on the perceptions and ratings of individuals (Cohen et al., 2016). In contrast, the psychological tradition suggests stressful events are perceived differently by all individuals, and that the level of stress we perceive is based on past experiences and the between-subjects differences in

tolerance levels (Cohen et al., 2016). As noted by Cohen et al. (2016), Lazarus and Folkman's (1984) Transactional Theory of Stress and Coping is built on this view of stress. The biological tradition views stress through its impact on a person's body (Cohen et al., 2016). A short-term stressor can be helpful for survival and adaptation when faced with a stressor; over time, if a stressor is causing us to stay engaged in the stress response for too long, the physiological responses can become maladaptive and put us at risk for different diseases later in life (Cohen et al., 2016). Further, additional stressors we experience while our adaptive systems are already engaged can increase our allostatic load and place us at a greater risk for accruing a traumatic experience (Stanley, 2019).

We experience stressful experiences on a daily basis; examples of such events include deadlines at work or school, upcoming performance reviews, big upcoming projects or homework assignments, and tension with roommates or family you live with. Often, these situations can overlap, increasing the adaptive processes we have to engage in. One way to buffer the effects of these stressors is support (Cassel, 1976; Cohen & McKay, 1984). Cassel (1976) was the first to suggest that perceived social support can serve as a buffer to stress because of its ability to influence how we appraise stressors. Having the support of people around you and within an environment (e.g., workplace) can lessen the effects of stress on the body (Cohen & McKay, 1984). Santini et al. (2015) found in their systematic review of stress and appraisal literature found that individuals who reported higher availability of social support were more likely to appraise situations as less stressful.

Stress and College Students

College students are not exempt from experiencing stress, and this occurrence has been well-documented in the college counseling literature (Baghurst & Kelley, 2014). In a sample of

459 US college students in the Midwest, Chao's (2012) study aimed to examine various conditions (e.g., social support) under which students' perceived stress predicted psychological well-being. Measuring stress using the Perceived Stress Scale (Cohen et al., 1983), the author found that students reporting low or inadequate levels of social support were more likely to report feeling more stressed and having lower psychological well-being (Chao, 2012). Chao (2012) highlights the stressors faced by college students, including perceived low social acceptance and struggles for independence. Further, their study highlighted the harmful role of dysfunctional coping in deteriorating that association; namely, as students in the study reported higher levels of stress, having dysfunctional coping weakened the impact of social support (Chao, 2012). These findings highlight social support's role as a buffer against poor psychological well-being, but also the role of dysfunctional coping in eliminating that buffer, putting the student at-risk for poor psychological well-being.

To determine whether adverse childhood experiences (ACEs) could be utilized to identify students at risk for mental health problems in college students and if stress were a mediator in that relationship, Karatekin (2018) conducted a short-term longitudinal study at the beginning and towards the end of an academic semester. Karatekin recruited a sample of 239 undergraduate students; 77% identified as female, the sample was predominantly white, and the majority (34%) were freshmen. Karatekin found students reporting early exposure to ACEs were more likely to meet the criteria for a depressive or anxiety disorder and express suicidal ideation, after not meeting the criteria at timepoint one for any of these concerns. Karatekin's findings illustrate ACE's impact on academic success and overall mental health concerns faced by college students.

Kalmakis et al. (2020) conducted a study to investigate the relationships between ACEs, post-traumatic stress disorder symptoms (PTSD-S), and perceived stress in traditional and

nontraditional college students. To accomplish this aim, these researchers designed a cross-sectional correlational study, and surveys were administered once to participants using an online questionnaire. The 236 participants were all from the authors' institution's nursing program, with 89% the sample being women. In their sample, approximately one-half of participants reported having at least two ACEs. Their results highlight PTSD-S moderating the relationship between reported ACEs and perceived stress throughout the week. This finding suggests that students who report PTSD-S from ACEs may report experiencing higher stress later in life. Considering the high prevalence of ACEs in their sample and in college students as a population, the authors describe the need for stress reduction programs to promote academic success.

COVID-19 Pandemic

The COVID-19 pandemic evoked high amounts of stress on the global community, with many comparing it to a traumatic event: we are experiencing high levels of stress regarding safety for ourselves and others in the pandemic and our limitations on social support, while feeling helpless to a virus. Kira et al. (2020) found COVID-19 stress to predict symptoms of PTSD, depression, and anxiety. For college students, courses were moved to being online or were offered in an asynchronous format. They were forced to navigate their independence and relationships without supports and had to find new ways of coping with the stress and loneliness brought by the pandemic. For the newer half of the traditional college population, they may express grief over missed traditional experiences before coming to college (e.g., high school graduation) and fear a return to solely online learning. To understand stress and trauma experienced by modern day college students, a knowledge of how the pandemic impacted their educational careers is needed.

Kecojevic et al. (2020) wanted to understand the factors contributing to decreases in college students' mental health during the pandemic. To accomplish this aim, the authors conducted a cross-sectional study and recruited a sample of 162 college students enrolled in a core curriculum course in New Jersey during a time when the state was experiencing high amounts of COVID diagnoses. The authors indicated students reporting high numbers of academic and everyday difficulties during the pandemic were more likely to report higher levels of mental health burden (i.e., level of concern for the pandemic; depression, anxiety, and somatic distress; and stress). Further, students reporting increased academic difficulties (e.g., struggling to stay focused on academic work) were more likely to report increased levels of depression, anxiety, somatization, and stress.

As schools continue working towards normalcy (i.e., offering in-person learning), scholars are beginning to explore how resumption is impacting returning students. Zheng et al. (2022) designed a cross-sectional study to investigate the effects of school resumption on psychological pressure and emotional issues of college students in China. A total of 1,598 students completed the authors' initial questionnaire during May 2020, and 836 participants completed the second survey in March, 2021. The authors' results indicated a decrease in anxiety, depression, and stress of the sample. Although this finding is promising, 2021 ended with a global resurgence with the Omicron variant of the virus, causing a resumption of mask mandates and online education. This resurgence occurred after the authors' study, creating an additional gap in the literature regarding students' anxiety regarding another variant. Society's approaches to normalcy have been met with anxiety regarding whether true normalcy is impending or if a new variant of COVID-19 will evoke additional shutdowns. With COVID-19

exacerbating negative mental health effects faced by college students, establishing different strategies to increase hope and decrease stress within this population becomes imperative.

Trauma

Trauma is typically considered to be something we can experience during times of high stress; Stanley (2019) describes that people experience trauma when they have been under stress, or periods of chronic allostatic load, and face a stressor or situation with fear or high uncertainty. From a diagnostic perspective, the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5-TR) describes trauma as:

> Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
>
> 1. Directly experiencing the traumatic event(s).
> 2. Witnessing, in person, the event(s) as it occurred to others.
> 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
> 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse); [sic] does not apply to exposure through electronic media, television, movies or pictures, unless this exposure is work related (American Psychiatric Association, 2022, p. 301).

Carlson and Dalenberg (2000) describe that for something to be perceived as traumatic, three elements are necessary: suddenness (an individual does not have enough time to allocate psychological resources to prepare for a negative event), lack of controllability (lack of

autonomy), and extremely negative valence (recalling aspects of the event or situation brings extreme discomfort or pain). Since then, recent literature on trauma has worked to expand the field's understanding to help better understand what may be perceived as traumatic. For example, current discourse on trauma has separated the construct into two to capture the range of experiences that may be experienced as a trauma. Major traumatic events (e.g., sexual assault, violence, war, terrorism) are sometimes referred to as "large 'T' traumas," while events such as bullying, financial hardship, and harassment are considered "little 't' traumas" (Barbash, 2017; Peternelj-Taylor, 2018). Regardless of the classification, difficult-to-navigate situations can lead to individuals experiencing an event or experience as traumatic.

Felitti et al.'s (1998) study of Adverse Childhood Experiences (ACEs) was pivotal in changing the way psychology and helping professions understand the *impact* of traumatic experiences. They looked to understand the influence of the number of ACEs in individuals on life outcomes (Felitti et al., 1998); they found that individuals with one ACE were more likely to report having experienced another, and the more ACEs someone reported, the more likely they were to report experiencing several leading causes of death in adults (e.g., heart disease, cancer, chronic lung disease; Felitti et al., 1998). Since then, trauma scholars have suggested the need to capture a bigger range of traumatic experiences. Afifi (2020) described the World Health Organization's (WHO) creation of the Adverse Childhood Experiences International Questionnaire (ACE-IQ) and its intent to better capture global and diverse perceptions of trauma. Additionally, scholars have described the need for additional items added to the original 10-item ACE Questionnaire; these suggested items include assessing for community violence, witnessing an assault(s), a loved one experiencing bodily injury or chronic illness (Finkelhor et al., 2013), low socioeconomic status (Finkelhor et al., 2015), and spanking (Alfifi et al., 2017). Now in the

COVID-19 pandemic, some scholars are beginning to argue that including an item to measure its impact would be beneficial with the generations that have been affected by it (e.g., Bryant et al., 2020; Fegert et al., 2020). This body of research is still growing and is important to counseling and other helping professions to understand in order to mediate the effects of traumatic experiences in the communities we serve.

College Students

College students are no exception to trauma experiences. In a review of the literature, Read et al. (2011) describe studies estimating 67% to 84% of students entering college to have experienced at least one potentially traumatic event before starting their studies. This vast range, the authors describe, is large because of various studies grounding their work in differing definitions of trauma. Thus, the aim of their study was to examine the rates of DSM-IV Criterion A trauma exposure, as well as the rates of posttraumatic stress disorder (PTSD), in a sample (n = 3,014) of college students for the northeast US. To assess these outcomes, the authors distributed the Traumatic Life Events Questionnaire (Kubany et al., 2000) and the PTSD Checklist-Civilian Version (Weathers et al., 1993). They found that 66% (n = 1,999) of the participants reported a traumatic life event (M = 1.5, SD = 1.45); 23% reported one event, 20% reported two events, and 25% reported experiencing three or more events before starting college. Regarding the types of traumas experienced, 35% reported experiencing a loved one suffer from a life-threatening illness; 34% described the sudden death of a loved one; 26% reported experiencing a natural disaster, accident, or fire; and 24% reported experiencing physical violence. Further, the only sociodemographic factor associated with experiencing a trauma was gender, with people identifying as women reporting (a) trauma more often than people identifying as men, and (b) more traumatic experiences than people identifying as men. Generally, people identifying as

women, people from underrepresented ethnicities, and people reporting lower socioeconomic status reported experiencing traumas from nearly all trauma categories. Nine percent of the sample met the criteria for a PTSD diagnosis; the likelihood of meeting the criteria increased as the number of types experienced increased, and those reporting exposure to unwanted sex were more likely to meet the criteria for PTSD. These findings highlight trauma's prevalence in college populations, as well as certain sociodemographic factors placing students at risk for increased experiences of trauma and for PTSD.

During the pandemic, students in on-campus programs were moved to strictly online course offerings; this contributed to increased isolation for students, an experience considered by most trauma scholars to be a potentially traumatic event (e.g., Barbash, 2017; Peternelj-Taylor, 2018). Further, the pandemic has all three elements of Carlson and Dalenberg's (2000) description of a traumatic event: suddenness (i.e., students were told to leave or not return from spring break, leaving little time to prepare), lack of controllability (i.e., the pandemic affected the global community; little could be done on an individual level to end government precautions), and extremely negative valence (i.e., prolonged grief due to deaths of loved ones that could not be grieved due to pandemic precautions). Lee et al. (2021) reviewed the literature on COVID-19 and its detrimental impacts on university students and folks from underrepresented communities; they describe the factors contributing to increases in mental health concerns, and how these factors (e.g., forced isolations, restrictions on supports) have been traumatic due to the pandemic. The authors then examined the effects of COVID-19 on college students' physical, emotional, and social health; to achieve this aim, they recruited a sample of 200 US college students. When asked, "How has COVID-19 impacted your mental health?" participants were allowed to pick more than one response; they indicated experienced increases in anxiety (60.8%), depression

(54.1%), and feelings of loneliness (59.8%). Fifty percent indicated increases in body weight as a result of the pandemic; further, 57% of those indicating increased feelings of loneliness indicated weight gain. The authors discuss the impact and disruptions of the pandemic and their likely contributions to the development of stress and trauma-related disorders. As described in chapter one, significant staffing shortages of college counseling centers have limited the offerings available to college students seeking help during the pandemic (Salimi et al., 2021). Without clinicians to serve this population, we can look for accessible interventions to implement for this population while they await services or to just support them during their academic careers.

Stories

Stories are central to the human experience. Schram (2005) recounts scholars referring to humans as *homo narrans*, "the storytelling animal" (p. 108), as stories have served an integral role in the human experience. They argue children throughout time have learned language, values, culture, traditions, and religion through storytelling (Schram, 2005). In addition to also instilling problem-solving skills and igniting imagination, storytelling can offer individuals options to ignite hope when one feels that hope has been lost (Schram, 2005). Examining the long-standing impacts of Apartheid in South Africa, Gachago et al. (2014) transcribed and analyzed focus group conversations of college students discussing individual narratives within their group. One of their findings suggest students constructing a larger group narrative through the sharing of their individual stories painted a picture of hope, allowing "students to trust their collective capabilities in their fight for a better South Africa" (Gachago et al., 2014, p. 8).

The study mentioned by Gachago and colleagues (2014) does not stand alone (see Elsegood et al., 2018; Lala et al., 2014; Wallace et al., 2014). As the COVID-19 pandemic continues into its third year, it is important to consider the limitations placed on communication

and storytelling due to safety measures. The absence of connection is evident, and as Palm (2020) argues, storytelling is integral to the process of developing hope, and has the power to support communities, especially those impacted by the pandemic.

People make sense and ascribe meaning to the world around them based on stories passed down to over time; stories make "life livable, because without a story, there is no identity, no self, no other" (Lewis, 2011, p. 505). This is still evident today. For example, during the 2020 pandemic, the fourth most listened to podcast in the world was *This American Life*, a podcast started 25 years earlier detailing stories from people around the world (Edison Research, 2021); one can suggest this ranking highlights people's need to connect with and hear from others in the country during a time of mandated isolations and social distancing. Storytelling has been looked at across professions, including its role in enhancing learning (Lawrence & Paige, 2016; Lucarevschi, 2016; Robin, 2016), marketing (Coker et al., 2017), and counseling (Mendoza & Bradley, 2021; Vereen et al., 2013). Sharing stories with one another is one of the earliest forms of communication (Lucarevschi, 2016). Stories help people navigate the challenges of their daily lives. Understanding the contexts for these stories, the role of stories in enabling people to connect with others (Sunderman et al., 2022), and the ability of stories to shift people's perspectives on situations they find challenging may be beneficial in helping people navigate difficult life transitions.

Cultural Stories

Storytelling has held large roles in teaching and conveying ancestors' experiences to future generations. Stories can be used to educate about the past to shape a better future (Lawrence et al., 2016). Although storytelling exists across cultures (Lugmayr et al., 2017) and has been shown to impact political landscapes (Wanzo, 2015), a vast amount of storytelling

literature has highlighted the practice's roots in, and impact on, Indigenous communities (Iseke, 2013; Lawrence et al., 2016). Cultural traditions around the world have included stories to enable people to connect with and educate their communities (Iseke, 2013). For example, stories allow elders in Indigenous cultures to teach their communities life lessons, encouraging people to interpret them based on their own experiences, thus validating their experiences and the meaning they ascribe to those moments (Iseke, 2013).

Stories allow people to connect with others (Iseke, 2013), thus suggesting the healing nature of storytelling. Chan (2021) describes a project involving the use of storytelling to help Indigenous youth and young adults to help them regain a sense of identity, telling *their* stories as opposed to the stories being colonized by others, eliminating their voice and ownership of their histories. Chan (2021) describes stories as not being limited to oral retellings; rather, stories may be sung, drummed, or communicated through practices such as weaving. The purpose of the project was to build on past research highlighting the connection between cultural continuity (i.e., preservation of traditions, beliefs, land, and language) to suicide prevention (see Chandler & Lalonde, 2009). Chan's (2021) project sought to build the resilience of Indigenous youth and young adults to prevent suicide and self-harm. Through connecting the participants to each other, their cultural foundations, and their traditions to build resilience and to empower them to take ownership of their stories.

In other areas around the world, stories have been used to increase hope and decrease feelings resulting from experiences of adversity. Green (2013) emphasizes the benefits for both the storyteller and the recipient, describing that learning of others' resilience and hope can be healing, connecting, and motivational for recipients. Hedtke (2014) suggests implementing narrative approaches in supporting families mourning the loss of a member due to cancer; she

encourages families to create stories highlighting the strength and efficacy of the members to make meaning that permits healing. In post-genocide Rwanda, Stories for Hope-Rwanda, a project pairing an elder and a youth within the community to share their stories, has contributed to increases in hope; a participant in Wallace and colleagues' (2014) study reported feeling more hopeful for the future after learning about the elder's past. Additionally in Rwanda, survivors sharing positive, hopeful messages was helpful in recovery for people healing from the traumatization of the genocide (Lala et al., 2014). In Canada, the Canadian Center for Policy Alternatives recruited refugee women to tell the community their stories of both hope and struggle when immigrating to Canada (MacKinnon, 2011); this community intervention allowed Manitoban citizens to understand and empathize with those struggling in their communities. Elsegood and colleagues (2018) found women in recovery hearing inspiring stories from others in recovery helped shift their perspectives towards the self, validating their experiences, and improving their work with newfound DBT skills. These examples illustrate the power of storytelling across cultures, suggesting the use of stories as a healing intervention.

College Students

In academic settings, storytelling is often used in teaching literature as a tool to bolster student resilience and language proficiency (e.g., Nguyen et al., 2016). Telling stories allows people to connect with others and to validate their experiences; college students are no exception to these benefits. Hamid et al. (2022) conducted a randomized controlled trial to assess the efficacy of a storytelling and cognitive behavioral therapy (CBT) researcher-created phone application intervention. Participants included college students aged 18-25 years old who were not actively engaged in therapy. Throughout the course of two weeks, test group participants were asked to spend 10-15 minutes engaged in the storytelling application and journaling in a

CBT daily diary; control group members were asked to spend time solely on the CBT journal; and waitlist group members completed the authors' assessment batteries with no daily intervention. The application, called Chronicles, involved participants creating an avatar in a virtual college setting; the game generated common college scenarios that asked participants to select how the character would be feeling, what they would be thinking, and how they should move forward in the situation. The decisions made by the player impacts the rest of the game. At the end of data collection, test group participants' results indicated significantly lower scores on depression, anxiety, and negative automatic thoughts, and higher scores on overall perception and learning. Their findings suggest that this specific storytelling intervention is an effective self-guided intervention for alleviating depression and anxiety in college students.

Tucker et al. (2020) conducted an experimental study to test their hypothesis that college students who view a story of someone who survived a suicide attempt will experience an increase in mental health treatment seeking. The experimental group listened to a 14-minute story of a survivor and completed a battery of assessments; the control group watched one of two psychoeducational videos to enhance their suicide literacy. Each video had the same script and were of similar length to the story shown to the experimental group; the difference was whether the narrator was a college student at the participants' institution or if the narrator was invisible to the audience, reading the script off-screen. Despite the study not being a longitudinal design, the authors' analyses demonstrated that participants who viewed the story or were in the narrator-present psychoeducation group expressed slightly higher rates of immediate information-seeking behavior for suicide. While their results did not illustrate large differences, one instance of watching a video created a small difference in information-seeking in college students, a population with historically lower rates of mental health help-seeking (Czyz et al., 2013). These

studies illustrate that stories (telling and receiving them) often relate to positive increases in college students' mental health.

Impact of the Pandemic

College students are likely to experience numerous negative mental health concerns during their academic careers (e.g., anxiety, depression, eating disorders, attention-deficit/hyperactivity disorder; Pedrelli et al., 2015; Tasso et al., 2021). The pandemic's mandated social distancing and quarantines exacerbated these predispositions. Wang and colleagues (2020) found 71% of their sample of 2031 Texan college students indicated the pandemic contributed to increases in their anxiety and depression. In a study examining college students' mental health during the pandemic, Kim et al. (2022) found significant increases in depression, alcohol use, bulimia nervosa and binge-eating disorder, and comorbidity of illnesses during the pandemic; additionally, results from women and Black students in the sample suggest these groups may be at a higher risk of depression and alcohol use due to the pandemic. When looking at suicidality in college students, DeVylder et al. (2021) utilized a cross-sectional survey design to add that hospitalizations for COVID-19 may be a contributing factor to suicidality in this population. DeVylder and colleagues (2021) suggest several possible mechanisms, including the physical effects of this variant of the coronavirus (e.g., hallucinations pushing the individual to attempt suicide) and the isolation and hopelessness experienced because of social distancing and shutdowns.

Papageno Effect

Scholars have shifted to support all populations' negative mental health because of the pandemic, including college students. One mentioned facet of the mental health epidemic impacting students is depression and suicidality. Constant access to various media platforms

(e.g., social media, news) during the pandemic and periods of political unrest has led to the creation of the term "doom-scrolling," referring to people constantly monitoring the news for new information on the uncertainty of the pandemic (Ytre-Arne & Moe, 2021); this results in higher likelihoods of depression and post-traumatic stress disorder (PTSD; Price et al., 2022). Further, scholars coined the term "infodemic," to refer to the act of individuals publishing erroneous information regarding the pandemic, health, and other current events (Zarcostas, 2020).

In response to increased media exposure and constant access to negative events, scholars have turned to how the timbre of media consumed impacts our overall mental health. To this, Domaradzi (2021) describes the Werther and Papageno effects. The Werther effect describes the negative impact of listening to stories of suicide in a negative manner (e.g., romanticizing the act), whereas the Papageno effect describes the positive impact of positive media reporting of suicide. First named by Niederkrotenthaler and colleagues (2010), the Papageno effect was named after the character Papageno in *The Magic Flute,* who speaks with three child-spirits, resulting in him no longer wanting to attempt suicide. In practice, the Papageno effect refers to the idea that exposure to non-suicidal media coverage can have a preventative effect on vulnerable populations (e.g., young adults, people with depression; Domaradzki, 2021).

Domaradzki (2021) conducted a systematic review highlighting the factors in media reporting contributing to a suicidality; their review also described recommendations for improving media reporting of suicide to serve as a protective factor for the public (e.g., link the death to bigger social issues, provide information about the warning signs). Niederkrotenthaler et al. (2022) also found in their meta-analysis that increased positive exposure to suicidality in the media offered a small protective factor for the individual for up to four weeks. Encouraging

better standards in media reporting is beyond the scope of this dissertation, however, this effect suggests that exposure to different, positive forms of media may serve a protective factor against negative mental health concerns.

Stories, Stress, and Trauma

These studies of stories suggest their effect as contributors (i.e., stress, trauma) to mental illnesses such as depression, anxiety, substance use, and suicidality, all impacting college students today (Hamid et al., 2018; Kim et al., 2022; Tucker et al., 2020). Zhang (2017) conducted a study to understand the impact of college students Hong Kong self-disclosing stressful life events on Facebook. After collecting a sample of 573 students, Zhang (2017) found that disclosing information on Facebook helped to decrease the depressive symptoms associated with the experienced stress. Further, self-disclosing on Facebook created an avenue for support, with followers and friends able to offer support (Zhang, 2017). These findings suggest sharing stories with others may alleviate negative perceptions of stress in college students.

Willingly sharing stories of trauma has also been found to be helpful in alleviating trauma symptoms. Gameon et al. (2021) conducted a qualitative study looking at college students' experiences of healing after experiencing an unwanted sexual experience (USE). Through use of Interpretive Phenomenological Analysis, the authors interviewed 17 college students (15 were female, two were male) who reported having USEs; participants in the study described positive disclosure experiences to be the most beneficial contributor to healing (Gameon et al. 2021).

Inspirational Stories and the Exemplar

Much of the literature on stories centers around the outcome and impacts on the storyteller. From the recipient's perspective, what happens when they listen to a story of someone overcoming adversity? Han et al. (2017) conducted a study of 59 Korean undergraduate

students to explore the impact of listening to a story of a moral exemplar on students' likelihood to volunteer within their communities. The findings suggest that students were more likely to get involved with volunteer work when exposed to an attainable, relevant exemplar as opposed to an unattainable one (i.e., someone in their age group or facing similar life circumstances v. a historical figure with minimal similarities; Han et al., 2017). Peer exemplars had a greater impact on students' motivation than the unattainable figures (i.e., Mother Theresa, Martin Luther King Jr.; Han et al., 2017). Further, Vos (2017) describes exemplars and how individuals can *imitate* or *emulate* them. Imitation, they argue, is replicating the behaviors of the exemplar; emulation is when the behaviors are replicated because they exemplify a set of moralistic values that are modeled for the individual. Emulation of an exemplar is more likely to occur when the psychological backgrounds, formative experiences, and weaknesses and struggles in life are illustrated to the recipient.

Character trait emulation and exemplary figures has yet to be discussed in counseling and counselor education literature. The present study will involve participants watching videos of people recounting stories of everyday individuals overcoming adversity. Videos were selected on the basis of whether or not they discussed overcoming adversity; they were then piloted with a sample group of college students to collect their perceptions of the videos and the figures portrayed. Taking measures to increase the relatability of the figures will hypothetically increase the motivation of the individuals, thus increasing their positivity. Further, through increasing their positivity, participants may report feeling more positive and hopeful.

Theoretical Frameworks

Transactional Theory of Stress and Coping

Lazarus and Folkman (1984) introduced the Transactional Theory of Stress and Coping. In this theory, they suggest that humans are constantly assessing, or *appraising,* their environments (Lazarus & Folkman, 1984). The term *transaction* in this context describes the interaction, or give-and-take, between one and their environment. That transaction is shaped by one's appraisal and coping systems (Biggs et al., 2017; Lazarus & Folkman, 1984). An individual's personal factors (e.g., past experiences, mood, physical states) influence their appraisal of situations and stimuli. Lazarus and Folkman (1984) describe two forms of appraisal undergone in the face of stressors: primary and secondary. Primary appraisal involves the individual assessing a situation or stimulus to determine if it is stressful or not. This form helps people determine whether something may hinder their well-being, prove to be a challenge, or none of the above. If an individual assesses a situation to not be an obstacle, then they resume normal functioning (Schuster et al., 2006); however, if the situation is assessed to need further energy, the person will move into secondary appraisal. According to Biggs et al. (2017), "primary appraisal determines the meaning and significance of a transaction to well-being, secondary appraisal determines what can be done to manage the stressor and its resultant distress" (p. 353). Secondary appraisal involves determining what coping is needed to resolve the stressor and return to pre-stress functioning. Although terms like "primary" and "secondary" can often refer to a hierarchy of importance or sequence, the two appraisal systems interact with one another through a complex, dynamic process, resulting in the individual's stress reaction (Biggs et al., 2017; Dewe & Cooper, 2007).

Coping

Once a person's appraisal systems has decided a stimulus or situation requires further effort for resolution, the person engages in coping. *Coping* refers to an individual making changes, cognitively and behaviorally, to manage and adapt to a situation that has been deemed stressful (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) describe coping as a dynamic process involving the individual consciously engaging in efforts to process and resolve a stressor to bring them back to regulation (Biggs et al., 2017; Brough et al., 2005). There are two types of coping people can use once their appraisal systems have decided to create the stress reaction: problem-focused coping and emotion-focused coping. *Problem-focused coping* involves the individual engaging in efforts to manage the stressor enacting the entire transactional process (Biggs et al., 2017). The individual engages in this type of coping when they are attempting to eliminate or decrease the distress caused by a situation or stimulus (Schoenmakers et al., 2015). *Emotion-focused coping* is utilized when the individual is attempting to resolve the emotional impact of the appraised stressor (Biggs et al., 2017). Both forms are enacted to help the individual cope behaviorally, situationally, socially, and emotionally.

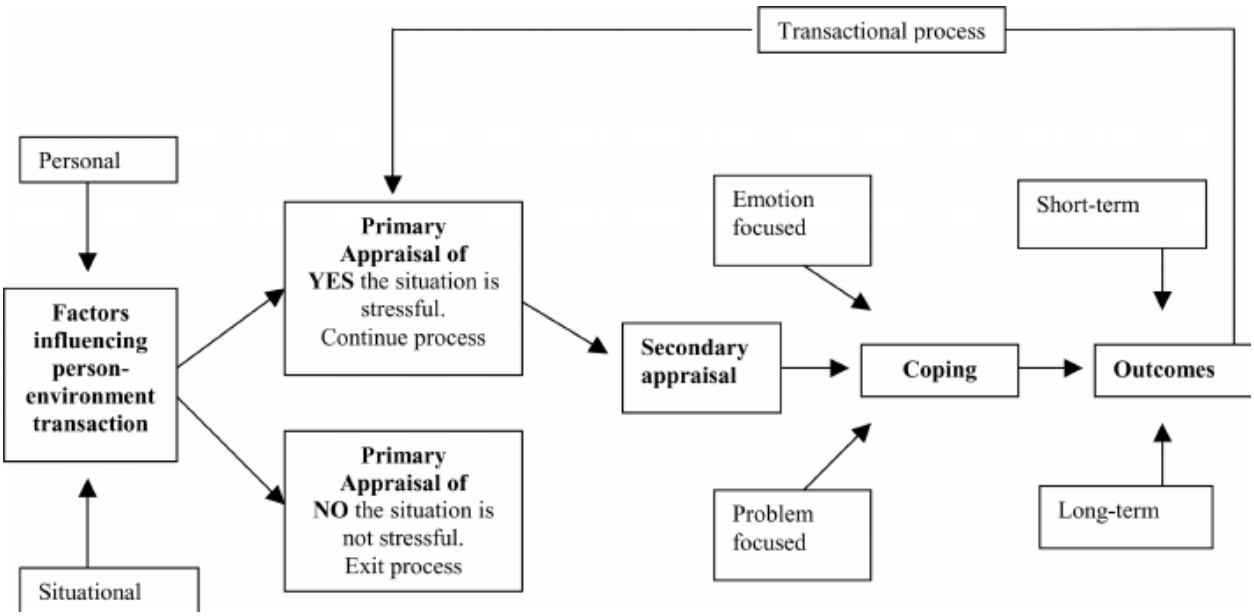
Cognitive Appraisal

After completing the coping process, the individual moves into cognitive appraisal. This stage of Lazarus and Folkman's (1984) model involves the individual appraising the process. The individual, regardless of success or not, will evaluate which tools were helpful or not in resolving the stressor (Biggs et al., 2017). The process allows the individual to reflect on learned processes, then helping them in future situations. This cyclical process allows us to build on coping strategies, helping to better influence the transactional process the next time our primary

appraisal systems perceive an incoming stressor. See Figure 2 for Schuster and colleagues' (2006) depiction of the Transactional Theory of Stress and Coping.

Figure 2

Transactional Theory of Stress and Coping (Schuster et al., 2006)



Hope Theory

As mentioned, Snyder's Hope Theory (1996; Snyder et al., 1991) is a cognitive model of understanding hope and the human orientation towards goal-seeking. Scholars have used Hope Theory as theoretical foundations to support their hope-focused researched has been studied with college students (e.g., Dorais, 2021). For example, Snyder et al. (2002) conducted a six-year longitudinal study of incoming freshman students to understand the role of hope in college academic success. After six years, the researchers found that participants with higher hope (as measured using the Hope Scale; Snyder et al., 1991) were more likely to have graduated and less likely to have been dismissed for poor academic performance (Snyder et al., 2002). More

recently, Gallagher et al. (2017) explored hope's role in predicting academic achievement and retention; the authors assessed hope using the academic subscale of the Domain Hope Scale-Revised (Snyder et al., 2005). When compared to self-efficacy and academic engagement, hope was the only construct in the study to consistently predict academic achievement and retention (Gallagher et al., 2017). Further, Garavand et al. (2022) aimed to understand the role of hope in undergraduate students' reported COVID-19 anxiety. After recruiting and retaining a sample of 210 undergraduate students in Iran, the authors found that as hope increased, the students reported experiencing less COVID-19 anxiety. These studies highlight the importance of hope in student success and well-being during their academic careers.

Gallagher et al. (2021) sought to examine the relationships between hope and anxiety, COVID-19 stress, and overall well-being. To accomplish this aim, the authors conducted a longitudinal research design to determine whether hope at timepoint one (March 2020) could predict participants' anxiety, COVID-19 stress, and well-being at timepoint two (May 2020). Their final sample (recruited via Amazon's Mechanical Turk) included 822 American adults; most identified as white (69.1%), with others identifying as Black or African American (13.1%), Hispanic/Latino (5.8%), Asian/Pacific Islander (4.4%), Native American (3.2%), or multiracial/other (3.7%). The battery of assessments included the Adult Hope Scale (Snyder et al., 1991) and a modified version of the Perceived Stress Scale-10 items (Cohen et al., 1983). The authors' results indicate an inverse relationship between hope with anxiety and perceived COVID-19 stress, and a positive relationship between hope and well-being. These findings indicate that during the pandemic, increases in hope can predict decreases in anxiety and COVID-19. This finding is consistent with past studies examining the relationship between hope and anxiety, as well as the effect of hope on recovery from poor mental health. Further, this

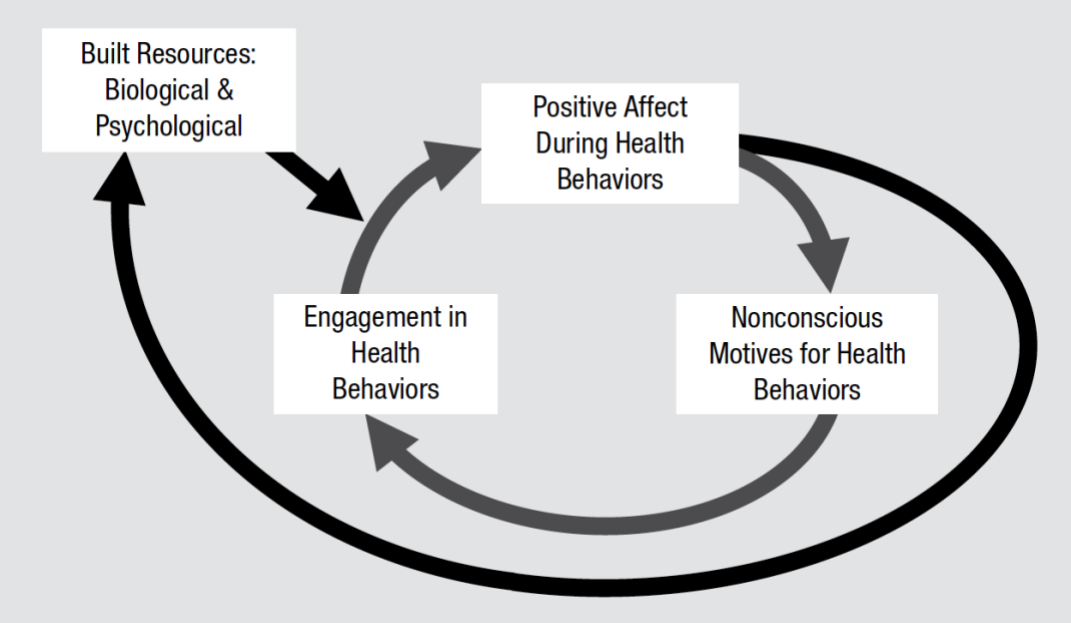
study is one of the first to demonstrate the temporal relationships between these concepts, especially during the COVID-19 pandemic.

Broaden-and-Build

Barbara Frederickson's Broaden-and-Build theory was proposed to describe the ways different positive emotions broaden a person's abilities to cope and respond to adversity, building the person's repertoire for future stressors (1998, 2001, 2009; Fredrickson & Joiner, 2018). These positive emotions include joy, gratitude, interest, hope, serenity, pride, amusement, inspiration, awe, and love (Frederickson, 2009). Frederickson and Joiner (2018) add that this process is more like an upward spiral shaped by the experience of accumulating these positive emotions. The experiences of these positive emotions subconsciously influence people, motivating them to search for more positive emotions. Experiencing these emotions helps people become more positive, optimistic people, bolstering their resilience, and helping them face and overcome stressors and adversity. See Figure 3 for Frederickson and Joiner's (2018) model of Broaden-and-Build influencing positive behavioral change (i.e., the upward spiral).

Figure 3

Frederickson and Joiner's (2018) model of Broaden-and-Build influencing positive behavioral change



In 2017, Chang studied 205 college students from a large midwestern university; namely, he sought to understand positive and negative affects' impact on problem solving. Through multiple regression analysis, he measured their affect and problem-solving orientations at two different time points with no intervention implemented. He discovered that, in contrast to Frederickson and Joiner's (2002) study, positive affect impacted problem-solving orientation (i.e., their reaction to encountering a problem; the *broadening* component of the theory), but did not have a significant impact on problem-solving skills (i.e., goal-directed, actionable tasks to resolve a stressor). However, they found that negative impact was a significant predictor of lower positive problem orientation and rational problem-solving, as well as impulsivity and carelessness. This study not only suggests the usefulness of Frederickson's theory with college students but highlights a gap in this section of the literature. Specifically, does offering students

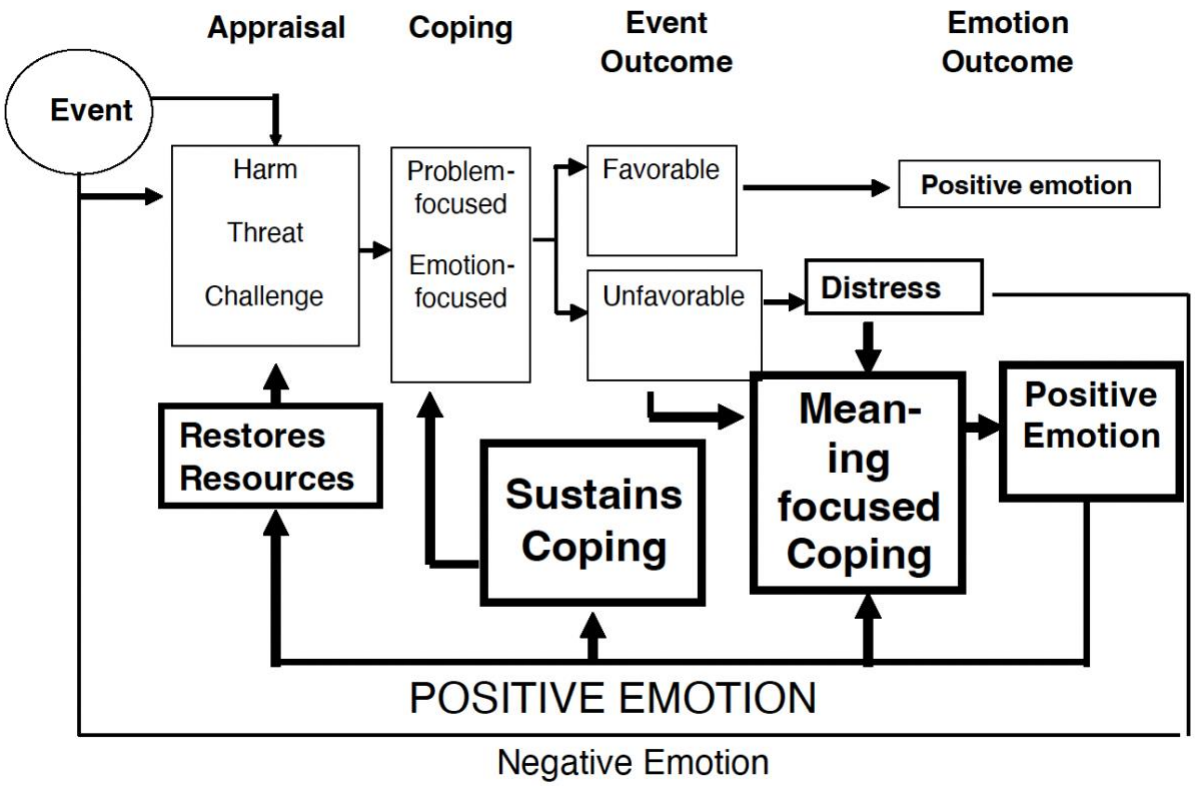
an intervention of listening to an awe-inspiring, hopeful story give a dose of positivity to empower them to successfully manage their stress?

Revised Transactional Theory of Stress and Coping

The original Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984) was created before the fieldwide embrace of Positive Psychology. Thus, Folkman (2008) revisited the model to ensure positive emotions and positivity were included and represented in the revised model. Additionally, Folkman (2008) expanded coping to not be limited to emotion-focused and problem-focused coping; she added *meaning-focused coping,* which refers to the ways in which we use our values, beliefs, experiences, and goals to sustain coping and overall wellbeing. The aforementioned descriptions of appraisal and coping hold true in this model; however, the Revised Transactional Theory of Stress and Coping (Folkman, 2008) includes the processes we undergo when a situation does not "go our way," and how we learn from it. Positivity and positive emotions do not occur only when we experience a favorable outcome; rather, we can experience these during both the coping and appraisal processes. Folkman (2008) argues that we may seek situations with high likelihoods of unfavorable outcomes because we know we will learn. Through coping and appraisal, we may learn that we have to find alternate pathways to reaching a goal; experiencing positivity and positive emotions can make this an enjoyable experience and can sustain this process until a favorable outcome is reached. See Figure 4 for Folkman's revised model.

Figure 4

Revised Transactional Theory of Stress and Coping (Folkman, 2008)



Meaning-focused coping, Folkman (2008) argues, is less "situation-specific" than problem and emotion-focused coping (p. 7) and can be categorized into five forms: benefit finding, benefit reminding, adaptive goal processes, reordering priorities, and infusing ordinary events with positive meaning (Folkman & Moskowitz, 2007). *Benefit finding*, the most commonly reported type of meaning-focused coping, refers to the process by which we search for a lesson or benefit as a result of an unfavorable outcome. A real-life example of this process is a person who was once incarcerated for a substance abuse-related crime working towards their sobriety, and finding a better relationship with their higher power as a result and describing the strong relationship they now share with their deity. Benefit finding is an outcome as a result of meaning-focused coping after an unfavorable outcome or distress. By contrast, *benefit reminding*

is the process we undergo to remind ourselves of the outcome or benefit(s) we worked to achieve. In keeping with the previous example, the person may struggle at times with their sobriety and may remind themself of the newfound peace in their strengthened relationship with their higher power and the joys of sobriety. *Adaptive goal processes* regard the process we undergo when we recognize a goal or pathway is no longer be plausible. These processes help prevent feelings of distress or failure that may arise when we fail to meet an identified goal. Additionally, we are able to engage in these processes because we are ultimately motivated by our values and beliefs to accomplish a meaningful goal. *Reordering priorities* occurs when individuals' realities shift through the appraisal and coping process; we have to reorder our priorities because we learn that they may not be aligned with the current task or reality at hand. Although similar to adaptive goal processes, reordering priorities is the process we may engage in *while* we recognize and adapt because a goal is not working. To find a new goal or outcome, we may need to reorder priorities to help give up a belief and adapt to a new one. Finally, *infusing ordinary events with positive meaning* regards individuals finding positive events during difficult or ordinary situations. This pertains primarily to the narrative we communicate to ourselves and how much emphasis we place on the small positive snapshots of our daily lives to help motivate us through the day. All of these categories comprise meaning-focused coping which impacts our positive emotions; in turn, positive emotions sustain all forms of coping and rebuilds our psychological resources to continue the process.

Purpose

Collectively, the literature reviewed in this chapter inform the conceptualization of this proposed study. Specifically, the aim of the proposed study is to offer stories as an intervention to (a) increase college students' positivity and hope and (b) improve their stress and trauma

symptomatology. Scholars have not implemented stories as an intervention to support this population. The primary aim of the proposed study was to determine the efficacy of listening to a daily positive story on college students' positivity, hope, reported stress, and trauma symptomatology over the course of a four-week intervention. I wanted to examine differences in the four constructs between a treatment and control group. Further, I wanted to determine the effect of the positive story intervention on the overall trauma symptomatology trajectory over the course of the four-week intervention. Additionally, I sought to determine whether the positive story intervention served as an exogenous variable in increasing hope and decreasing stress. Finally, through examination of the 57 timepoints collected, I wanted to understand whether positivity and stress functioned as a state or trait over the course of the intervention.

Significance

The proposed study will offer the field of counseling and college counseling important information regarding the usefulness of the interventions for working with college students. Namely, if effective, this intervention is one that does not require weekly counseling and can be implemented with students seeking services despite increased waitlists from the pandemic (Sammons et al., 2021), and can be accessed online, an option in demand for this population (Dorais, 2021). This study will be one of the first studies looking at these constructs within this population after the pandemic. Further, this is one of the first studies to investigate these constructs longitudinally over the course of four weeks, and the first to use these stories in an intervention with any population.

Summary

This chapter described positive psychology, hope, stress, and trauma, and discussed them within the context of college students. Further, storytelling was discussed, including the effects

of storytelling, the impact stories have when received, and the factors contributing to emulation of exemplar values in individuals. Recent research was discussed throughout these sections, highlighting the current gaps, especially those magnified by the pandemic's impact on college students. The study's theoretical frameworks were discussed to support the present study. Finally, the chapter concluded with a description of the aims of the study, and the potential significance the study will have for college counseling in addition to intervention research.

CHAPTER THREE: METHODOLOGY

This chapter will present the methodology for the present study. Specifically, this chapter will describe the proposed positive stories intervention, outline the research questions and hypotheses, describe the intended procedure for the study, introduce the intended measures to be included, and discuss the various statistical analyses I propose to utilize in response of the research questions. As mentioned, college students today face the stress and isolation associated with transitioning into their college careers. Additionally, the COVID-19 pandemic has increased student reports of depression, anxiety, and suicidality (Wang et al., 2020). Through employment of a intensive longitudinal research design, the proposed study will describe the efficacy of employing positive stories with college students over the course of four weeks through showcasing daily trends in participants in the groups, and by examining the impact of stress on the trajectories of positivity, hope, and trauma symptoms.

Rationale

The primary aim of my study is to test the effectiveness of a stories intervention on positivity, stress, and trauma symptomology in college students. The story intervention involved asking participants to watch or listen to two clips (once in the morning, once in the evening; described on Appendix B) every day for four weeks. Through use of a longitudinal research design, I will examine the relationship between listening to a positive story and student participants' self-reported positivity and stress throughout the duration of a four-week story intervention. Further, my proposed study will explore the relationship between self-reported positivity, hope, stress, and trauma symptomology. Due to the relationship between stress and trauma (Stanley, 2019), I would also like to determine whether stress is a contributor to the trajectory of hope and trauma symptomatology over the course of four weeks. Use of time series

analysis will also allow me to analyze the data for trends in positivity throughout the duration of the study's collection period.

Research Questions

1. Is there a significant difference in the levels of positivity, hope, stress, and trauma symptomatology in college students receiving a four-week story intervention as compared to a waitlist control group?
2. What is the effect of the positive story intervention on the slope and intercept of the trauma trajectory, and are these effects explained by participant level positivity?
3. To what extent does the positive stories intervention serve as an exogenous variable in increasing positivity and reducing stress?
4. Will positivity, as measured by the P Scale, function as a state or trait over the course of a four-week story intervention?
5. Will stress, as measured by the SNRS-11, function as a state or trait over the course of a four-week story intervention?

Research Hypotheses

1. There will be significant differences in levels of positivity, hope, stress, and trauma symptomatology after implementing the intervention of listening to stories of hope in a treatment group of college students.
2. The positive story intervention will have a negative effect on the slope and intercept of the trauma trajectory, and these effects will be explained by participant-level positivity.
3. The positive stories intervention will serve as an exogenous variable in increasing positivity and reducing stress.

4. Positivity, as measured by the P Scale, will function as a trait over the course of a four-week story intervention.
5. Stress, as measured by the SNRS-11, will function as a trait over the course of a four-week story intervention.

Experimental Research Design

Experimental research designs permit researchers to explore factors that may have a reciprocal relationship; that is, to determine whether there is evidence for a potential causal relationship between variables (Shadish et al., 2002). Experimental designs are unique in that they are designed to examine effects from manipulating a variable (Shadish et al., 2002). In the present study, participants were randomly assigned to two groups: the control group and experimental (i.e., treatment) group. The manipulated variable in the current study is positivity, as the difference between the groups is that the treatment group was given doses of positivity through listening to stories from people around the country overcoming adversity or finding hope and connection. Thus, this design will allow me to answer the research questions guiding this study.

Designing a research study involves consulting the existing literature, generating research questions the scholar would like to answer, later disseminating the findings, contributing to the literature. To accomplish this with an appropriate level of rigor, one must abide the necessary steps before collecting data (Creswell & Plano Clark, 2018). Crotty (1998) describes four stages of developing a research study: (1) identifying a paradigm worldview, (2) the identified worldview influences the theoretical stance of the researcher, (3) the theoretical stance influences the methodology, which then (4) guides the methods taken during data collection. This section will describe how design planning for the present study attended to Crotty's (1998) steps.

Philosophical Assumptions

When conducting research, it is important for researchers to describe their philosophical assumptions, comprising the researcher's *worldview*; this allows for researchers to convey assumptions guiding the study to the reader. Philosophical assumptions are a set of beliefs that guide the practice and intent behind the research process (Creswell & Creswell, 2018): *ontology* refers to the nature of research, *methodology* refers to how data is collected, *epistemology* refers to ways of knowing, *rhetoric* concerns the ways and language in which data are presented, and *axiology* focuses on the assumptions and worldviews of researchers that may impact research methods (Creswell & Plano Clark, 2018). Paradigm worldviews differ based on how they address these described philosophical assumptions. Four worldviews most commonly present in the literature are postpositivism, constructivism, transformative, and pragmatism (Creswell & Plano Clark, 2018). Quantitative researchers commonly operate from a postpositivistic worldview (knowledge is conjectural, and research seeks to develop true statements, abandoning weaker claims; Phillips & Burbules, 2000), whereas qualitative researchers largely view the world through a constructivist lens (humans make sense of their reality through their experiences; Creswell & Creswell, 2018; Crotty, 1998).

The present study's aims include studying the effectiveness of a four-week intervention of listening to story. Namely, the study aimed to quantitatively measure participants' outcomes on several measures before, during, and after completing a four-week intervention. Considering these intentions, a postpositivist worldview largely guided the methodology of this study, testing and building upon existing theories described in chapter two. The study will expand upon the existing understanding of positivity in intervention research, as well as the role of stress in the trajectory of positivity and trauma symptomatology in counseling students.

Experimental designs, as opposed to survey research, involve manipulating a variable(s) to determine if the manipulation impacts an outcome (Creswell & Creswell, 2018; Shadish et al., 2002). In an experiment, one group experiences the manipulation while another group is isolated from the manipulation by the researcher (Creswell & Creswell, 2018). Like survey designs, experimental designs help researchers draw inferences regarding relationships between variables (Creswell & Creswell, 2018). In experimental designs, the goal is not to seek an absolute truth; rather, it is to build on our understanding of relationships at a given point in time. Therefore, this study and its methodology are influenced by the postpositivistic framework. Corry et al. (2019) described randomized controlled trials (RCTs) as being firmly grounded within postpositivism due to RCTs featuring hypothetico-deductivism (i.e., the testing of hypotheses regarding causal relationships through systematic observation) and falsification (i.e., a goal of these observations is to refute hypotheses made regarding causal relationships). Further, RCTs are built on the idea that despite scientific observations being made, science cannot establish laws regarding the studied relationships, and that the scientist's role in the research process is to build on and refute what has been done in the past to work towards a deeper understanding of potential causal relationships (Corry et al., 2019).

Intensive Longitudinal Designs

One form of experimental design is the intensive longitudinal design (ILD). ILDs involve collecting data at five or more time points from a unit (e.g., person, group). The purpose of this is to determine whether a change has occurred over a period. Employing a longitudinal design permits researchers to look at subjects within naturalistic settings (as opposed to collecting data from participants in an unnatural, potentially uncomfortable setting), and encourages experimentation to understand relationships over time (Bolger & Laurenceau, 2013). ILDs

encourage the collection of with-day or day-to-day data to better capture minute fluctuations in constructs within subjects (Bolger & Laurenceau, 2013). Bolger and Laurenceau (2013) describe five reasons for employing an ILD:

1. Allow researchers to understand relationships within and between behaviors and constructs,
2. Help to reduce the effects of recall biases (i.e., under-recalling or over-recalling the number of experiences in response to a survey question; McCormick & Zheng, 2007) that largely affect the assessment of emotional experiences (Robinson & Clore, 2002),
3. Allow researchers to directly observe processes of change,
4. Allow researchers to observe "low-intensity behaviors" that are more difficult to measure with traditional methodology designs (p. 12),
5. Identify relationships between variables within subjects.

ILDs have been used in the social sciences due to their ability to study the fluctuations of a state or trait over a period. Snippe et al. (2014) studied the ability of a daily at-home mindfulness practice to predict if one's daily mindfulness would increase as a result. To examine this relationship, the authors recruited participants in the Netherlands; of the 187 individuals who participated in their mindfulness-based stress reduction program, 83 completed the required number of surveys to be included in the final analysis. Through use of this design, Snippe and colleagues were able to determine that when an individual's mindfulness increased, their positive and negative affects improved, with results lasting up to one full day; further, the authors were able to infer that increases in mindfulness preceded increases in psychological well-being. While possible theories underlying these findings are beyond the scope of this dissertation, this study highlights the abilities of using longitudinal research designs: one can better examine

fluctuations over time as compared to a traditional pre- and post-test design; in social science research, one is also able to determine the length of effects of certain interventions over a period, as seen in Snippe and colleagues' work.

Daily Diary

One form of intensive longitudinal design is a daily diary design. Diary approaches were introduced in the social sciences during the 1960s and are often employed using two different strategies: (1) use of standardized, quantitative instruments; or (2) collecting qualitative feedback from participants over a period, which then undergo content analysis to uncover themes (Thiele et al., 2002). Diary designs allow for researchers across fields to, "capture life as it is lived" (Bolger et al., 2013, p. 580); in other words, daily diary designs allow for researchers to observe behavior(s) within the settings they are experienced by sample participants (Conner & Mehl, 2015). The rationale for using this design is to eliminate retrospection bias and minimize selectivity (Conner & Mehl, 2015). Further, this allows for life to be observed outside of a research lab and within their naturalistic settings (Conner & Mehl, 2015).

Diary designs can illustrate changes within individuals over time and allow for researchers to make inferences about the temporal order of relationships (Snippe et al., 2015). Snippe and colleagues (2015) employed a diary design to understand if day-to-day changes in mindfulness and rumination precede depression, if depressive symptoms precede changes in mindfulness and rumination, and whether there are individual differences in the effects. Over the course of eight to 11 weeks, participants were asked to complete an abbreviated battery of assessments to measure daily depressive symptoms, mindfulness, and repetitive thinking. Through use of vector autoregressive modeling, the authors were able to determine the temporal order of the relationships between the three constructs, determining that mindfulness preceded

changes in repetitive thinking, mindfulness preceded changes in depressive symptoms, and changes in repetitive thinking preceded changes in depressive symptoms; additionally, this research design permitted the researchers to determine there was no evidence of reverse causality. These determinations were made possible by use of a diary design.

Various strategies exist regarding diary designs: signal-contingent designs, event-contingent designs, device-contingent designs, and interval contingent designs (Bolger & Laurenceau, 2013). *Signal-contingent designs* involve participants reporting to the researchers when signaled to do so by the research team (i.e., researchers randomly signaling to participants through use of an electronic beeper to report; McAdams & Constantian, 1983). These signals can occur at fixed or random intervals and involve asking participants to report based on how they are feeling in that set point in time (Bolger & Laurenceau, 2013). *Event-contingent designs* are used by researchers when they want participants to report after an event or behavior has taken place (e.g., asking participants to complete the diary after smoking a cigarette). *Device-contingent designs*, a newer design, involves the use of technology to help collect information. For example, Bolger and Laurenceau (2013) describe a hypothetical study involving participants wearing a heart rate monitor every day; when their heart rate exceeds a certain number, participants are asked to complete a self-report survey sent to their smart phones. Bolger and Laurenceau (2013) emphasize the vast possibilities of data collection within this design: collection of self-report data, physiological indices, task performance, environmental factors, and geographical data of participants' locations. *Interval-contingent designs* are used to collect information from participants at either fixed or scheduled intervals set by the researcher(s). Data collected are often able to be analyzed using longitudinal and time-series modeling (Bolger & Laurenceau, 2013). Due to the present study's research questions and the intended analyses to

answer those questions, an interval-contingent design will be used in the present study, asking participants to respond to a set of items twice per day at set times in the morning (6:00 am EST) and evening (6:00 pm EST).

When selecting items and measures to include in an assessment battery, Morren et al. (2009) offer several guiding recommendations. First, Morren and colleagues (2009) found in their systematic review that studies with high compliance rates (above 80%) used shorter diaries to reduce boredom that may contribute to early dropout; additionally, questions should be able to be answered by participants quickly (Thiele et al., 2002). Further, reminding participants of when a diary should be completed ensures higher compliance in a diary design (Morren et al., 2009). Third, offering financial compensation was found effective. Thiele et al. (2002) also suggest researchers stay in consistent contact with participants to build rapport to help ensure compliance and increase participant motivation to continue with participation. In the present study, I used brief measures to assess daily positivity and stress (see Measures section for more information). I created a video to communicate to participants when their surveys will be sent out and when they should be completed by (transcript on Appendix B) . Additionally, I offered high incentives to support compliance ($35; Teague et al., 2018). Lastly, I personally emailed participants every morning and night the survey to complete, consistently thanking them to show appreciation and build rapport.

Challenges of Intensive Longitudinal Designs

While there are numerous reasons one may employ a longitudinal design, Bolger and Laurenceau (2013) note several challenges that researchers must consider. First, ILDs can be burdensome for participants; using long surveys as opposed to short ones may increase the likelihood of forgotten answers or noncompliance with collection, and numerous interruptions or

collection points may be experienced as taxing to participants (i.e., participant fatigue; Bolger & Laurenceau, 2013). Second, diary measurement reactivity may influence obtained data. Barta et al. (2012) described three sources of measurement reactivity: the guinea pig effect, social desirability, and satisficing. The *guinea pig effect* refers to participants feeling the pressure or self-consciousness associated with being watching or observed during a study (Barta et al., 2012). *Social desirability* refers to participants either making conscious attempts to seem more favorable (impression management) or subconsciously offering responses that seem more favorable (deceptive self-enhancement; Barta et al., 2012). *Satisficing* refers to pressure felt by participants due to the requests made of them by the researchers (i.e., participants feeling tired or bored of longer assessments may just select answers with less attention). To potentially combat these effects, Mehl and Conner (2013) suggest reactivity can be decreased through inclusion of a control group in diary measurement. Third, reliability of measures must be considered thoroughly, as diary measurements often examine within-subjects change over a period (Bolger & Laurenceau, 2013). Fourth, ILDs are not useful in measuring rare events (Bolger & Laurenceau, 2013). Finally, retrospective biases may still be present, thus urging researchers to interpret results with caution (Bolger & Laurenceau, 2013).

To minimize the presence of these challenges in the present study, I first decided which measures would be used for daily measurement that would be perceived as less burdensome and would result in less participant forgetfulness. As mentioned, I selected two brief measures to assess positivity (Positivity Scale, Caprara et al., 2012) and stress (Stress Numerical Rating Scale-11, Kartvounides et al., 2016). These measures together, which are described in this chapter, include nine-items. To account for reactivity, I included a control group in the present study to check for the impact of the assessments themselves on participants. When selecting

measures, I utilized measures reporting good within-subjects reliability. Fourth, the aim of the present study is not to measure a rare event(s); rather, it is looking to measure the effects of an intervention over a period within participants. Finally, the participants are immediately asked questions based on how they feel *in the present moment*, reducing the need for participants to use retrospection or to recall past experiences of certain emotions or behaviors.

Threats to Internal Validity

According to Van Ness et al. (2011), the present study fits the definition of a longitudinal research design: a study in which data is collected at three or more timepoints (Plano Clark et al., 2015). As noted by Dorais (2021), several threats to internal validity emerge in longitudinal research: history, maturation, and attrition; Shadish and colleagues (2002) also note testing as a threat. *History* refers to the events affecting the sample throughout the course of the study (Shadish et al., 2002). Participants will likely still experience the effects of COVID-19, as it is still classified by the WHO as a pandemic (i.e., "an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people"; Kelly, 2011, p. 540). *Maturation* in a longitudinal study considers how participants naturally change throughout duration of data collection (Shadish et al., 2002). While most longitudinal studies are longer than four weeks (Caruana et al., 2015), the present sample will be resuming or beginning college careers, thus inciting natural development that may affect participants over time. Participants deciding to continue with treatment for the allotted duration of the study is *attrition* in a longitudinal study (Shadish et al., 2002). *Testing* as a threat refers to the impact of repeated exposure to measures impacting scores, leading to researchers determining a causal effect when one is not present (Shadish et al., 2002). To decrease these threats, I will randomly assign participants to the experimental and control groups to increase

internal validity (Shadish et al., 2002). Random assignment in the current study will allow me to better determine whether differences were due to history or maturation; all participants will be maturing at the same rate and is a factor that cannot be controlled for. Further, random assignment will help determine whether the intervention had an effect on participants over the course of four weeks. Further, to decrease the likelihood of dropout, I will offer high compensatory initiatives to maintain retention (Teague et al., 2018). Finally, while participants will be asked to complete assessments frequently, the inclusion of a control group will help in determining existing causal effects.

Threats to External Validity

External validity refers to the ability of a study's findings regarding causality to apply, or be generalized to, the larger population from which the researcher sampled (Shadish et al., 2002). Shadish and colleagues (2002) describe several threats to external validity when determining causality: interaction of causal relationship (a) with units, (b) over treatment variables, (c) with outcomes, and (d) with settings; they also posit context-dependent mediation as an additional threat. *Interaction of causal relationship with units* questions whether findings can describe the population or a unique subset; in the proposed study, the high compensatory initiatives offered to combat threats internal validity may pose a new threat to external validity (Dorais, 2021). To decrease the impact of this threat, I will recruit students from institutions from various regions in the United States to better capture the population of college students in the US, as well as increase the variability within the sample. *Interaction of causal relationship over treatment variations* questions external validity when there have been variations in the intervention implementation (Shadish et al., 2002). In the proposed study, endless factors could impact the participants' positivity and stress (e.g., receiving a good/bad grade on an assignment or exam,

family visiting one weekend). The aim is to understand whether the intervention can mitigate the effects of these factors.

Interaction of causal relationship with outcomes questions the ability of the study's findings to suggest relationships between other outcomes. For example, the present study aims to study the efficacy of an intervention of positive stories within the college population. To recruit and decrease attrition, I offered high compensation. High incentives in research, while seen as necessary to accruing robust samples, offer several areas of concern regarding the external validity of findings. Offering large incentives may impact participant decision-making, participating and behaving in a financially-motivated manner (Resnik, 2015). Additionally, concerns regarding exploitation of a group must be considered (Resnik, 2015); namely, compensation must be fair as opposed to paying a group too little and taking advantage of certain factors impacting their financial situations (i.e., college students generally need sources of extra income while attending school; Reppond, 2019). A third area of concern is biased enrollment, which describes the act of researchers offering high incentives to participants in need of financial support (Resnik, 2015). Due to most college students needing financial support (Reppond, 2019), they may be more inclined to participate and do enough to receive payment, thus creating a potential impact to the validity of data collected. To combat these areas described by Resnik (2015), I described the payment schedule in the IRB proposal, which was approved by my institution; additionally, compensation was offered in the form of Amazon gift cards as opposed to cash payments.

Interaction of causal relationship with settings regards the causal relationship within and across settings (Shadish et al., 2002). Since students will be participating in the study in their naturalistic settings, the environment will not remain constant; however, using GLIMMPSE

power analysis will determine the minimum sample size needed to achieve a certain level of power. Following these recommendations will decrease the likelihood of participant differences impacting the obtained results, increasing the ability of the researchers to make claims inferring causality regardless of setting. The final threat described by Shadish and colleagues (2002) is *context-dependent mediation*, refers to the loss of a causal relationship due to the elimination of potential mediating factors (Shadish et al., 2002). Considering the present study is not looking at variables that mediate a causal relationship, this threat is less likely to impact the external validity of the study. However, systematic replication of the present study will suggest further information regarding the external validity of this study's findings (Petursdottir & Carr, 2018).

Procedure

The researcher will utilize and emphasize a quantitative design in response to the research questions. As recommended by Conner and Lehman (2012), I first piloted the measures and the videos selected from StoryCorps. Through convenience sampling, I contacted known researchers working with undergraduate students, inviting their students to complete the pilot survey. The pilot survey included all 56 videos and was followed by a brief validity check to ensure the participants (n = 2) watched the video, then asking them to score how hopeful or stressed they were immediately after the video. To do this, I included the Stress Numerical Rating Scale and a modified version which asked participants the same question regarding hope as opposed to stress. After every 10 videos, participants were asked to select the videos that stood out to them the most, which ones they did not like, and offered text boxes for them to answer questions about the videos in their own words. These checkpoint questions asked participants to respond to prompts about how the videos made them feel (e.g., "How do you feel after watching the 10 videos?") Participant responses included, "I felt a mix of things after

watching the first 10 videos; some were uplifting, some were sad. But overall, I feel grateful for human connection;" "I feel hopeful about what people can do when they set their mind to something. To me, these videos were all about change and determination through adversity, and they made me feel like I could do anything I put my mind to;" and "I feel more at ease. I think this was a good distraction from reality in a sense and I have some suspicious motivation to do my work." To avoid potential risks of exploitation, participants were paid in accordance with Virginia's 2023 minimum wage requirements. They were sent $50 gift cards for the anticipated four hours of work. Amazon's Incentives program was used to distribute the $50 payments in the form of Amazon gift cards; after disbursement, email addresses of participants in the pilot group were destroyed.

After reviewing the responses, I moved forward to receive permission from the Institutional Review Board (IRB) of the researcher's university. I contacted a sample of universities within various regions across the United States for permission to recruit college students from their institution. I used a longitudinal survey design to administer the battery of assessments via Qualtrics (2020). Survey design is most appropriate to achieve the aims of this dissertation, as it permits researchers to capture quantitative trends (i.e., predictive relationships; Creswell & Creswell, 2018). At the start of recruitment, interested participants first reviewed the virtual informed consent form on Qualtrics (see Appendix C), checking that they approved and consented to moving forward with the study. Participants were asked to confirm they were (a) over 18 years old at the start of the study, and (b) currently enrolled in an undergraduate program; the Qualtrics (2020) survey was designed to close the survey if the participants did not meet both criteria. Participants then completed the assessment battery and the demographics form; completing this will compensate participants with $5. After, participants were randomly

assigned to either a control or experimental (i.e., treatment) group using Qualtrics' (2020) embedded randomization generator. The battery of instruments is described within this chapter in the measures section.

Throughout the four-week data collection period, participants in the experimental group were asked to watch a video on StoryCorps sent to them by the researcher every morning and night. After watching each video, they were asked to complete a brief battery of assessments; in total, participants in this group were asked to watch 14 videos throughout the course of the week. Both groups were sent the same battery of instruments at the same times throughout the week, the exception being the control group will not be asked to watch the selected videos. Story Corps is an independently funded organization which collects stories from Americans for the US Library of Congress. It is not regarded as a high source of entertainment or media consumption for college students today. Additionally, in the comments box made available to the treatment group, there was never mention of having seen the content before. It can be thus assumed that participants in the control group were not watching the videos alongside the treatment group. At the end of each week, participants were asked to complete all measures (except for the demographics questionnaire) described in this chapter. The experimental group's participation will be evaluated through checking they have watched the videos and completed the weekly battery; the control group will be evaluated through ensuring they have completed the weekly battery. The treatment group's surveys took approximately three to four minutes to complete at each timepoint; the control group's surveys took less than one minute at each timepoint. Every week, the researcher sent participants who have completed 50% of the bi-daily surveys for the week $5; through completing all major end-of-week assessments, participants can earn an additional $10, making the maximum they can earn a total of $35.

Through administration of the measures described later in this chapter, the study aims to understand the impact of listening to a positive story on an individual's positivity, as measured by the Positivity Scale (Caprara et al., 2012), and on their stress, as measured by the Stress Numerical Rating Scale (Karvounides et al., 2016). Further, this study aims to understand the relationships between positivity and stress, and positivity and trauma symptomatology (as measured by the Trauma Symptom Checklist; Elliott & Briere, 1992).

Participants

I used GLIMMPSE 3.0.0 (Kreidler et al., 2014) to determine the minimum sample size needed to have a higher chance (>80%) of detecting a difference between the two groups. I needed each group to have a minimum sample of n=42 to make inferences regarding the study's research questions. In a study of adolescent males in residential treatment for substance abuse (n=20, M=16.46), Balkin and Russo (2021) administered assessment batteries every week over the course of one year. Impacted by turnover rates, consent, assent, and voluntary compliance, Balkin and Russo (2021) reported an attrition rate of 62.3%. Further, Beauchemin (2018) conducted a randomized controlled trial of college students to examine the efficacy of a seven-week intervention on students' stress and well-being; in this study, the total attrition rate for the study was 20%, the intervention group attrition rate was 14%, and the control group attrition rate was 27%. The proposed study is shorter in duration than the studies conducted by Beauchemin (2018) and Balkin and Russo (2021), and participants will be offered high incentives to promote retention (Teague et al., 2018), therefore leading me to estimate an attrition rate of 50%.

Further, the sample will be split into experimental and control groups, meaning I will randomly assign participants to each group. While estimating for the attrition rate of 50%, I aimed to recruit 42 participants for each group. This sample size will allow me to draw

inferences from the groups according to the research questions, as well as account for attrition, increasing the likelihood of maintaining a robust sample. Due to the present study featuring research questions pertaining to college students in the US, I contacted several colleges' deans and communications officers from each of the regions in the US (West, Midwest, South, and Northeast). Inclusion criteria required participants to be enrolled in a four-year college and to be over 18 years old. Through administration of the assessment battery including a demographics questionnaire, I collected information regarding participants' age, gender, race, ethnicity, and current stage of matriculation in their college careers. Participants were offered up to $35 for participating in the entire study. Completion of all four weeks' requirements will earn participants' $20; completion of the larger end-of-week assessments will earn participants an additional $15. Through this procedure, I used multistage cluster sampling followed by purposive sampling to obtain a large enough sample that (a) meets sample size recommendations determined through GLIMMPSE (Kreidler et al., 2014), and (b) accounts for attrition.

Cluster Sampling. Multistage cluster sampling was used in the present study to identify clusters (i.e., regions) of the US, later randomly identifying two states within each identified region. "Clusters" refer to groups of people (Sedgwick, 2014). In cluster sampling, random clusters are selected, from which every member of the participant has a chance of being selected (Sedgwick, 2014). In the proposed study, the regions are clusters within the United States. Through purposive sampling, institutions will be selected, and students will be invited to voluntarily participate in the study (Sedgwick, 2014).

Purposive Sampling. Purposive sampling is a nonprobability sampling method assisting researchers in targeting a specific group with desired characteristics (Campbell et al., 2020). When using purposive sampling, the researcher decides what needs to be known and recruits

based on the identified parameters (Etikan et al., 2016). In the present study, I identified colleges within the states selected through cluster sampling. I gathered institutions within the states and selected institutions that had diverse student demographics and were not affiliated with the Ivy League, as these affiliated institutions often present students with uniquely challenging curricula, presenting both significant mental health concerns for students and systemic issues related to the historic lack of diversity in the Ivy League (Johnson et al., 2022). This methodology will allow me to recruit students to better represent the population of US college students.

Recruitment. To recruit my sample, I first underwent the mentioned sampling methods. I randomly selected two states within each region of the United States, and then selected schools that advertised higher acceptance rates and had diverse student populations. The sample of colleges included: University of Arizona; California State, Sacramento; Minnesota State; University of Iowa; William & Mary; University of Texas, Austin; University of Rhode Island; and the Pennsylvania State University. I contacted the schools' deans and communication officers with the emailed copied on Appendix A. The contacted individuals then shared the invitation to participate with their students. Through these steps, the identified institution representatives were then able to invite students, and all students had equal access to joining the study.

Random Assignment. To increase the validity of the proposed study, the sample obtained through the sampling methods will then be randomly assigned to either the experimental or control group (Shadish et al., 2002), as is characteristic of experimental research designs (Creswell & Creswell, 2018). Engaging in this method reduces the likelihood of certain variables influencing the measured outcomes (Shadish et al., 2002). Additionally, engaging in this sampling method ensures the proposed experimental design is a *true experiment* (Creswell &

Creswell, 2018). Further, through utilization of the random assignment feature on Qualtrics (2020), randomization will occur unbeknownst to the researcher, ensuring a double-blinded approach (Sedgwick, 2015).

Data Collection

Data collection took place over the course of four weeks. First, participants were recruited through their institution if their administrators shared the invitation, and they were asked to complete the battery of instruments, in addition to a demographics assessment. All distributions of assessments occurred via Qualtrics (2020). Participants were asked to enter their email addresses, as they would be used to contact participants throughout the study. Email addresses were destroyed after data collection finished. Through Qualtrics, participants were randomly assigned to either the experimental or control groups without input from the primary investigator. This ensures a double-blind assignment, reducing the likelihood of bias and increasing the generalizability of the findings. After the registration survey, participants were grouped into two phases based on when they completed the initial survey. Phase one began on January 20, 2023 and continued until February 16, 2023; phase two began on January 23, 2023 and continued until February 19, 2023. Using the Qualtrics distribution features, participants were sent the surveys every morning (6:00 am EST) and evening (6:00 pm EST); participants had to complete 50% of the weekly surveys to receive compensation. Further, the end-of-week surveys were sent with subject lines indicating the larger surveys were enclosed. Ultimately, participants were contacted 56 times throughout the study using Qualtrics, and received five messages (one per pay day) describing the progression of the study and reminding them of the study's requirements.

Materials

For the present study, I gathered stories from StoryCorps, a nonprofit organization whose mission is to collect stories from Americans across the country. Participants in the project are from all backgrounds and are recruited and interviewed to share a story from their life with the intention of sharing wisdom to the next generations. Since starting in 2003, Story Corps has become the largest collection of human voices ever collected (StoryCorps, 2023). Selection of the videos was influenced by whether the video told a story of positivity (e.g., finding family after being rejected by family over being transgender) rather than sadness (e.g., a woman discussing her final phone call with her husband who was trapped in the World Trade Center during the 9/11 attacks). The rationale for selecting videos from this source is that StoryCorps is an open access library, meaning any individual can access the videos without any sort of subscription or institutional affiliation, thus increasing accessibility. Stories are told through interviews conducted by individuals with people they share relationships with, meaning the videos and interviews are more organic as opposed to being staged. The aim of the organization is to connect people and share people's stories with others with the goal of creating a more compassionate world (StoryCorps, 2023). Additionally, considering a large motivator for this study is to find methods of increasing positivity for people who may be struggling to receive mental health services, the materials used had to be accessible to anyone who looked them up. Ultimately, the goals of the organization, the videos themselves, and the accessibility motivated the reasoning for incorporating them into the study.

I embedded the videos into a Qualtrics (2020) survey and engaged in the outlined pilot survey procedure. The letter inviting participants to participate in the pilot is on Appendix A and the script used in the video explaining the instructions is on Appendix B. To be eligible,

participants had to be enrolled in an undergraduate program and were recruited through invitation emails distributed by contacted administrators.

The pilot group phase of the present study offered numerous insights before recruiting for the intervention study. First, participants (n = 2) were asked to score their hope and stress using single-item measures. While the Stress Numerical Rating Scale (SNRS-11; Kartvounides et al., 2016) has been demonstrated across various populations (see Measures section below for more information), the researcher adapted the SNRS-11 to measure hope; the sole difference between the two scales was that "stress" was replaced with "hope". Participants' hope and stress fluctuated as they watched each of the 56 clips, and their open-ended feedback reflected those fluctuations (e.g., one participant said, "I feel content with being alive. These videos reminded me of the most important part of life: human connection. I feel lucky to be alive and to have relationships with other people. I feel grateful for loss and sadness because it means that you have loved. These videos covered people from so many different walks of life, with so many different experiences, and found the one commonality: our relationships with other people are what get us through"). The responses on the ultra-brief scales, despite coming from a small sample, suggest that the SNRS-11 may be reactive enough to capture the fluctuations resulting from the selected videos. Further, the responses suggest that the selected videos are impactful to students enrolled in an undergraduate program.

After receiving the video feedback from the pilot group and recruiting my sample, I then scheduled the videos to be sent out to the groups. One video was sent to all participants in the treatment group each morning and evening over the course of four weeks, totaling 56 videos administered over the four weeks. After each video, participants were asked to complete a brief participation check (e.g., answering one question about the content of the video) to ensure

participation in the intervention; further, participants in both groups were asked to complete the Positivity Scale (Caprara et al., 2012) and the SNRS-11 (Karvounides et al., 2016). At the end of each week, participants were also asked to complete the Trauma Symptom Checklist-40 items (Elliott & Briere, 1992) and the Adult Hope Scale (Snyder et al., 1991). The daily survey took the control group participants less than one minute to complete and the treatment group less than four minutes to complete each morning and night.

Measures

Participants completed a battery of assessments over the duration of data collection. At recruitment, participants were asked to complete a brief demographics questionnaire, the Adult Hope Scale (AHS; Snyder et al., 1991), the Stress Numerical Rating Scale (SNRS-11; Kartvounides et al., 2016), the Positivity Scale (P Scale; Caprara et al., 2012), and the Trauma Symptom Checklist (TSC-40; Elliott & Briere, 1992). After random assignment, treatment group participants will be asked to watch the daily administered StoryCorps videos every morning and night, then complete the P Scale and the SNRS-11; the control group just completed the scales. In addition to the two scales, the TSC-40 and AHS will be completed by participants at the end of each of the four weeks. All assessments were administered via Qualtrics (2020) to participants throughout the course of data collection.

Demographics Questionnaire. The researcher created a demographics form to provide the researcher with participants' information. Information collected included participants' email addresses for further contact throughout data collection, age, gender, race, and ethnicity. Additionally, participants were asked to describe their current placement in school (e.g., traditional freshman, nontraditional junior, etc.) and if they have received therapy before in the past and if they were currently receiving services.

Stress Numerical Rating Scale-11. The SNRS-11 (Karvounides et al., 2016) is a one-item measure of momentary stress intended for use in adolescents and adults. Initially developed and modeled after a commonly used single-item measure of pain in children, the Numerical Rating Scale-11 (van Baeyer et al., 2009), the SNRS-11 asks participants, "On a scale of zero to 10, with zero being no stress and 10 being worst stress possible, what number best describes your level of stress right now?" Participants are offered the 11 responses, spaced equidistant from each other across a page, asking them to indicate the number of their current stress levels. Since this is a single-item measure, there are no Cronbach's alpha values to report for this measure. Karvounides and colleagues (2016), when developing the single-item measure, tested for evidence of convergent validity with the State-Trait Anxiety Inventory for Children (STAI-C; Spielberger & Gorsuch, 1973), the Perceived Stress Scale (PSS, Cohen et al., 1983), and the Children's Somatization Inventory (CSI; Garber et al., 1991). The SNRS-11 demonstrated evidence of strong construct validity with the STAI-C (r_s=.60, p<.01), and evidence of significantly moderate validity with the total scores on both the PSS (r_s=.31, p<.01) and the CSI (r_s=.35, p<.01). While these findings regard validity in a sample population of college students (n=1,610), the measure has been utilized in several studies with different populations, including US surgeons during the COVID-19 pandemic (Landau et al., 2022) and parents of young children aged between six and 12 years old (Lim et al., 2021).

Positivity Scale. The Positivity Scale (P Scale; Caprara et al., 2012) was created to measure an individual's positivity. Positivity is defined by the scale developers as one's "tendency to view and address life and experience with a positive outlook" (p. 710). The eight-item measure includes items related to self-esteem, life satisfaction, and optimism. Examples of items include, "I have great faith in the future," and "I look forward to the future with great hope

and optimism." Responses are formatted on a five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*); one item, "At times, the future seems unclear to me," is reverse scored during data analysis. The higher the score obtained by a participant, the higher their positivity. Caprara and colleagues report obtaining a range of internal consistency values, with Cronbach's alpha values fluctuating from .71 to .82 across their validation studies. Further, to test for evidence of construct and discriminant validity, Caprara and colleagues administered the P Scale along with the Rosenberg (1965) Self-Esteem Scale (α=.84), the Satisfaction with Life Scale (Diener et al., 1985; α=.90), the Life Orientation Test (measures optimism; Scheier et al., 1994; α=.79), the Center for Epidemiologic Studies Depression Scale (CES-D; Fava, 1983; Radloff, 1977; α=.83), the Positive and Negative Affect Scale (PANAS; Watson et al., 1988; positive affect section obtained α=.81, whereas the negative affect section obtained α=.87), and the Big Five Questionnaire (BFQ; Caprara et al., 1993; alpha values ranged from .73 to .88) to their sample of 3,589 Italian adults, ranging from 17 to 75 years old. The authors found the P Scale to be highly correlated with self-esteem (r=.67, p<.01), life satisfaction (r=.73, p<.01), and optimism (r=.66, p<.01); negative affect (r=-.40, p<.01) and higher incidences of depression (r=-.39, p<.01) were significantly negatively correlated with the P Scale. Additionally, the authors investigated the test-retest reliability of the P Scale. With a sample of 262 undergraduates from Sapienza, Italy, the authors administered the P Scale in October, 2010 and again in November, 2010. Reliability was .76 (95% CI [lower=.72, higher= .80]) and .78 (95% CI [lower=.76, higher=.80]) at the October and November administrations respectively. In the present study, the P Scale demonstrated evidence of internal consistency (α_{T1} = .78, α_{T2} = .87, α_{T3} = .88, α_{T4} = .87, α_{T5} = .85)

Since its initial validation, the P Scale has been used in numerous studies. While creating the Frequency of Suicidal Ideation Inventory (FSII), Chang and Chang (2016) administered the P Scale, alongside other measures assessing suicide risk and protective measures, to assess for evidence of discriminant validity. The P Scale and the FSII were found to have a significant negative association (r=-.47, p<.001; Chang & Chang, 2016). Yıldırım & Güler (2021) looked to understand the role of positivity within the relationships between COVID-19 perceived risk, death distress, and happiness. To measure positivity in their sample of 3,109 Turkish adults (ages between 18 and 70; M=38.64, SD=10.40), the authors administered the P Scale (Yıldırım & Güler, 2021). Authors found, among other results, that positivity fully mediated the effect of coronavirus risk on death anxiety (Yıldırım & Güler, 2021). Ocal and Uslukilic (2022) looked to investigate the relationship between depression, anxiety, stress, and positivity in university students during the COVID-19 pandemic. In their cross-sectional study of 2,153 Turkish students, the authors administered the validated Turkish version of the P Scale (Çıkrıkçı et al., 2015) to measure positivity (Ocal & Uslukilic, & 2022). The authors found that as the P Scale scores decreased, the sample's depression scores increased (r=-.603, p<.001). Additionally, the authors found as participants' levels of anxiety and stress increased, their positivity scores on the P Scale were more likely to decrease, emphasizing the inverse relationship between depression, anxiety, and stress and positivity.

Adult Hope Scale. The Adult Hope Scale (AHS), or what is sometimes referred to as the Dispositional Hope Scale, measures individual differences in hope (Snyder et al., 1991). As described in chapter two of this dissertation, Snyder and colleagues (1991) developed the scale based on Snyder's Hope Theory, which theorizes that people who are able to successfully identify pathways to reach their goals and possess the agency to work towards those goals are

likely to have higher trait hope (Snyder, 2002). Thus, the AHS assesses an individual's ability to (1) identify pathways, or the *how*, to pursue their goals, and (2) develop the agency, or determination, to persevere through any emerging challenges to reach their identified goals (Snyder et al., 1991). The AHS is a 12-item measure which asks participants to select the number that best describes *them*; responses are on a four-point Likert type scale, ranging from 1 (*definitely false*) to 4 (*definitely true*). Four items assess pathways (e.g., "I can think of many ways to get out of a jam"), four assess agency (e.g., "I energetically pursue my goals"), and four are filler items (e.g., "I feel tired most of the time"). Unlike the newer State Hope Scale (Snyder et al., 1996), the AHS measures dispositional hope (i.e., hope as an individual trait) as opposed to hope as a state (i.e., a state that can fluctuate throughout the day). Since the present study is looking to assess hope every week, as opposed to twice per day daily, the AHS will be used.

For the overall scale, Snyder and colleagues (1991) reported the Cronbach's alpha values to range between .74 to .84. For the agency subscale, alpha values ranged from .71 to .76; for the pathways subscale, alpha values ranged from .63 to .80. Robinson and Rose (2010) looked to examine the validity of general and domain-focused measures of hope in a convenience sample of undergraduate students (n=227). The AHS demonstrated evidence of convergent validity with other measures; namely, with academic hope (measured by the Academic Hope Scale, taken from the Domain Specific Hope Scale-Revised; r=.559, p<.004), math hope (measured by an adapted Academic Hope Scale to measure hope in math courses; r=.346, p<.004), self-efficacy (measured by the Self-Efficacy Scale; r=.599, p<.004), optimism (measured by the Life Orientation Scale; r=.415, p<.004), and with mastery approach goals (measured by the Achievement Goals Questionnaire; r=.333, p<.004). Eddington et al. (2014) used the AHS when validating their Depression Change Expectancy Scale to assess expectancy for change in

depression; the measure includes both pessimistic and optimistic phrasing to avoid response set. The AHS was negatively correlated with the pessimistically worded items from the Depression Change Expectancy Scale (r=-.29, p<.01), demonstrating evidence of discriminant validity in a sample of 416 undergraduate students from North America. In the current study, the AHS demonstrated good internal consistency (α_{T1} = .75, α_{T2} = .79, α_{T3} = .86, α_{T4} = .85, α_{T5} = .85).

Trauma Symptom Checklist. The Trauma Symptom Checklist (TSC; Briere & Runtz, 1989) was initially created to expand upon the psychometrically supported Crisis Symptom Checklist (Briere & Runtz, 1987). Namely, the authors (1989) were looking to expand upon the symptomology assessed in participants, better assess the extent of symptomology, and to increase the number of subscales included in the final measure (e.g., depression, anxiety). Initially proposed as a 33-item measure (TSC-33; Briere & Runtz, 1989), the new scale posed several shortcomings: (a) it failed to assess for sexual difficulties in samples, (b) the sleep disturbance subscale demonstrated poorer internal consistency (α=.66), and (c) ambiguity regarding content validity of the post-sexual abuse trauma subscale (Elliott & Briere, 1992). Thus, Elliott and Briere (1992) validated the TSC-40, a relatively brief, 40-item measure used to assess effects of (but not limited to) childhood trauma (Briere & Runtz, 1989). The overall scale comprises six subscales: dissociation, anxiety, depression, sexual abuse trauma index (replacing the post-sexual abuse trauma subscale), sleep disturbance, and sexual problems. Participants are asked, "How often have you experienced each of the following in the *last two months*?" and items provided include symptoms such as "feeling isolated from others," "insomnia," and "low sex drive"; each item corresponds with a subscale. Responses are measured using a 4-point Likert-type scale, ranging from 0 (*never*) to 3 (*very often*).

Elliott and Briere (1992) report several findings regarding the scale: (a) TSC-40 subscale scores were significantly higher for sexually abused women than those with no history of sexual abuse, and (b) total scores on the TSC-40 were greater for subjects reporting abuse history compared to those reporting no history. The TSC-40 and its subscales demonstrate good internal consistency as evidenced by obtained Cronbach's alphas: anxiety (α=.66), depression (α=.70), dissociation (α=.64), sexual abuse trauma index (α=.62), sexual problems (α=.73), sleep disturbance (α=.77), and overall (α=.90). In a study comparing betrayal trauma to other forms of trauma in undergraduate college students, Goldsmith and colleagues (2012) obtained an overall α value of .92 for the TSC-40, lending additional support for the internal consistency of the TSC-40. In the present study, the TSC-40 overall demonstrated good internal consistency (α_{T1} = .92, α_{T2} = .93, α_{T3} = .94, α_{T4} = .93, α_{T5} = .95).

Data Analyses

Growth Curve Analysis. To answer the first and second research questions, I will utilize a growth curve analysis (GCA) to determine longitudinal within-subjects change. Growth curve models allow for researchers to estimate trajectories of differences over time (CenterStat, 2017). Compared to a multivariate analysis of variance (MANOVA), GCAs allow for researchers to look at individual differences over a period of time (Curran & Bauer, 2016). Additionally, the ability to examine within-subjects change and to explore trajectories permit researchers to understand treatment effectiveness (Curran & Bauer, 2016). Using a growth curve model to answer research questions one and two will allow me to assess (a) the outcome on the variables and (b) the variables' trajectory of change over the course of the four-week intervention.

Time Series Analysis. To answer the third, fourth, and fifth questions, I performed a time series analysis. Time series analysis allows researchers to "test theories about social

dynamics" and to make "hypotheses about causal relationships between the variables *in time*" (Box-Steffensmeier et al., 2014, p. 8). Further, time series analyses permit researchers to determine whether a variable is exogeneous (independent) or endogenous (dependent) and how it may be impacting other variables within a study (Box-Steffensmeier et al., 2014; Ninot et al., 2005). In the present study, conducting a time series analysis will allow me to determine (a) whether the positive stories intervention serves as an exogenous variable, (b) the temporal dynamics of positivity and stress over the course of a four-week intervention.

Summary

The present study will offer additional information regarding positivity and stress in college students. First, the impact of stories has received little attention, and there is a dearth of research in counseling on this activity. If results suggest this intervention to be effective, it will have implications related to the support of college students during their academic careers, increasing positivity while decreasing perceptions of stress and trauma symptomatology over a four-week period. This study will also extend the field's understanding of the relationship between positivity, stress, hope, and trauma symptomatology within the college student population. Finally, the proposed study's methodology is less researched within counseling and counselor education (Dorais, 2021; Lenz, 2015; Wood et al., 2021); the findings will contribute to the field's understanding of this type of methodology and the information one can obtain regarding intervention testing with college students.

CHAPTER FOUR: RESULTS

This chapter will present the results from the present study. The primary aim of the study was to examine the effectiveness of listening and watching brief positive stories over the course of four weeks. First, the participants, their reported demographics, and attrition rates are presented. Next the research questions are answered; namely, the results from the growth curve model are discussed to answer whether there was a significant difference in the levels of positivity, hope, stress, and trauma symptoms between the two groups of participants. Additionally, the results of the growth curve model will answer the second and third research questions to understand the effect of the positive story intervention on the slope and intercept of the trauma trajectory, and the extent the positive stories intervention serves as an exogenous variable in increasing positivity and reducing stress. Then, the results from the time series analysis are presented to determine whether positivity and stress, as measured by the Positivity Scale (Caprara et al., 2012) and the Stress Numerical Rating Scale-11 (Karvounides et al., 2016) respectively, functioned as states or traits in the present data set.

Participant Demographics

Participants were eligible for the study if they were (a) 18 years old or older, and (b) currently enrolled in an undergraduate program. Figure 5 presents the Consolidated Standards of Reporting Trials (CONSORT; Schulz et al., 2010) diagram illustrating participant participation and retention from recruitment, through data collection, ultimately to final analysis. One hundred ninety-two participants met inclusion criteria, consented to participation, and completed the first assessment battery. Intention-to-treat analysis (ITT; Gupta, 2011; McCoy, 2017) is a procedure to ensure all participants who have been randomized are analyzed to reduce potential biases and incorrect interpretations of the data. This procedure accounts for issues such as noncompliance in

randomized controlled trials (RCTs; McCoy, 2017). In the present study, I analyzed data from all individuals that completed at least the third assessment, i.e., participants that completed registration and at least the first two weeks of the study. This means that participants who completed at least the first two weeks of the study were analyzed and accounted for. Table 1 presents the demographic information of the sample included in final analyses.

Figure 5

CONSORT Diagram of Participant Participation and Attrition

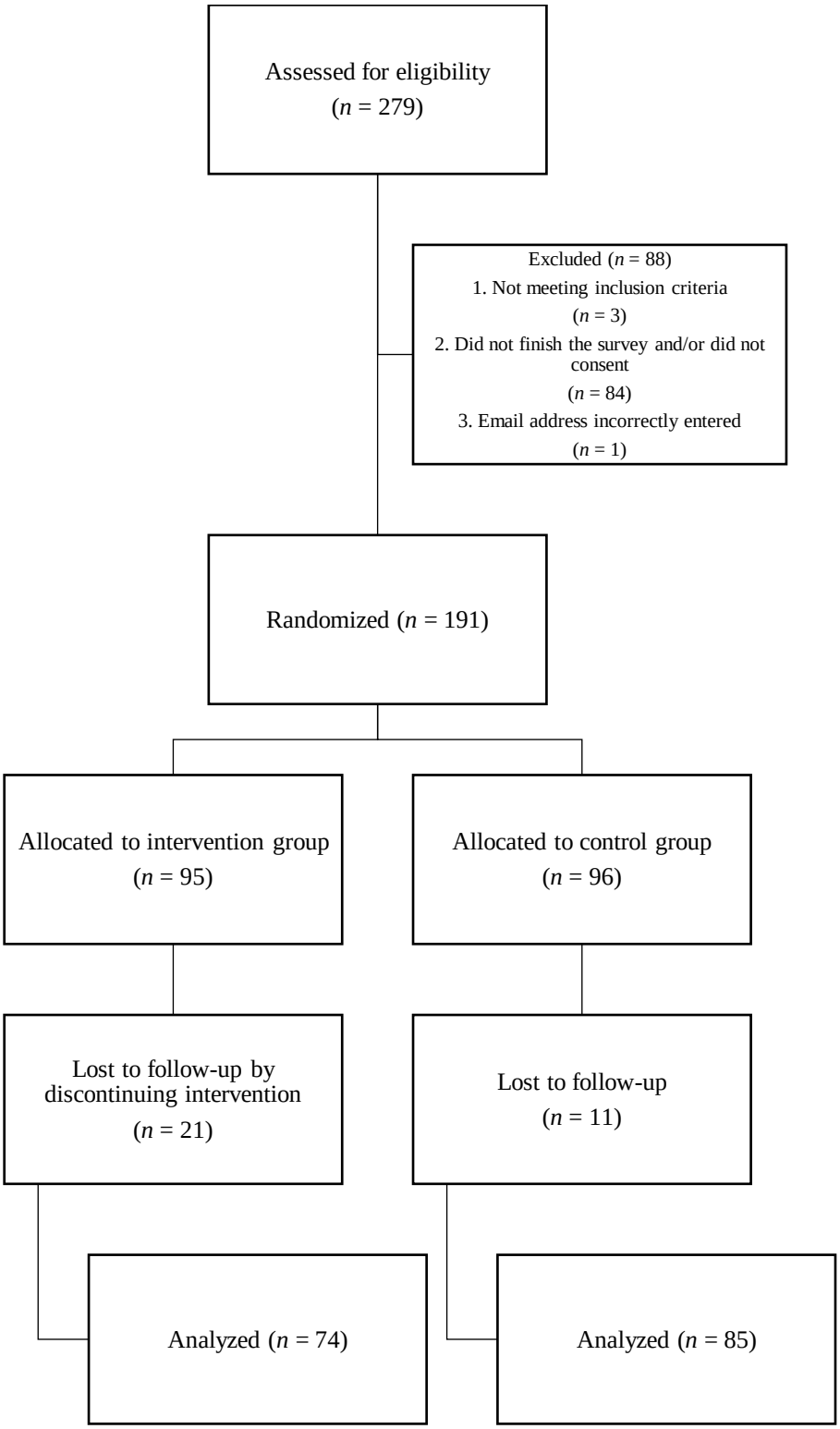


Table 1

Demographic Information of Participants Included in Final Analysis

	Frequency	Percentage
Age (M = 19.11, SD = 1.63)		
18	63	39.9%
19	55	34.8%
20	26	16.5%
21	5	3.2%
22	3	1.9%
24	1	0.6%
25	2	1.3%
27	1	0.6%
30	1	0.6%
Did not disclose	2	1.3%
Race		
White	71	44.7%
Black or African American	9	5.7%
American Indian or Alaska Native	1	0.6%
Asian	45	28.3%
Multiracial	19	11.9%
Preferred not to say/did not disclose	10	6.2%
Arabic	2	1.3%
Latino/Latina	2	1.3%
Ethnicity		
Hispanic	53	33.3%
Not Hispanic	103	64.8%
Prefer not to answer	3	1.8%
Gender		
Male	29	18.2%
Female	122	76.7%
Transgender	1	0.6%

Nonbinary	4	2.5%
Prefer not to answer	2	1.3%
Educational Placement		
Freshman	84	52.8%
Sophomore	46	29.1%
Junior	23	14.5%
Senior	4	2.5%
Other	2	1.3%
Traditional		
Yes	149	93.7%
No	9	5.7%
Did not disclose	1	0.6%
History of Therapy		
Yes, in the past	45	28.3%
Yes, in the past and currently receiving	20	12.6%
Yes, never in the past and currently receiving	4	2.5%
No	89	56.3%
Did not disclose	1	0.6%

Preliminary Data Analysis

Before analyzing the data, I downloaded the data from Qualtrics into a Microsoft Excel sheet to clean the data. Data cleaning in this case involved multiple steps: using software functions to calculate the total scores on the five large assessments, calculating the averages of the timepoints (n = 57), and removing the individuals that didn't complete at least the first two weeks of the study. The survey distributed on day 11 morning did not display the questions to participants; only the video designated for that timepoint. To account for this, I took the averages of day 10 evening and day 11 evening to produce the scores on the P Scale and SNRS-11. This was only a concern for the treatment group considering each survey was independent of one

another; through use of Qualtrics' "allow multiple attempts" feature of distribution, the control group received the same morning and evening surveys throughout the study. Table 2 illustrates the descriptive statistics on all measures used in the current study.

Table 2

Univariate Descriptive Statistics for Positivity (Positivity Scale), Stress (Stress Numerical Rating Scale-11), Hope (Adult Hope Scale), and Trauma Symptomatology (TSC-40) Separated by Group

	Mean					Standard Deviation				
	T_1	T_2	T_3	T_4	T_5	T_1	T_2	T_3	T_4	T_5
					Treatment Group					
Positivity	27.82	28.56	28.69	29.12	29.47	4.16	4.59	5.11	5.23	5.57
Stress	5.89	4.59	4.85	4.51	4.86	2.01	2.15	2.32	2.35	2.19
Hope	24.60	24.92	24.73	25.11	25.51	2.89	3.69	3.85	3.95	4.14
Trauma	68.16	64.60	60.85	59.81	61.02	16.86	17.46	16.77	16.07	19.42
					Control Group					
Positivity	26.52	27.24	27.37	27.16	28.05	4.48	4.89	5.07	4.97	4.57
Stress	5.51	4.11	4.32	4.10	4.24	1.83	2.41	2.29	2.35	2.12
Hope	24.08	23.99	24.33	23.58	24.21	2.99	2.78	3.18	3.56	2.74
Trauma	72.00	67.78	67.51	65.40	66.04	19.01	18.36	18.85	19.77	20.49

Note. T_1 = registration, T_2 = Day 7, T_3 = Day 14, T_4 = Day 21, T_5 = Day 28

Results of Research Question One

The first research question reflects the aim of the study, which is to understand between-group differences in positivity, hope, stress, and trauma symptomatology throughout the course of a four-week story intervention. The first research question asks:

Is there a significant difference in the levels of positivity, hope, stress, and trauma symptomatology in college students receiving a four-week story intervention as compared to a waitlist control group?

Preliminary Analysis

After cleaning the data, I imported the dataset into SAS for Academics (SAS, 2022) to create a growth curve model. I began by analyzing the data using PROC MIXED on SAS because PROC MIXED is best suited for analyzing repeated measures data and patient-reported outcomes (Manthena et al., 2021). To compare change over the duration of the study, I included three fixed effects (i.e., components which remain constant throughout the study): assigned group, timepoint, and the group-over-time interaction (Bolger & Laurenceau, 2013). Considering the hypothesis to research question one, I expected a significant group-over-time interaction (Group*Time; Bolger & Laurenceau, 2013).

Using SAS, I then built an unconditional growth model for the constructs to examine the variance in them over time. The results are used to calculate the intraclass correlation (ICC) which allow researchers to understand the amount of variance can be accounted for by within-person change over a period of time. ICC is measured by dividing the between-person variance (τ^2) by the sum of the between-person and within-person variance ($\tau^2 + \sigma^2$). Based on the models from the current dataset, 23.59% of the variance in positivity, 55.78% of the variance in stress, 31.97% of the variance in hope, and 18.2% of the variance in trauma symptomatology throughout the four weeks can be attributed to within-person change over a period of time.

Main Analysis

I used an unstructured covariance matrix to fit the model; unstructured covariance matrices place no constraints on the values, and variance and covariance values are directly from

the data (Grace-Martin, 2016). In other words, because the values are estimated using the data, this can result in the best model fit based on the data (Grace-Martin, 2016). After the four-week positive story intervention, the interaction between group and time were not statistically significant in explaining the trajectory of positivity (β = .12, *SE* = .176, *df* = 144, *p* = .50, CI_{95} = -.23, .47). Further, assigned group (β = 1.10, *SE* = .69, *df* = 167, *p* = .12, CI_{95} = -.26, 2.45) did not have statistically significant fixed effect on positivity. Time, on the other hand, had a small, fixed effect on the trajectory of positivity (β = 0.27, *SE* = .12, *df* = 135, *p* < .05, CI_{95} = -.05, .50).

Next, I looked at the trajectory of stress. After the four-week story intervention, the interaction between assigned group and time were not statistically significant in explaining the trajectory of stress (β = -.03, *SE* = .09, *df* = 139, *p* = .74, CI_{95} = -.22, .16). Also, group was not a statistically significant fixed effect (β = .54, *SE* = .34, *df* = 166, *p* = .11, CI_{95} = -.13, 1.22). Similar to positivity, without accounting for the fixed effect of time, there were no group differences in stress levels. Time was a significant fixed effect on stress (β = -.26, *SE* = .06, *df* = 130, *p* < .0001, CI_{95} = -.38, =.14). After examining stress, I then analyzed the hope scores within the dataset. Neither group (*p* = .47) or time (*p* = .94) were significant fixed effects in explaining the trajectory of hope; however, while the group-over-time interaction was not a statistically significant fixed effect, the *p* value for hope was the lowest when examining this interaction (β = .17, *SE* = .11, *df* = 141, *p* = .12, CI_{95} = -.04, .39). Lastly, I examined the fixed effects impacting trauma scores over the four-week intervention. The group-over-time interaction was not statistically significant in explaining the trajectory of trauma symptomatology throughout the study's duration (β = -.53, *SE* = .63, *df* = 142, *p* = .40, CI_{95} = -1.77, .71). Group was not a significant fixed effect (β = .27, *SE* = .12, *df* = 135, *p* = .50, CI_{95} = -.23, .47); however, time was significant in explaining the trajectory of trauma (β = -1.29, *SE* = .41, *df* = 133, *p* < .01, CI_{95} = -

2.10, -.48). Based on these results, I failed to reject the null hypothesis of research question one. In other words, the groups did not statistically differ over time.

Table 3

Parameter Estimates of Fixed Effects

	Estimate (β)	SE	df	p	CI_{95}	
					Lower	Upper
			Positivity			
group	1.10	.69	167	.12	-.26	2.45
time	.27	.12	135	<.05	-.05	.50
group*time	.12	.18	144	.50	-.23	.47
			Stress			
group	.54	.34	166	.11	-.13	1.22
time	-.26	.06	130	<.0001	-.38	.14
group*time	-.03	.09	139	.74	-.22	.16
			Hope			
group	.35	.49	170	.47	-.61	1.31
time	.07	.07	133	.94	-.14	.15
group*time	.17	.11	141	.12	-.04	.39
			Trauma			
group	.27	.12	135	.50	-.23	.47
time	-1.29	.41	133	<.01	-2.10	-.48
group*time	-.53	.63	142	.40	-1.77	.71

Results of Research Question Two

The second question guiding this study is to determine the effect of the positive story intervention on the trauma trajectory over the course of four-week intervention. Namely:

What is the effect of the positive story intervention on the slope and intercept of the trauma trajectory, and are these effects explained by participant level positivity?

To answer this question, I looked at the results obtained to answer research question one. Namely, the results from the analysis of trauma symptomatology indicated no significant group-over-time change. Ideally, groups should not statistically differ in participants are randomly assigned to a treatment or control group, therefore a significant effect of group was not expected or obtained in the current dataset. While time was a significant fixed effect (β = -1.29, *SE* = .41, *df* = 133, $p < .01$, CI_{95} = -2.10, -.48), the story intervention did not cause significant change in the treatment group over time when compared to a waitlist control group. Additionally, participant-level positivity, as measured by the P Scale (Caprara et al., 2012), was not significant in these domains. Therefore, I failed to reject the null hypothesis of research question two. The effect of the positive story intervention was not great or significant enough to claim the slope and intercept of trauma was significant.

Results of Research Question Three

The third question to be answered using growth curve analysis looks to determine whether the intervention itself influenced the participants' positivity and stress. This question specifically asks:

> *To what extent does the positive stories intervention serve as an exogenous variable in increasing positivity and reducing stress?*

To answer this question, I again returned to the results obtained in research question one. Specifically, I revisited the results from stress and positivity. When looking at the interaction between group and time, neither positivity (β = 0.12, *SE* = .176, *df* = 144, *p* = .50, CI_{95} = -.23, .47) or stress (β = -.03, *SE* = .09, *df* = 139, *p* = .74, CI_{95} = -.22, .16) were significant fixed effects in explaining the trajectory of the constructs throughout the intervention duration. Thus, we failed to reject the null hypothesis of research question three; specifically, there was no

significant change in the constructs, so we cannot claim that the intervention impacted the model and the measured constructs over the course of the four weeks.

Results of Research Question Four

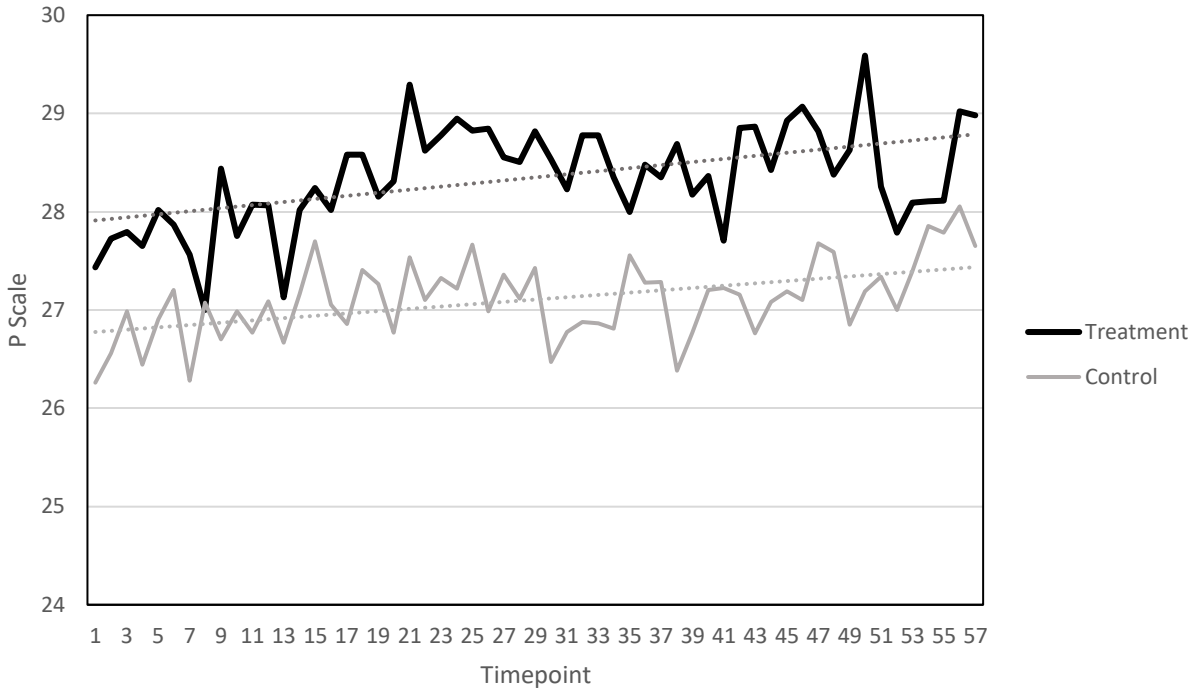
The fourth question asked in this study sought to examine whether positivity fluctuated or plateaued throughout the course of the four-week intervention; namely:

> *Will positivity, as measured by the P Scale, function as a state or trait over the course of a four-week story intervention?*

To answer the fourth research question, I conducted a time series analysis to visually inspect the data for trends and fluctuations and to determine whether positivity was able to be predicted post-treatment in the two groups of participants. The results of the time series analysis illustrate the natural trends of constructs over the course of a study or section of time. Figure 6 displays the natural time series of 165 students who took the Positivity Scale every morning and night. The time series depicted in Figure # met the exceeded the recommended minimum number of 50 time points (Tabachnick & Fidell, 2019), resulting in a total of 57 collected time points.

Figure 6

Natural Time Series of Positivity Over the Course of Four Weeks



When examining the time series, positivity in both groups appears to have a state-like quality, with positivity ending at a higher value in each group when compared to the beginning. Both groups' positivity values are similar in the beginning of treatment; however, when looking at the two groups, the treatment group increases at a greater rate than the control. In other words, the slope and intercept of the line is higher than the slope and intercept of the control group. When analyzed with SPSS, the data resulted in a simple smoothing model. This means the model was measured by placing more emphasis on the most recent timepoint, slightly less emphasis on the one directly before it, and so on. This type of modeling best fits for non-seasonal or short-term data with little fluctuation. The exponential smoothing model parameters for both groups are illustrated in Table 4. Stationary R^2 values indicate a potential relationship between the independent and dependent variables; in this analysis, the scores on the P Scale reported by the

treatment (R^2 = .30) and control (R^2 = .38) groups indicate an adequate relationship in the model. In other words, the model accounted for 30% and 38% of the variance between the treatment and control groups, respectively. The values and visual inspection of the natural time series illustrated in Figure 6 suggest that positivity functioned as a state throughout the course of the intervention. Both groups' scores increased throughout treatment; however, the treatment group scores of positivity were higher than those of the control group, and the trend increased at a higher rate compared to the control group.

Table 4

Exponential Smoothing Model Parameters for Positivity Over the Course of Four Weeks

Group	Stationary R^2	Estimate	Standard Error
Treatment	.30	.28*	.09
Control	.38	.25*	.09

*$p < .01$

Results of Research Question Five

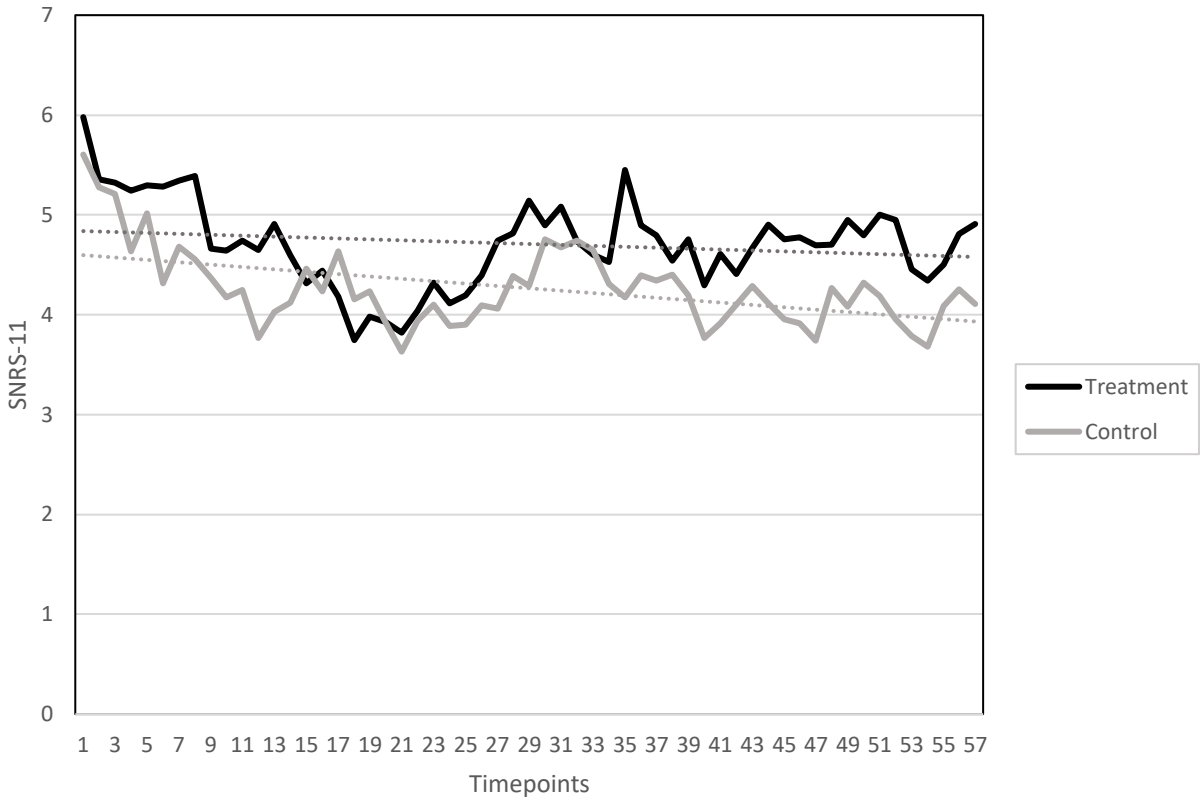
The final question, similar to the fourth, sought to examine whether stress fluctuated or stayed stationary throughout the intervention. This question asks:

> *Will stress, as measured by the SNRS-11, function as a state or trait over the course of a four-week story intervention?*

Similar to the previous question, I conducted a second time series analysis to determine whether stress levels of participants could be predicted post-intervention. Figure # displays the natural time series of 165 students who took the SNRS-11 measure every morning and night. Like with research question four, the time series depicted in Figure # met the exceeded the recommended minimum number of 50 time points (Tabachnick & Fidell, 2019), resulting in a total of 57 collected time points.

Figure 7

Natural Time Series of Stress Over the Course of Four Weeks



A visual inspection of the data, unlike the time series of the P Scale, indicates minimal fluctuations throughout the course of the four weeks. Both groups started at a similar score at registration, and there was little change indicated in the visual model as well as the model parameters generated using SPSS. In fact, the control group scores decreased at a faster rate compared to the treatment group. Based on this cursory glance of the figure, stress looks to function as a trait due to the lack of fluctuations throughout the study's duration. Similar to research question four, I then analyzed the data using SPSS which resulted in a simple exponential smoothing model. Table 5 presents the exponential smoothing model parameters. Stationary R^2 values obtained from the dataset indicate a weak relationship between stress (as

measured by the SNRS-11) and group, as both the treatment (R^2 = .05) and control group (R^2 = .08) R^2 values are close to zero.

Table 5

Exponential Smoothing Model Parameters for Stress Over the Course of Four Weeks

Group	Stationary R^2	Estimate	Standard Error
Treatment	.05	.74**	.12
Control	.08	.72**	.13

**$p < .001$

Unlike the data reported in response to research question four, the values indicate a potential white noise model. A white noise model in time series analysis indicates that changes in datasets are likely due to chance (Brownlee, 2020). One method for analyzing a data set for a white noise model is looking at the Ljung-Box. Table 6 presents the Ljung-Box test results obtained through analysis in SPSS. Based on the *p* values, one can only say with 11% confidence that the stress time series is not pure white noise; on the other hand, one can only say with 35% confidence that the time series is not pure white noise. Collectively, these findings indicate that stress with the sample in the present study functioned as a state within participants, regardless of assigned group.

Table 6

Ljung-Box Test Results for Stress

	Ljung-Box Results	
Group	Statistics	*p*
Treatment	10.26	.89
Control	14.26	.65

Chapter Summary

This chapter presented the results of the statistical analyses used to answer the five research questions underlying. To answer the first three research questions, I first analyzed the dataset to determine whether the growth curve model would be an appropriate analysis with the data. I then used an unstructured covariance model to fit the model. Based on the results, I failed to reject the null hypotheses of research questions one, two, and three. To answer research questions four and five I used a time series analysis to first visualize the data for potential trends. Next, I reported the statistics analyzed through SPSS. Through these steps, I was able to determine that positivity acted as a state due to its fluctuations throughout the course of the four weeks. Additionally, I found that stress acted as a trait due to the minimal fluctuations throughout the study duration. Further, the Ljung-Box statistics suggest that changes are likely due to chance. The results for research question four are the only significant set of results.

CHAPTER FIVE: DISCUSSION

The present study's aim was to examine the effectiveness of a positive story intervention on participant positivity, stress, hope, and trauma over the course of four weeks. The underlying goal was to find methods of support college students' mental health to meet the increasing need for services on college campuses due to the COVID-19 pandemic (Salimi et al., 2021; Son et al., 2020). The pandemic has affected the majority of college students, increasing their reports of depression, anxiety, stress, and suicidal ideation (Wang et al., 2020). Additionally, trauma scholars have been describing the need for the expansion of the original 10-item Adverse Childhood Experiences (ACE; Felitti et al., 1998) scale to consider the additional experiences that can affect a person's functioning and life outcome (Alfifi et al., 2017; Finkelhor et al., 2013, 2015). Post-pandemic, these scholars are also considering the ways the pandemic has created traumatic experiences for all to live through the period (Bryant et al., 2020; Fegert et al., 2020). With a majority of college students entering college pre-pandemic with at least one ACE (Boals et al., 2020; Frazier et al., 2009; Read et al., 2011), the pandemic has created an increased risk for additional negative life outcomes for today's students (Lee et al., 2021).

Thus, the present study considered the literature on positivity and hope's effects on trauma and stress to posit an intervention to support today's college students. Further, this is the first study to use Story Corps, an open access library of stories from across the US, as an intervention with any population. To understand the effectiveness of the intervention throughout the course of four weeks, several questions were posed in chapters one and three of this dissertation, and they have been answered in chapter four. This final chapter will discuss (a) the results through interpretation of the findings for each question, (b) the limitations of these

findings, (c) offer implications for counselor educators and college counselors, and (d) areas to consider for future research.

Summary and Interpretation of Research Question One

Research question one reflects the overall aim guiding the current study by examining the data for differences in the outcomes between the two randomly assigned groups of participants. None of the analyses revealed significant differences between the groups over the course of the four-week intervention; however, hope was the closest variable to demonstrate statistically significant difference (p = .12) between treatment and control groups. These nonsignificant findings indicate that with this sample, there were not significant differences in the groups, and over time, there were not significant changes as a result of the tested intervention. Based on these results with this sample, I cannot conclude that this intervention is an effective treatment for stress and trauma symptoms in the US college population.

Alternative Treatments for the College Population

This is not the first intervention study tested to support the college population. While the present study did not produce robust results in response to a majority of the research questions, there are many examples of interventions that have been found to be helpful with college students. For example, Dorais (2021) conducted the first intervention study looking at the effect of a Centering Prayer on student wellbeing, resilience, and hope. Her study found that students practicing a bi-daily Centering Prayer meditation increased participants' hope, resilience, and wellbeing over the course of the four-week trial. Nguyen-Feng et al. (2017) conducted a randomized controlled trial over the course of eight weeks: four weeks of the intervention, followed by four weeks of post-intervention follow-ups. The aim of their study was to determine the effectiveness of three internet-based stress management programs on students' stress, anxiety

and depression: (1) mindfulness and present control (i.e., mindfulness about what they are able to control in their present moment or environment), (2) mindfulness only, and (3) a stress management information condition (Nguyen-Feng et al., 2017). Their study found all three conditions to decrease participants' self-reported stress, anxiety, and depression scores. Robino et al. (2021) conducted a nonrandom cross-sectional design to examine the effects of animal-assisted intervention programs on college students' positive and negative affect (measured using the Positive and Negative Affect Scale [PANAS]; Watson et al., 1988). The authors found that students interacting with therapy animals brought to campus experienced increases in positive affect and decreases in negative affect. While these studies vary by tested intervention and observed constructs, they illustrate various interventions that have been empirically supported to help aspects of college students' mental health. Despite the nonsignificant findings in response to this research question, these examples exemplify the interventions that have been found helpful for the college student population.

Summary and Interpretation of Research Question Two

The goal of the second research question was to determine whether the positive story intervention affected the slope and intercept of the trauma trajectory. The results indicated that whether or not the participants received treatment, there was no significant between-group change in self-reported trauma symptomatology over the course of the four weeks. Since there were no significant changes in both trauma symptomatology and participant positivity, I failed to reject the null hypothesis of research question two. Meaning was highlighted in Seligman's Authentic Happiness (2002) and Well-Being Theories (2011) as major contributors to wellbeing, happiness, and overall positivity. Meaning in life has been found to be a buffer or helpful addition to our coping processes both post and during stress (Waters et al., 2022). Additionally,

the presence of meaning can serve as a protective factor against adversity; Schechter et al. (2020) found that during the pandemic, frontline workers reported experiencing *more* meaning and purpose in life despite increases in stress, depression, and anxiety due to the pandemic. The aim of this research question was to determine whether offering micro doses of positivity (e.g., brief stories of people experiencing positivity during adversity) would reduce overall trauma symptoms due to the positivity theoretically supporting their coping processes. While the results of this research question did not yield significance, positivity has been demonstrated in the literature to support posttraumatic coping. This line of study still warrants additional research.

Other studies looking at affect, positivity, and trauma symptoms have found significance. Referring back to the study by Nguyen-Feng and colleagues (2017), their study measured participants' interpersonal trauma to determine whether it moderated intervention efficacy. The authors found greater treatment efficacy for individuals in the mindfulness plus control (i.e., internet-based trainings to encourage participants to consider their present moment) and stress management conditions who initially reported greater experiences of interpersonal trauma compared to other participants (Nguyen-Feng et al., 2017). Weltz et al. (2016) examined whether early childhood trauma influenced negative affect (measured using the PANAS and a single-item stress measure) in college students (n = 1634). Through use of an intensive longitudinal design, the authors found that participants who reported experiencing childhood trauma expressed more negative effect in response to daily stressors (Weltz et al., 2016). Weltz and colleagues' (2016) findings, while focused primarily on negative affect, exemplify research that has examined the effects of trauma exposures on both positive and negative emotional regulation (Bardeen et al., 2013). Berfield et al. (2022) found that individuals in their sample of adults (n = 434) who reported both increased experiences of trauma and certain trauma types experienced greater

instances of positive and negative emotional dysregulation. Positive emotion dysregulation is when someone overexerts positivity to cope with negative feelings or emotions, feels "numb" during moments of happiness or joy, or experiences high amounts of positivity which contributes to over-impulsivity (Berfield et al., 2022). Negative emotion dysregulation refers to the ways an individual may try to cope with a stressor that may result in a lack of self-awareness, an inability to control behaviors, or refuse to engage in situations that result in negative emotions in the pursuit of happiness or positivity (Berfield et al., 2022; Gratz & Roemer, 2004). These findings all emphasize trauma and positivity's (i.e., emotions) relationship; as mentioned, this line of research merits additional exploration.

Summary and Interpretation of Research Question Three

The third research question underlying the current study asked whether the positive story intervention was an exogenous variable in the present trial. First, the growth curve model did not yield significant results regarding positivity and stress, suggesting the positive story intervention did not produce a significant effect on participants' positivity and stress. Because of these nonsignificant findings, the intervention did not serve as an exogenous variable impacting the study. Exogenous variables are effects that are often unaccounted for that influence data (Berliner, 2014). Berliner (2014) offers examples of exogenous variables in a study looking at classroom achievement scores: peer interactions that happen outside of the intervention or data collection can influence the mindset of participants; the neighborhoods students live in; school composition. These examples are all variables that are difficult to measure and quantify, yet likely impacting a dataset. In the present study, I had participants complete two measures every day for four weeks; further, participants assigned to the treatment group were required to watch brief clips of positivity before completing the two measures. While the next section will

summarize the results of research question four, the time series analysis of positivity displayed both groups increasing slightly in positivity throughout the four weeks. Since both groups increased in positivity and a majority of the sample came from a large institution in the southern region of the US, one could infer that other outside, exogenous variables could have been impacting the participants as a group. Further testing of this theory is needed before making judgments.

Summary and Interpretation of Research Question Four

Research questions four and five focus on the bi-daily fluctuations of positivity (question four) and stress (question five) between the groups throughout treatment. To answer research question four, I first took the means of each timepoints' scores for both groups, and then used the means to generate a visual depiction of the data to look for trends. This process illustrated that positivity in the treatment group started higher than the control group. Additionally, positivity in both groups increased throughout treatment; however, positivity in the treatment group increased at a higher rate than the control group and stayed higher than the control group throughout treatment. While overall, positivity acted and fluctuated as a state, this interpretation must be made with caution. Namely, when referring back to the results from research question one and focusing on the fixed effects of the group assigned, positivity increased at a small, insignificant rate ($\beta = 1.10$, $p = .12$). Despite the p value exceeding the traditional alpha cutoff value of .05 and the failure to reject the null hypothesis, the p value is still considerably low. In other words, despite randomly assigning participants to groups, this still impacted participants' positivity, warranting additional research.

On the other hand, this study is the first to look at the bi-daily fluctuations of positivity in a randomized controlled trial of college students participating in a positive story intervention for

four weeks through a time series analysis. Catalino and Tov (2022) conducted a two-week daily diary study of college students (n = 301) to examine the relationship between positivity as a trait and participant wellbeing. The authors found that participants who reported prioritizing positivity every day reported greater overall wellbeing (Catalino & Tov, 2022). While the authors of this work describe positivity as a trait that contributes to us practicing positivity in our daily lives, Caprara et al. (2022) discuss that these are positive emotions contributing to our wellbeing. Relating these recent findings back to Barbara Frederickson's work (2009), when we feel good and experience positive emotions, these can motivate us to continue finding meaning through more moments that result in positive emotions. The current study measured positivity, and the time series results illustrate the fluctuations of positivity throughout a four-week study, suggesting that positivity functions more like a momentary state instead of a trait.

Summary and Interpretation of Research Question Five

Like question four, research question five was answered by first visually inspecting the figure in Figure 7. Between the treatment and control groups, stress remained relatively stable throughout the course of treatment regardless of group assignment. Next, I analyzed the data using SPSS to test the model. Stationary R^2 values were .05 and .08 for the treatment and control groups, respectively. These values indicate a poor relationship between stress and group within this dataset. Referring back to the results obtained by SAS to answer research question one, time had a small, significant fixed effect on stress (β = -.26, p <.0001). This also suggests that time, not the group, group interacting with time, and the intervention, had the biggest impact on participant stress. This could be a result of many extraneous variables affecting the participants. For example, the two phases of data collection began in early January; this time of the semester is typically busy for students, as they are usually returning to school to begin their spring

semesters. As the semester continues, students can become more comfortable as they find strategies to balance their routines for the remainder of the semester.

Further, I analyzed the data to determine whether the data yielded a white noise model. A white noise model indicates that any occurring changes are likely due to chance; not because of an intervention or variable of interest. One solution for examining the data for this is to look at the Ljung-Box test results. The Ljung-Box test resulted in high *p* values for both the treatment ($p = .89$) and control group ($p = .65$), meaning that it is only with 11% confidence for the treatment group and 35% confidence for the control group that I can say there is no white noise model in both groups' stress scores. Stress has been examined in several time series analysis studies. For example, Fuller et al. (2003) conducted a semester-long daily diary study asking 14 employees at two Midwestern colleges to answer questions regarding their job strain, overall stress, and job satisfaction throughout the May 2000 semester. The authors found that stress fluctuated: when participants reported greater stress one day, they were more likely on the next day to report greater job satisfaction and less job strain on the next day, adding support to the theory of cybernetics ("today's stressful event leads to a discrepancy between one's perceived and desired state," which then contributes to the use of coping mechanisms which increase satisfaction and decrease stress; Fuller et al., 2003, p. 1029). While their study produced findings that illustrated fluctuations in stress, the current study did not. This could be due to a host of reasons; however, based on recommendations by Fisher (2000), one potential reason could be that stress in the present study, unlike the study done by Fuller and colleagues (2003) was measured twice per day instead of once. Time series analyses looking at the natural trends of stress have not been done extensively, warranting additional attention by interested scholars.

Limitations

Puhan and colleagues (2012) describe the need for scientific studies to include limitations of a study within its manuscript's discussion section; this encourages honesty rather than a need for recognition from research findings. Therefore, this section will discuss the present study's limitations, including threats to validity and errors in data collection. This study was a home-based longitudinal study, and therefore presents risks for future research to be cognizant of before replicating or continuing a study. Further, data was collected via self-report surveys, presenting additional limitation. Thus, the overall goal of this section is twofold: (a) to improve the quality of findings, and to (b) ensure accurate interpretation of reported and discussed findings (Theofanidis & Fountouki, 2018).

Validity

As described in chapter three, a threat to internal validity is testing (Shadish et al., 2002). In the present study, participants were asked to complete a short battery of surveys twice per day for four weeks. Shadish and colleagues (2002) describe the impact of multiple testing periods impacting the ability for researchers to accurately measure causality our outcomes. Given the tasks for the participants regardless of group assigned, participants could have begun repeating past answers consciously or subconsciously. Participants in the treatment group were paid regardless of whether they accurately answered the story content check question; both groups were paid if they completed 50% of the surveys, and the surveys completed were 100% finished. Given these incentives, participants were not coerced into answering items on both scales (POS and SNRS-11) in a favorable manner for the study. Additionally, as mentioned in chapter three, the inclusion of a control group can help in determining any causal effects; given this addition, stronger conclusions regarding relationships were able to be made.

Shadish and colleagues (2002) described threats to external validity that were also described in chapter three of this dissertation. To decrease the likelihood of findings being unable to be generalized to the greater population, I recruited from institutions across the US as opposed to one area. A significant majority (n = 66) of students agreed to participate from a research-focused southern university, limiting the ability of the findings to be generalized to all college students. Additionally, since a portion of the sample came from the same institution, the threat of context-dependent maturation is present in the current study (Shadish et al., 2002). In summary, the present study made several decisions described in chapter three to mitigate the impacts of threats to internal and external validity; readers are still encouraged to interpret the described findings with caution due to the presence of these factors (Theofanidis & Fountouki, 2018).

Self-Report

The current study collected data from participants in the form of self-report surveys. Self-report studies are the most used form of assessment and are comprised of three types: direct self-reports, indirect self-reports, and open-ended self-descriptions (Paulhus & Vazire, 2007). The present study used direct self-reports, meaning that the items were not crafted by developers to obscure the construct being measured to participants (indirect), and they did not ask participants to answer open-ended prompts regarding how they were feeling in a moment (open-ended self-descriptions; Paulhus & Vazire, 2007). Rather, the items directly asked participants about their positivity (e.g., “I have great faith in the future”; Caprara et al., 2012) and stress (“On a scale of zero to 10, with zero being no stress and 10 being worst stress possible, what number best describes your level of stress right now?”; Karvounides et al., 2016). Regarding the use of self-report surveys in counseling, Lenz and Williams (2014) found in their meta-analysis that self-

reported outcomes "may be equally as useful for making causal inferences as those noted by clinicians" (p. 83) regarding posttraumatic stress disorder symptoms. While the self-report component of the present design may call to question the internal validity of the study (Shadish et al., 2002), Lenz and Williams' (2014) findings suggest that it may not heavily impact the present study. Regardless, researchers should interpret the findings with caution.

Additionally, stress was measured using a single-item self-report measure; therefore, there is no information available regarding reliability of the measure. While some scholars prefer multi-item measures due to their ability to better capture response styles and the nuances of a construct of interest (Paulhus & Vazire, 2007), the current study included asking participants to complete survey packets twice per day for four weeks. Due to the length of the study, decreasing the size of the tasks asked of participants became a priority during survey design. To reduce fatigue and boredom and to increase compliance throughout the study, the present design followed recommendations by Morren and colleagues (2009) and Thiele and colleagues (2002), thus using short measures to measure the constructs throughout the four weeks. While these decisions were made in the present study due to the design and duration, researchers should carefully interpret these findings.

Conduct and Attrition

As described in chapter three, a reason for using an intensive longitudinal design is the ability to collect data from participants in their naturalistic settings. Participants were sent a link to the survey every morning or evening at the same times every day throughout the study's duration. In the present study, similarly to Dorais (2021), I used these scheduled administration times to ensure conduct by participants. One limitation to this decision is that participants could backlog surveys to complete scheduled surveys at later times. By choosing to not restrict the

timeframe in which participants could complete a survey, I reduced the burden placed on participants with the goal of increasing attrition in the study.

Unblinding of Assigned Group

Another limitation stems from the concern that a majority of the participants came from one institution. One participant in the control group spoke with another who had been assigned to the treatment group, resulting in the control group participant reaching out to the primary investigator to ensure they were getting the right surveys since theirs did not contain a video. While this is only one person in this study, it's likely that other students were able to determine which group they had been assigned to. For either group, this could result in the participant feeling deceived (McCambridge et al., 2013). Deception is an inherent piece of randomized controlled trials, as the group participants are assigned to indicates the treatment or intervention they will receive (McCambridge et al., 2013). Participants finding out which group they have been assigned to before they are debriefed by the research team can impair their overall trust with research as a whole, as well as with the research team. In the present study, this could have resulted in participants knowing more about what was being studied, influencing how they answered the measures' questions. This could create bias in their responses; they could retaliate due to distrust of the research team, resulting in them quickly going through the item responses without consideration; and they could ultimately drop out of the study. Again, while this occurred one time to the primary researcher's awareness, the lack of geographical diversity can place pressure on the research design's blinding process.

Video Inclusion

One limitation to this proposed intervention is the videos selected. I selected videos based on whether they portrayed a positive story as opposed to one that may be perceived as sadder.

Subjective selection, in this case, allowed for my experiences, beliefs, and values to be imposed on the overall structure of the intervention, selecting videos that I believed would offer a dose of positivity to the treatment group participants. To account for this, I ran a small pilot study to collect participant feedback on the videos included in the final, tested version. One limitation to this is the size of the pilot group (n = 2) compared to the final treatment group (n = 76); the findings of the pilot group cannot be generalized to the entire treatment group. To allow for participants to offer feedback and resulting feelings from the videos, I included optional open-ended boxes for participants to describe their feelings. While the responses entered were regularly positive, a few described a dislike of the videos' content. One individual participant described that "listening to stories about how everyone else had (...) loving families (...) really doesn't help when you never had that" in response to one of the videos (ellipses included to correct typographical errors and to remove expletives). While these comments were extremely rare in occurrence due to the variety of content included in the stories, individual differences influence the perception of the videos; these differences fell outside of the scope of the present dissertation and were thus not accounted for or measured.

Implications

This study sought to answer five research questions regarding the outcomes of watching positive stories twice per day for four weeks in college students. In this study, I used a publicly available library of resources to create a collection of stories to show to participants in the treatment group and had control group participants complete the survey without any intervention. As mentioned, this is the first time Story Corps has been used in a counseling or counselor education study. Additionally, this is the first study to look at the impacts of this intervention

over a period. Given the findings obtained for each, there are implications for researchers across various domains.

College Counseling

The role of college counseling centers is to support college students seeking help for their mental health; this support entails centers offering interventions to accomplish this aim (Bishop, 2016). With college counseling centers reporting both increases in demand for services and staffing struggles to meet this demand, establishing interventions to support this population outside of traditional therapy is imperative (Xiao et al., 2017), especially post-pandemic (Salimi et al., 2021; Son et al., 2020). The present study's aim was to examine the efficacy of a pilot intervention to support college students.

While the piloted intervention is the first to use the open access media library Story Corps, this is not the first study looking to establish an intervention to support college students' mental health. Dorais (2021) found that having college students engage in a Centering Prayer meditation twice per day increased their hope, resilience, and wellbeing over the course of a four-week implementation. Nguyen-Feng et al. (2017) found various versions of an internet-based stress management intervention to be helpful in decreasing participants' anxiety, depression, and stress during and after implementation. Worsley et al. (2020) conducted a systematic review to compile interventions that have been tested to support mental health outcomes in college students. Across 24 studies, they found 11 different types of interventions that met their inclusion criteria: mindfulness-based, psychological, technology-delivered, psychoeducation, educational, recreation, relaxation, acceptance and commitment training, setting-based, suicide-prevention, and self-regulation (i.e., Tomatis method; Worsley et al., 2020). In a separate systematic review, Lattie and colleagues (2019) reported on 89 intervention

studies; they found that 80% of interventions were delivered via internet, and 31% (the majority) of the interventions were cognitive-behaviorally focused. Their thorough review highlights the potential for the internet for implementing interventions to both reduce college student depression and anxiety and increase overall wellbeing (Lattie et al., 2019). While the present study was not statistically effective with the present sample of college students, other interventions have found to be helpful. Considering the promise of online interventions, future replication studies of the positive story intervention could directly measure for effects on these three outcomes. Additionally, college counselors and centers should consider digital mental health interventions due to the body of literature supporting their efficacy with college students (Lattie et al., 2019).

Positive Psychology

The field of positive psychology studies the factors under which people can flourish in the various arenas of their lives. Schreiner (2015) describes the need for positive psychology on all tiers of college campuses; more specifically, administrators, faculty, and staff members at colleges influence the environments they create for their students. This influence can create environments for all students to flourish in their studies. In the present study, the results from research question four revealed the intervention to have a small effect on the overall trajectory of positivity throughout the four-week trial. Jeong et al. (2020) studied the effectiveness of a social robot coach with 35 college students. The robot administered daily positive four to six minute-long positive psychology sessions for a week: it greeted the participants, inquires about their day, administers a short-survey, guides the participant through the session, administers the survey again, and thanks the participants for their time. At the end of the seventh session, the collected data suggests that the sessions contributed to significant improvements in the participants'

wellbeing, mood, and willingness to change (Jeong et al., 2020). This finding, in addition to the current study's nonsignificant findings, suggests that positive psychology researchers should focus studies on outcomes of positivity (e.g., wellbeing) as opposed to positivity itself.

Stories

The healing nature of stories, both the act of storytelling and listening to stories from others, were discussed in chapter two of this dissertation. This is the first study to implement stories into an internet-based intervention. Additionally, it is the first study to use Story Corps in an intervention study on mental health. Stories allow humans to connect with one another, transfer information, and ultimately to heal (Elsegood et al., 2018; Lala et al., 2014; Wallace et al., 2014). Lewis (2011) described the ability of stories to bolster our senses of self and to help individuals ascribe meaning to their experiences. Stories are also powerful in that they can motivate us to continue navigating everyday challenges and invite us to challenge our own beliefs.

The participants in the treatment group received 56 stories from Story Corps for 28 days. In the treatment group surveys, participants were offered an open-ended content box for them to enter relevant feelings they felt they wanted to share. While a content analysis is beyond the scope of this dissertation, several quotes emerged that speak to the power of stories. For example, after watching a story of a father and daughter talking about him raising her during college as a single father, one participant wrote, "I felt deep admiration for the father, who sacrificed so much out of love for his daughter. It inspired me to make similar sacrifices for those I love." Another participant said, "this video made me feel like there was hope. That the struggles that I am going through right now will mean something in the future." Even in quotes where participants described an element of the video making them sad or emotional, they still

felt moved: “The clip shown made me feel a bit sentimental. It sort of reminds me of my mom and when she was in community college while she was pregnant with my brother and I. Sadly, she dropped out to raise us. But it makes me happy that [the father] was able to achieve two significant feats at the same time.” Regardless of the statistical outputs, scholars interested in implementing stories in services for college students should still consider this as an option that warrants additional testing.

Recommendations for Future Research

As previously mentioned, a significant portion of the sample was recruited by a large southern university, therefore limiting the findings of the study to that one region. Future researchers interested in replicating the findings should consider additional methods for ensuring a more proportionate sample of students across the regions. Further, an infinite number of factors could have impacted the participants’ positivity and stress throughout the day (e.g., receiving a bad grade, being on academic probation); future replication studies could determine items measuring the presence and impact of day-to-day stressors on one’s wellbeing in the collection period. Considering these recommendations during the research design phase of planning will likely reduce the impacts of validity threats to findings.

Future research could also replicate the present study, describing to participants they must complete the surveys within a certain time frame after distribution before the survey closes. This would take an additional step to verify adherence to the study protocol. Further, researchers should consider whether their financial means permit them to offer additional compensation for this design type, as increasing the potential burden on participants can increase dropout and decrease overall adherence to the study. Future researchers interested in this type of design can also posit questions regarding contributors to participant adherence. These suggestions regarding

conduct and adherence may decrease caution needed by researchers when interpreting the findings. Additionally, recruiting a larger sample in a replication study may reveal statistically significant results between groups' scores of hope over the course of the trial. As previously mentioned, the *p* value for hope was .12, suggesting that a higher sample size may be significant.

As mentioned, since this is the first time a study has featured media from Story Corps in an intervention, the intervention had to be constructed with no past studies to influence its development. Given the variability in content included and the individual differences of participants, future research could build on this in a plethora of ways. First, future researchers could perform content analyses on the included media, developing codes and themes for each. Researchers could collect information regarding values and beliefs from participants during registration, and their results would influence the treatment group they were placed in, with each treatment group reflecting video codes. This design would allow for the media in the intervention to better align with the participants' values and beliefs and may contribute to increased effectiveness. Additionally, this intervention was piloted in the present trial with college students. College students are widely considered easier to recruit by researchers conducting survey research due to their willingness to comply with research protocol for relatively little compensation (e.g., course credit). Future research should consider replicating the current study with student samples from other regions (i.e., a majority do not come from the southern region of the US; Peterson & Merunka, 2014) and with nonstudent samples before generalizing to other student and nonstudent adult populations (Peterson, 2001).

An additional recommendation for future research is to conduct a systematic review or meta-analysis of interventions available for supporting college students' mental health. This pursuit would assist college counseling scholars in understanding what has been done and found

effective when implemented. Further, based on Nguyen-Feng et al.'s (2017) and Dorais' (2021) studies, pairing the present intervention with mindfulness exercises and testing three conditions as opposed to two may expand on the resulting information. Additionally, the SNRS-11 and P Scale have never been used in a time series analysis; considering the lack of significance in the majority of the present study's results; future replication studies may benefit the field by creating a different battery of measures (e.g., PANAS; Watson et al. 1988; Daily Stress single-item; Weltz et al., 2016). Because of the lack of empirical support available on the measures at the time of writing this dissertation, the nonsignificant findings may suggest that the measures are not sensitive enough to measure bi-daily fluctuations in these constructs.

Conclusion

This study examined the efficacy of a positive story intervention for college students using open access stories from Story Corps. As described within this chapter, a majority of the research questions yielded nonsignificant findings. There were not significant differences between the groups' scores of positivity, stress, hope, and trauma symptomatology over the course of the four-week intervention. Additionally, this lack of significance answered research questions two and three: the positive story intervention did not produce significant effects on the treatment group's trauma symptomatology, and the group's insignificant positivity scores did not explain the trauma trajectory; and because of the lack of significance, there were no effects from the positive story intervention on positivity and stress. In response to the fourth research question, visual inspection of the model in Figure 6 and the simple exponential smoothing models and their stationary R^2 values for the treatment ($R^2 = .30$) and control groups ($R^2 = .38$) indicate positivity fluctuated as a state during the four-week intervention. This suggests that positivity, as measured by the P Scale, acts as a state and can fluctuate in samples. On the other

hand, stress in both groups stayed stationary throughout the four weeks, indicating that stress acted like a trait and therefore was not affected by the intervention as hypothesized. The Ljung-Box test results also suggest that changes in stress were likely due to chance. The latter two research questions illustrate the temporal dynamics of these two constructs; additionally, they suggest that a person can still feel stressed, a form of negative affect, while experiencing increases in positivity simultaneously.

One concluding item to note is that every survey for the treatment group had an optional box for participants to write in any comments about how they felt in the moment. While a majority of the results were nonsignificant, a majority of responses offered by participants in this box indicated a positive response to the videos themselves. One in particular was left by a participant in the very last timepoint of the study. They wrote, "sometimes these videos would make me tear up or want to talk to someone I love more. I felt a bit embarrassed to say that in the optional sections before, but I feel okay to send it now. [sic] They felt very real and grounded unlike other 'feel-good' stories I have heard." In response to the video featuring a son and his dad talking about the son's episodes of psychosis when in college and how they have adapted together, another participant said the video left them with, "a sense of purpose to help those near me who might be suffering from some form of depression." While this intervention did not prove to be statistically significant, these two quotes do not standalone; other participants also contributed similar comments to the videos included in the study. Although a content analysis of the contributed comments goes beyond the scope of this dissertation, they emphasize a positive reaction and a motivation to serve others as a result of the stories. As counselors, we have to evaluate interventions, understanding that what works for some clients may not work for others. Despite the nonsignificant findings, this intervention was able to help some participants during

the study; as counselors, we must consider caveats such as these to support our clients and their communities.

REFERENCES

Abdel-Khalek, A. M. (2007). Love of life as a new construct in the well-being domain. *Social Behavior and Personality: An International Journal, 35*(1), 125-134. https://doi.org/10.2224/sbp.2007.35.1.125

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96*(2), 358-372. https://doi.org/10.1037/0033-295X.96.2.358

Abramson, L. Y., Alloy, L. B., & Metalsky, G. I. (1995). Hopelessness depression. In G. M. Buchanan & M. E. P. Seligman (Eds.), *Explanatory Style* (pp. 113-134). Routledge. https://doi.org/10.4324/9781315831497

Afifi, T. O. (2020). Considerations for expanding the definition of ACEs. *Adverse Childhood Experiences: Using Evidence to Advance Research, Practice, Policy, and Prevention,* 35-44. https://doi.org/10.1016/B978-0-12-816065-7.00003-3

Afifi, T. O., Ford, D., Gershoff, E. T., Merrick, M., Grogan-Kaylor, A., Ports, K. A., MacMillan, H. L., Holden, G. Q., Taylor, C. A., Lee, S. J., & Bennett, R. P. (2017). Spanking and adult mental health impairment: The case for the designation of spanking as an adverse childhood experience. *Child Abuse & Neglect, 71*, 24-31. https://doi.org/10.1016/j.chiabu.2017.01.014

Alloy, L. B., & Clements, C. M. (1998). Hopelessness theory of depression: Tests of the symptom component. *Cognitive Therapy and Research, 22*, 303-335. https://doi.org/10.1023/A:1018753028007

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

Arañez Litam, S. D., Ausloos, C. D., & Harrichand, J. J. S. (2021). Stress and resilience among professional counselors during the COVID-19 pandemic. *Journal of Counseling & Development, 99*(4), 384-395. https://doi.org/10.1002/jcad.12391

Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., & Allen, K. A. (2021). Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the Coronavirus Stress Measure. *International Journal of Mental Health and Addiction, 19*, 2423-2439. https://doi.org/10.1007/s11469-020-00337-6

Asebedo, S. D., & Seay, M. C. (2014). Positive psychological attributes and retirement satisfaction. *Journal of Financial Counseling and Planning, 25*(2), 161-173.

Baghurst, T., & Kelley, B. C. (2014). An examination of stress in college students over the course of a semester. *Health Promotion Practice, 15*(3), 438-447. https://doi.org/10.1177/1524839913510316

Bakioğlu, F., Korkmaz, O., & Ercan, H. (2021). Fear of COVID-19 and positivity: Mediating role of intolerance of uncertainty, depression, anxiety, and stress. *International Journal of Mental Health and Addiction, 19*, 2369-2382. https://doi.org/ 10.1007/s11469-020-00331-y

Balkin, R. S., & Russo, G. M. (2021). Evaluating perceptions of working alliance and crisis stabilization for adolescent males in residential treatment for substance abuse: A time-series analysis. *Counseling Outcome Research and Evaluation, 12*(1), 4-15. https://doi.org/10.1080/21501378.2020.1776598

Barbash, E. (2017). Different types of trauma: Small ‘t’versus large ‘T’. *Psychology Today, 13*.

Bardeen, J. R., Kumpula, M. J., & Orcutt, H. K. (2013). Emotion regulation difficulties as a prospective predictor of posttraumatic stress symptoms following a mass shooting.

Journal of Anxiety Disorders, 27(2), 188-196. https://doi.org/10.1016/j.janxdis.2013.01.003

Barta, W. D., Tennen, H., & Litt, M. D. (2012). Measurement reactivity in diary research. In M. R. Mehl & T. S. Conner (Eds.), *Handbook of research methods for studying daily life* (pp. 108–123). London, England: Guilford Press

Bartholomew, T. T., Joy, E. E., & Gundel, B. E. (2021). Clients' hope for counseling as a predictor of outcome in psychotherapy. *The Counseling Psychologist, 49*(8), 1126-1146. https://doi.org/10.1177/00110000211033255

Beauchemin, J.D. (2018). Solution-focused wellness: A randomized controlled trial of college students. *Health & Social Work, 43*(2), 94-100. https://doi.org/10.1093/hsw/hly007

Beck, A. T. (1963). Thinking and depression: Idiosyncratic content and cognitive distortions. *Archives of General Psychiatry, 9*(4), 324-333. https://doi.org/10.1001/archpsyc.1963.01720160014002

Beck, A. T., Kovacs, M., & Weissman, A. (1975). Hopelessness and suicidal behavior: An overview. *JAMA, 234*(11), 1146-1149. https://doi.org/10.1001/jama.1975.03260240050026

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology, 42*(6), 861–865. https://doi.org/10.1037/h0037562

Beiter, R., Nash, R., McCrady, M., Rhoades, D., Linscomb, M., Clarahan, M., & Sannut, S. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *Journal of Affective Disorders, 173*, 90-96. https://doi.org/10.1016/j.jad.2014.10.054

Berfield, J. B., Goncharenko, S., Forkus, S. R., Contractor, A. A., & Weiss, N. H. (2022). The differential relation of trauma types with negative and positive emotion dysregulation. *Anxiety, Stress, & Coping, 35*(4), 425-439. https://doi.org/10.1080/10615806.2021.1964072

Berliner, D. C. (2014). Exogenous variables and value-added assessments: A fatal flaw. *Teachers College Record: The Voice of Scholarship in Education, 116*(1), 1-31. https://doi.org/10.1177/016146811411600102

Biggs, A., Brough, P., & Drummond, S. (2017). Lazarus and Folkman's psychological stress and coping theory. In C. L. Cooper & J. C. Quick (Eds.), *The handbook of stress and health: A guide to research and practice* (1st ed., pp. 349-364). John Wiley & Sons Ltd.

Bishop, K. K. (2016). The relationship between retention and college counseling for high-risk students. *Journal of College Counseling, 19*(3), 205-217. https://doi.org/10.1002/jocc.12044

Boals, A., Contractor, A. A., & Blumenthal, H. (2020). The utility of college student samples in research on trauma and posttraumatic stress disorder: A critical review. *Journal of Anxiety Disorders, 73*. https://doi.org/10.1016/j.janxdis.2020.102235

Bolger, N., & Laurenceau, J.-P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling research*. Guilford Press.

Box-Steffensmeier, J. M., Freeman, J. R., Hitt, M. P., Pevehouse, J. C. W. (2014). *Time Series Analysis for the Social Sciences.* Cambridge University.

Briere, J., & Runtz, M. (1987). Post sexual abuse trauma: Data and implications for clinical practice. *Journal of Interpersonal Violence, 2*(4), 367-379. https://doi.org/10.1177/088626058700200403

Briere, J., & Runtz, M. (1989). The trauma symptom checklist (TSC-33): Early data on a new scale. *Journal of Interpersonal Violence, 4*(2), 151-163. https://doi.org/10.1177/088626089004002002

Briere, J., & Scott, C. (2015). *Principles of Trauma Therapy: A Guide to Symptoms, Evaluation, and treatment (DSM-5 Update),* (2nd ed.). Sage.

Brough, P., O'Driscoll, M., Kalliath, T. (2005). Confirmatory factor analysis of the cybernetic coping scale. *Journal of Occupational and Organizational Psychology, 78*(1), 53-61. https://doi.org/10.1348/096317904X23754

Brownlee, J. (2020). *White Noise Time Series with Python.* https://machinelearningmastery.com/white-noise-time-series-python/#:~:text=White%20noise%20is%20an%20important,made%20to%20the%20predictive%20model.

Bryant, D. J., Oo, M., & Damian, A. J. (2020). The rise of adverse childhood experiences during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy, 12(*S1), S193–S194. https://doi.org/10.1037/tra0000711

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing, 25*(8), 652-661. https://doi.org/10.1177/1744987120927206

Caprara, G. V., Alessandri, G., Steca, P., Yamaguchi, S., Fukuzawa, A., Eisenberg, N., Kupfer, A., Caprara, M. G., & Abela, J. (2012). The positivity scale. *Psychological Assessment, 24*(3), 701-712. https://doi.org/10.1037/a0026681

Caprara, G. V., Barbaranelli, C., Borgogni, L., & Perugini, M. (1993). The “big five questionnaire”: A new questionnaire to assess the five factor model. *Personality and Individual Differences, 15*(3), 281-288. https://doi.org/10.1016/0191-8869(93)90218-R

Caprara, M., Gerbino, M., Mebane, M. E., & Ramirez-Uclés, I. M. (2022). Self-efficacy beliefs in managing positive emotions: Associations with positive affect, negative affect, and life satisfaction across gender and ages. *Frontiers in Human Neuroscience, 16*, 927648.

Carlson, E. B., & Dalenberg, C. J. (2000). A conceptual framework for the impact of traumatic experiences. *Trauma, Violence, & Abuse, 1*(1), 4-28. https://doi.org/10.1177/1524838000001001002

Caruana, E. J., Roman, M., Hernández-Sánchez, J., & Solli, P. (2015). Longitudinal studies. *Journal of Thoracic Disease, 7*(11), E537-E540. https://doi.org/10.3978/j.issn.2072-1439.2015.10.63

Cash, D. K., Heisick, L. L., & Papesh, M. H. (2018). Expectancy effects in the autonomous sensory meridian response. *Brain, Cognition and Mental Health 6*, e5229. https://doi.org/10.7717/peerj.5229

Cassel, J. (1976). The contribution of the social environment to host resistance. *American Journal of Epidemiology, 104*(2), 107-123.

Catalino, L. I., & Tov, W. (2022). Daily variation in prioritizing positivity and well-being. *Emotion, 22*(5), 874–879. https://doi.org/10.1037/emo0001070

CenterStat. (2017). *What is Growth Curve Modeling?* https://centerstat.org/growth-curve-modeling

Chan, A. S. (2021). Storytelling, culture, and indigenous methodology. In *Discourses, Dialogue and Diversity in Biographical Research* (pp. 170-185). Brill.

Chan, K., & Uusiautti, S. (2022). University students' autonomous sensory meridian response (ASMR) experiences in the light of a well-being theory. *Seminar.net, 18*(1), 1-23.

Chandler, M. J. & Lalonde, C. E. (2009). Cultural continuity as a moderator of suicide risk among Canada's First Nations. In L. J. Kirmayer & G. G. Valaskakis (Eds.), *Healing Traditions: The Mental Health of Aboriginal Peoples in Canada* (pp. 221-248). Vancouver, Canada: UBC Press.

Chang, S. L. H. (2017). The influence of maladaptive perfectionism, negative affect, and negative urgency on bulimic symptoms among female college students. *Korean Journal of Clinical Psychology, 36*(2), 192-205.

Chang, E. C., & Chang, O. D. (2016). Development of the frequency of suicidal ideation inventory: Evidence for the validity and reliability of a brief measure of suicidal ideation frequency in a college student population. *Cognitive Therapy and Research, 40*, 549-556. https://doi.org/10.1007/s10608-016-9758-0

Chao, R. C-L. (2012). Managing perceived stress among college students: The roles of social support and dysfunctional coping. *Journal of College Counseling, 15*(1), 5-21. https://doi.org/10.1002/j.2161-1882.2012.00002.x

Chen, R., Sun, C., Chen, J-J., Jen, H-J., Kang, X. L., Kao, C-C., & Chou, K-R. (2021). A large-scale survey on trauma-burnout, and posttraumatic growth among nurses during the COVID-19 pandemic. *International Journal of Mental Health Nursing, 30*, 102-116. https://doi.org/10.1111/inm.12796

Çıkrıkçı, Ö., Çiftçi, M., & Gençdogan, B. (2015). The psychometric properties of the Turkish Form of the Positivity Scale. *The Journal of Happiness & Well-Being, 3*(1), 57-76.

Clinton, A. B. (2020, December 9). *Scaling up to address global trauma, loss, and grief associated with COVID-19*. American Psychological Association. https://www.apa.org/international/global-insights/global-trauma

Coffey, J. K., Wray-Lake, L., Mashek, D., & Branand, B. (2016). A multi-study examination of well-being theory in college and community samples. *Journal of Happiness Studies, 17,* 187-211. https://doi.org/10.1007/s10902-014-9590-8

Cohen, S., Gianaros, P. J., & Manuck, S. B. (2016). A stage model of stress and disease. *Perspectives on Psychological Science, 11*(4), 456-463. https://doi.org/10.1177/1745691616646305

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 385-396. https://doi.org/10.2307/2136404

Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. In S. E. Taylor, J. E. Singer, & A. Baum (Eds.), Handbook of Psychology and Health, Volume IV (1st ed., pp. 253-268). Lawrence Erlbaum Associates.

Coker, K. K., Flight, R. L., & Baima, D. M. (2017). Skip it or view it: The role of video storytelling in social media marketing. *Marketing Management Journal, 27*(2).

Connelly, L. M. (2014). Use of theoretical frameworks in research. *Medsurg Nursing, 23*(3), 187-188.

Conner, T. S., & Lehman, B. J. (2012). Getting started: Launching a study in daily life. In M. R. Mehl & T. S. Conner (Eds.), *Handbook of research methods for studying daily life* (pp. 89–107). The Guilford Press.

Conner, T. S., & Mehl, M. R. (2015). Ambulatory assessment: Methods for studying everyday life. *Emerging Trends in the Social and Behavioral Sciences: An Interdisciplinary, Searchable, and Linkable Resource, 2015*, 1-15.

Corry, M, Porter, S., & McKenna, H. (2019). The redundancy of postitivism as a paradigm for nursing research. *Nursing Philosophy, 20*(1), e12230. https://doi.org/10.1111/nup.12230

Crain, M., & Koehn, C. (2012). The essence of hope in domestic violence support work: A hermeneutic-phenomenological inquiry. *Journal of Mental Health Counseling, 34*(2), 170-188. https://doi.org/10.17744/mehc.34.2.am6j432352416nh8

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.

Crotty, M. J. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.

Csikszentmihalyi, M. (2000). Happiness, flow, and economic equality. *American Psychologist, 55*(10), 1163–1164. https://doi.org/10.1037/0003-066X.55.10.1163

Cucinotta, D., & Vanelli, M. (2020). WHO declares COVID-19 a pandemic. *Acta Biomedica, 91*(1), 157. https://doi.org/10.23750/abm.v91i1.9397

Curran, P. J., & Bauer, D. J. (2016, April 3). *Introduction to Growth Curve Modeling: An Overview and Recommendations for Practice* [Lecture]. https://centerstat.org/wp-content/uploads/2016/SRA/Curran-Bauer-SRA-4APRIL2016-2-up.pdf

Cutcliffe, J. R. (2009). The inspiration of hope in bereavement counseling. *Issues in Mental Health Nursing, 25*(2), 165-190. https://doi.org/10.1080/01612840490268234

Czeisler, M. E., Wiley, J. F., Facer-Childs, E. R., Robbins, R., Weaver, M. D., Barger, L. K., Czeisler, C. A., Howard, M. E., & Rajaratnam, S. M. W. (2021). Mental health, substance use, and suicidal ideation during a prolonged COVID-19 related lockdown in a region with low SARS-CoV-2 prevalence. *Journal of Psychiatric Research, 140,* 533-544. https://doi.org/10.1016/j.jpsychires.2021.05.080

Czyz, E. K., Horwitz, A. G., Eisenberg, D., Kramer, A., & King, C. A. (2013). Self-reported barriers to professional help seeking among college students at elevated risk for suicide. *Journal of American College Health, 61*(7), 398-406. https://doi.org/10.1080/07448481.2013.820731

DeVylder, J., Zhou, S., Oh, H. (2021). Suicide attempts among college students hospitalized for COVID-19. *Journal of Affective Disorders, 294*, 241-244. https://doi.org/10.1016/j.jad.2021.07.058

Dewe, P., & Cooper, G. L. (2007). Coping research and measurement in the context of work related stress. In G. P. Hodgkinson & J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology 2007* (pp. 141–191). John Wiley & Sons Ltd. https://doi.org/10.1002/9780470753378.ch4

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Domaradzki, J. (2021). The Werther effect, the Papageno effect or no effect? A literature review. *International Journal of Environmental Research and Public Health, 18*(5), 2396. https://doi.org/10.3390/ijerph18052396

Dorais, S. (2021). *The dynamics of resilience in a centering meditation: A longitudinal randomized controlled trial* (Publication No. 1627407477) [Doctoral dissertation, William & Mary]. ProQuest Dissertations & Theses Global. http://doi.org/10.25774/w4-hq1g-pj29

Eddington, K. M., Dozois, D. J. A., & Backs-Dermott, B. J. (2014). Evaluation of the internal consistency, factor structure, and validity of the depression change expectancy scale. *21*(5), 607-617. https://doi.org/10.1177/1073191113517929

Elliott, D. M., & Briere, J. (1992). Sexual abuse trauma among professional women: Validating the trauma symptom checklist-40 (TSC-40). *Child Abuse & Neglect, 16*(3), 391-398. https://doi.org/10.1016/0145-2134(92)90048-V

Elsegood, K. J., Anderson, L., & Newton, R. (2018). Introducing the recovery inspiration group: promoting hope for recovery with inspirational recovery stories. *Advances in Dual Diagnosis*. https://doi.org/10.1108/ADD-03-2018-0004

Etikan, I., Musa, S. A., Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4. https://doi.org/10.11648/j.ajtas.20160501.11

Fava, G. A. (1983). Assessing depressive symptoms across cultures: Italian validation of the CES-D self-rating scale. *Journal of Clinical Psychology, 38*(2), 249-251. https://doi.org/10.1002/1097-4679(198303)39:2<249::AID-JCLP2270390218>3.0.CO;2-Y

Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020). Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long

return to normality. *Child and Adolescent Psychiatry and Mental Health, 14*. https://doi.org/10.1186/s13034-020-00329-3

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventative Medicine, 14*(4), 245-258.

Finkelhor, D., Shattuck, A., & Turner, H. (2013). Improving the adverse childhood experiences study scale. *JAMA Pediatrics, 167*(1), 70-75. https://doi.org/10.1001/jamapediatrics.2013.420

Finkelhor, D., Shattuck, A., & Turner, H. (2015). A revised inventory of adverse childhood experiences. *Child Abuse & Neglect, 48*, 13-21. https://doi.org/10.1016/j.chiabu.2015.07.011

Floody, D. R. (2014). Serenity and inner peace: Positive perspectives. In G. K. Sims, L. L. Nelson, & M. R. Puopolo (Eds.), *Personal peacefulness: Psychological perspectives* (pp. 107-133). Springer.

Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress, & Coping, 21*(1), 3-14. https://doi.org/10.1080/10615800701740457

Folkman, S., & Moskowitz, J. T. (2007). Positive affect and meaning-focused coping during significant psychological stress. In M. Hewstone, H. Schut, J. de Wit, K. van den Bos, & M. Stroebe (Eds.), *The Scope of Social Psychology: Theory and Applications*. Psychology Press. https://doi.org/10.4324/9780203965245

Frazier, P., Anders, S., Perera, S., Tomich, P., Tennen, H., Park, C., & Tashiro, T. (2009). Traumatic events among undergraduate students: Prevalence and associated symptoms. *Journal of Counseling Psychology, 56*(3), 450–460. https://doi.org/10.1037/a0016412

Fredrickson, B. L. (1998). What good are positive emotions? Review of General Psychology, 2, 300–319.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218-226. https://doi.org/10.1037/0003-066X.56.3.218

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society B: Biological Sciences, 359*(1449), 1367-1377. https://doi.org/10.1098/rstb.2004.1512

Fredrickson, B. L. (2009). *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. Crown Publishers/Random House.

Fredrickson, B. L. (2013). Chapter one: Positive emotions broaden and build. *Advances in Experimental Social Psychology, 47,* 1-53. https://doi.org/10.1016/B978-0-12-407236-7.00001-2

Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*(2), 172-175. https://doi.org/10.1111/1467-9280.00431

Fredrickson, B. L., & Joiner, T. (2018). Reflections on positive emotions and upward spirals. *Perspectives on Psychological Science, 13*(2), 194-199. https://doi.org/10.1177/1745691617692106

Friedberg, J. P., Adonis, M. N., Von Bergen, H. A., & Suchday, S. (2005). September 11th related stress and trauma in New Yorkers. *Stress and Health, 21*(1), 53-60. https://doi.org/10.1002/smi.1039

Fuller, J. A., Stanton, J. M., Fisher, G. G., Spitzmüller, C., Russell, S. S., & Smith, P. C. (2003). A Lengthy Look at the Daily Grind: Time Series Analysis of Events, Mood, Stress, and Satisfaction. *Journal of Applied Psychology, 88*(6), 1019–1033. https://doi.org/10.1037/0021-9010.88.6.1019

Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology, 9*(2), 103-110. https://doi.org/10.1037/1089-2680.9.2.103

Gachago, D., Condy, J., Ivala, E., & Chigona, A. (2014). "All stories bring hope because stores bring awareness": Students' perceptions of digital storytelling for social justice education. *South African Journal of Education, 34*(4), 1-12.

Gallagher, M. W., Marques, S. C., & Lopez, S. J. (2017). Hope and the academic trajectory of college students. *Journal of Happiness Studies, 18*, 341-352. https://doi.org/10.1007/s10902-016-9727-z

Gameon, J. A., Lahiere, A. N., & Skewes, M. C. (2021). College students' perspectives on healing following an unwanted sexual experience. *Current Psychology, 40*, 2570-2580. https://doi.org/10.1007/s12144-020-00619-1

Garami, J., Valikhani, A., Parkes, D., Haber, P., Mahlberg, J., Misiak, B., Frydecka, D., & Moustafa, A. A. (2019). Examining perceived stress, childhood trauma and interpersonal trauma in individuals with drug addiction. *Psychological Reports, 122*(2), 433-450. https://doi.org/10.1177/0033294118764918

Garavand, H., Abdoli, F., & Sabzian, S. (2022). Investigating the causal model of the meaning in life and sense of coherence with Covid-19 anxiety: The mediating role of hope. *Journal of Research in Psychopathology, 3*(8), 41-50. https://doi.org/10.22098/JRP.2022.10814.1102

Garber, J., Walker, L. S., & Zeman, J. (1991). Somatization symptoms in a community sample of children and adolescents: further validation of the Children's Somatization Inventory. Psychological Assessment: *A Journal of Consulting and Clinical Psychology, 3*(4), 588-595. https://doi.org/10.1037/1040-3590.3.4.588

Goldsmith, R. E., Freyd, J. J., & DePrince, A. P. (2012). Betrayal trauma: Associations with psychological and physical symptoms in young adults. *Journal of Interpersonal Violence, 27*(3), 547-567. https://doi.org/10.1177/0886260511421672

Grace-Martin, K. (2016). *The unstructured covariance matrix: When it does and doesn't work.* The Analysis Factor. https://www.theanalysisfactor.com/unstructured-covariance-matrix-when-it-does-and-doesn%E2%80%99t-work/

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 26*, 41-54. https://doi.org/10.1023/b:joba.0000007455.08539.94

Grossnickle, E. M. (2016). Disentangling curiosity: Dimensionality, definitions, and distinctions from interest in educational contexts. *Educational Psychology Review, 28*, 23-60. https://doi.org/10.1007/s10648-014-9294-y

Gulliford, L., Morgan, B., & Kristjánsson, K. (2013). Recent work on the concept of gratitude in philosophy and psychology. *The Journal of Value Inquiry, 47*, 285-317. https://doi.org/10.1007/s10790-013-9387-8

Gupta, S. K. (2011). Intention-to-treat concept: A review. *Perspectives in Clinical Research, 2*(3), 109-112. https://doi.org/10.4103/2229-3485.83221

Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 852–870). Oxford University Press.

Hamid, A., Arshad, R., & Shahid, S. (2022, April). What are you thinking?: Using CBT and Storytelling to Improve Mental Health Among College Students. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (pp. 1-16).

Han, H., Kim, J., Jeong, C., & Cohen, G. L. (2017). Attainable and relevant moral exemplars are more effective than extraordinary exemplars in promoting voluntary service engagement. *Frontiers in Psychology, 8*. https://doi.org/10.3389/fpsyg.2017.00283

Harris, G. E., & Larsen, D. (2007). HIV peer counseling and the development of hope: Perspectives from peer counselors and peer counseling recipients. *AIDS Patient Care and STDs, 21*(11), 843-860. http://doi.org/10.1089/apc.2006.0207

Hiscott, J., Alexandridi, M., Muscolini, M., Tassone, E., Palermo, E., Soultsioti, M., Zevini, A. (2020). The global impact of the coronavirus pandemic. *Cytokine & Growth Factor Reviews, 53*, 1-9. https://doi.org/10.1016/j.cytogfr.2020.05.010

Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 11*, 213-218.

Horigian, V. E., Schmidt, R. D., & Feaster, D. J. (2020). Loneliness, mental health, and substance use among US young adults during COVID-19. *Journal of Psychoactive Drugs, 53*(1), 1-9. https://doi.org/10.1080/02791072.2020.1836435

Horiuchi, S., Tsuda, A., Yoneda, K., & Aoki, S. (2018). Mediating effects of perceived stress on the relationship of positivity with negative and positive affect. Psychology research and behavior management, 299-303. https://doi.org/10.2147/PRBM.S164761

Huen, J. M. Y., Ip, B. Y. T., Ho, S. M. Y., & Yip, P. S. F. (2015). Hope and hopelessness: The role of hope in buffering the impact of hopelessness on suicidal ideation. *PLoS ONE 10*(6). https://doi.org/10.1371/journal.pone.0130073

Iida, M., Shrout, P. E., Laurenceau, J.-P., & Bolger, N. (2012). Using diary methods in psychological research. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 1. Foundations, planning, measures, and psychometrics* (pp. 277–305). American Psychological Association. https://doi.org/10.1037/13619-016

Iseke, J. (2013). Indigenous storytelling as research. *International Review of Qualitative Research, 6*(4), 559-577. https://doi.org/10.1525/irqr.2013.6.4.559

James, W. (1902). *The varieties of religious experience: A study in human nature*. Longman, Green.

Jeong, S., Alghowinem, S., Aymerich-Franch, L., Arias, K., Lapdriza, A., Picard, R., Won Park, H., Breazeal, C. (2020). A robotic positive psychology coach to improve college students' wellbeing. In: 2020 29th IEEE international conference on robot and human interactive communication (RO-MAN). *IEEE*, pp 187–194, https://doi.org/10.1109/RO-MAN47096.2020.9223588

Johnson, J. M., Scott, S., Phillips, T., & Rush, A. (2022). Ivy issues: An exploration of black students' racialized interactions on Ivy League campuses. *Journal of Diversity in Higher Education*. Advance online publication. https://doi.org/10.1037/dhe0000406

Johnson, M. K. (2019). Joy: A reply to the replies. *The Journal of Positive Psychology*, *15*(1), 84-88. https://doi.org/10.1080/17439760.2019.1685582

Juna, M. A., Anshari, M., Ahmad, N., & Hamdan, M. (2022). Working from home, COVID-19 and multi-dimensional model of well-being theory. *International Journal of Work Organisation and Emotion, 13*(3), 230-259. https://doi.org/10.1504/IJWOE.2022.126957

Kalamakis, K. A., Chiodo, L. M., Kent, N., & Meyer, J. S. (2020). Adverse childhood experiences, post-traumatic stress disorder symptoms, and self-reported stress among traditional and nontraditional college students. *Journal of American College Health, 68*(4), 411-418. https://doi.org/10.1080/07448481.2019.1577860

Kalamakis, K. A., Meyer, J. S., Chiodo, L., & Leung, K. (2015). Adverse childhood experiences and chronic hypothalamic–pituitary–adrenal activity. *Stress, 18*(4), 446–450. https://doi.org/10.3109/10253890.2015.1023791

Karatekin, C. (2018). Adverse childhood experiences (ACEs), stress and mental health in college students. *Stress and Health, 34*(1), 36-45. https://doi.org/10.1002/smi.2761

Karatekin, C., & Hill, M. (2019). Expanding the original definition of adverse childhood experiences (ACEs). *Journal of Child & Adolescent Trauma, 12*, 289-306. https://doi.org/10.1007/s40653-018-0237-5

Karvounides, D., Simpson, P. M., Davies, W. H., Khan, K. A., Weisman, S. J., & Hainsworth, K. R. (2016). Three studies supporting the initial validation of the stress numerical rating

scale-11 (stress NRS-11): A single item measure of momentary stress for adolescents and adults. *Pediatric Dimensions, 1*(4), 105-109. https://doi.org/10.15761/PD.1000124

Kecojevic, A., Basch, C. H., Sullivan, M., & Davi, N. K. (2020). The impact of the COVID-19 epidemic on mental health of undergraduate students in New Jersey, cross-sectional study. *PLoS one, 15*(9), e0239696.

Kelly, H. (2011). The classical definition of a pandemic is not elusive. *Bulletin of the World Health Organization, 89*(7), 540-541. https://doi.org/ 10.2471/BLT.11.088815

Kim, H.-Y., Shin, S.-H., Lee, E.-H. (2022). Effects of health belief, knowledge, and attitude toward COVID-19 on prevention behavior in health college students. *International Journal of Environmental Research and Public Health, 19*(3), 1898. https://doi.org/10.3390/ijerph19031898

Kira, I. A., Shuwiekh, H. A. N., Rice, K. G., Ashby, J. S., Elwakeel, S. A., Fahmy Sous, M. S., Alhuwailah, A., Baali, S. B. A., Azdaou, C., Oliemat, E. M., & Jamil, H. J. (2020). Measuring COVID-19 as traumatic stress: Initial psychometrics and validation. *Journal of Loss and Trauma.* https://doi.org/10.1080/15325024.2020.1790160

Koehn, C., & Cutcliffe, J. R. (2012). The inspiration of hope in substance abuse counseling. *The Journal of Humanistic Counseling, 51*(1), 78-98. https://doi.org/10.1002/j.2161-1939.2012.00007.x

Kovich, M. K., Simpson, V. L., Foli, K. J., Hass, Z., & Phillips, R. G. (2023). Application of the PERMA model of well-being in undergraduate students. *International Journal of Community Well-Being, 6*, 1-20. https://doi.org/10.1007/s42413-022-00184-4

Kreidler, S. M., Muller, K. E., Grunwald, G. K., Ringham, B. M., Coker-Dukowitz, Z. T., Sakhadeo, U. R., Barón, A. E., & Glueck, D. H. (2014). GLIMMPSE: Online power

computation for linear models with and without a baseline covariate. *Journal of Statistical Software, 54*(10), i10. https://doi.org/10.18637/jss.v054.i10

Kubany, E. S., Leisen, M. B., Kaplan, A. S., Watson, S. B., Haynes, S. N., Owens, J. A., & Burns, K. (2000). Development and preliminary validation of a brief broad-spectrum measure of trauma exposure: The Traumatic Life Events Questionnaire. *Psychological Assessment, 12*(2), 210–224. https://doi.org/10.1037/1040-3590.12.2.210

Lala, G., McGarty, C., Thomas, E. F., Ebert, A., Broderick, M., Mhando, M., & Kamuronsi, Y. (2014). Messages of hope: Using positive stories of survival to assist recovery in Rwanda. *Journal of Social and Political Psychology, 2*(1), 450-468. https://doi.org/10.5964/jspp.v2i1.290

Landau, S. I., Mavroudis, C., Brooks, E., Bergmark, R., Berlin, N. L., Lancaster, E., Waljee, J., Wick, E., Yeo, H., Wirtalla, C., & Kelz, R. B. (2022). Longitudinal evaluation of the surgical workforce experience during the Covid-19 pandemic. *The American Journal of Surgery, 224*(5), 1199-1206. https://doi.org/10.1016/j.amjsurg.2022.04.015

Larsen, D. J., & Stege, R. (2010a). Hope-focused practices during early psychotherapy sessions: Part I: Implicit approaches. *Journal of Psychotherapy Integration, 20*(3), 271-292. https://doi.org/10.1037/a0020820

Larsen, D. J., & Stege, R. (2010b). Hope-focused practices during early psychotherapy sessions: Part II: Explicit approaches. *Journal of Psychotherapy Integration, 20*(3), 271-292. https://doi.org/10.1037/a0020821

Larsen, D. J., & Stege, R. (2012). Client accounts of hope in early counseling sessions: A qualitative study. *Journal of Counseling & Development, 90*(1), 45-54. https://doi.org/10.1111/j.1556-6676.2012.00007.x

Lattie, E. G., Adkins, E. C., Winquist, N., Stiles-Shields, C., Wafford, Q. E., & Graham, A. K. (2019). Digital mental health interventions for depression, anxiety, and enhancement of psychological well-being among college students: Systematic review. *Journal of Medical Internet Research, 21*(7): e10876

Lawrence, R. L., & Paige, D. S. (2016). What our ancestors knew: Teaching and learning through storytelling. *New Directions for Adult and Continuing Education, 149*, 63-72.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Lazzaro, A. L., Bolton, M. J., & Kieffer, K. (2022). *A brief report on amusement in college students: the positive effects of affiliative and self-enhancing humor styles on romantic relationship satisfaction and psychological wellbeing*. https://psyarxiv.com/cu5yh/download?format=pdf

Lederer, A. M., Hoban, M. T., Lipson, S. K., Zhou, S., & Eisenberg, D. (2021). More than inconvenienced: The unique needs of U.S. college students during the COVID-19 pandemic. *Health Education & Behavior, 48*(1), 14-19. https://doi.org/10.1177/1090198120969372

Lee, J., Jeong, H. J., & Kim, S. (2021). Stress, anxiety, and depression among undergraduate students during the COVID-19 pandemic and their use of mental health services. *Innovative Higher Education, 46*, 519-538. https://doi.org/10.1007/s10755-021-09552-y

Lee, S. A., & Neimeyer, R. A. (2022). Pandemic grief scale: A screening tool for dysfunctional grief due to a COVID-19 loss. *Death Studies, 46*(1), 14-24. https://doi.org/10.1080/07481187.2020.1853885

Lenz, A. S. (2015). Using single-case research designs to demonstrate evidence for counseling practices. *Journal of Counseling & Development, 93*(4), 387-393. https://doi.org/10.1002/jcad.12036

Lenz, A. S., & Williams, R. T. (2014). Comparative efficacy between self-report and clinician-administered assessments of posttraumatic stress disorder symptoms across seven studies. *Counseling Outcome Research and Evaluation, 5*(2), 75-88. https://doi.org/10.1177/2150137814550523

Lewis, B. (2011). *Narrative psychiatry: How stories can shape clinical practice*. JHU Press.

Lim, M. T. C., Ramamurthy, M. B., Aishworiya, R., Rajgor, D. D., Tran, A. P., Hiriyur, P., Kunaseelan, S., Jabri, M., Goh, D. Y. T. (2021). School closure during the coronavirus disease 2019 (COVID-19) pandemic: Impact on children's sleep. *Sleep Medicine, 78*, 108-114. https://doi.org/10.1016/j.sleep.2020.12.025

Linley, P. A., Joseph, S., Harrington, S., & Wood, A. M. (2007). Positive psychology: Past present, and (possible) future. *The Journal of Positive Psychology, 1*(1), 3-16. https://doi.org/10.1080/17439760500372796

Lipson, S. K., Lattie, E. G., Eisenberg, D. (2019). Increased rates of mental health service utilization by U.S. college students: 10-year population-level trends (2007-2017). *Psychiatric Services, 70*(1), 60–63. https://doi.org/10.1176/appi.ps.201800332

Liu, R. T., Kleiman, E. M., Nestor, B. A., & Cheek, S. M. (2015). The hopelessness theory of depression: A quarter-century in review. *Clinical Psychology: Science and Practice, 22*(4), 345–365. https://doi.org/10.1037/h0101732

Lucarevschi, C. R. (2016). The role of storytelling on language learning: A literature review. *Working Papers of the Linguistics Circle, 26*(1), 24-44.

Lugmayr, A., Sutinen, E., Suhonen, J., Sedano, C. I., Hlavacs, H., & Montero, C. S. (2017). Serious storytelling–a first definition and review. *Multimedia Tools and Applications, 76*, 15707-15733. https://doi.org/10.1007/s11042-016-3865-5

Lynch, W. F. (1974). *Images of hope: Imagination as healer of the hopeless.* University of Notre Dame Press.

MacKinnon, S. (2011). Building capacity through participatory action research: The state of the inner-city report project. *Community Development Journal, 46*(2), 154-167. https://doi.org/10.1093/cdj/bsp059

Manthena, J., Korrapati, V., & Zhang, C. (2021). SAS Proc Mixed: A statistical programmer's best friend in QoL analyses. *PharmaSUG*. https://www.pharmasug.org/proceedings/2021/SA/PharmaSUG-2021-SA-062.pdf

Masiero, M., Mazzaocco, K., Harnois, C., Cropley, M., & Pravettoni, G. (2020). From individual to social trauma: Sources of everyday trauma in Italy, the US and UK during the Covid-19 pandemic. *Journal of Trauma & Dissociation, 21*(5), 513-519. https://doi.org/10.1080/15299732.2020.1787296

Maslow, A. H. (1968). *Toward a psychology of being*. Van Nostrand.

McAdams, D. P., & Constantian, C. A. (1983). Intimacy and affiliation motives in daily living: An experience sampling analysis. *Journal of Personality and Social Psychology, 45*(4), 851–861. https://doi.org/10.1037/0022-3514.45.4.851

McCambridge, J., Kypri, K., Bendtsen, P., & Porter, J. (2014). Deception in research is morally problematic... And so too is not using it morally: Reply to open peer commentaries on "The use of deception in public health behavioral intervention trials: A case study of

three online alcohol trials". *The American Journal of Bioethics, 14*(1), W9-W12. https://doi.org/10.1080/15265161.2014.862418

McCormick, T. H., & Zheng, T. (2007). Adjusting for recall bias in "How many X's do you know?" surveys. In *Proceedings of the Joint Statistical Meetings.*

McCoy, S. I., Njau, P. F., Fahey, C., Kapologwe, N., Kadiyala, S., Jewell, N. P., Dow, W. H., & Padian, N. S. (2017). Cash versus food assistance to improve adherence to antiretroviral therapy among HIV-infected adults in Tanzania: a randomized trial. *AIDS, 31*(6), 815-825. https://doi.org/10.1097/QAD.0000000000001406

McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin, 127*(2), 249-266.

McLaughlin, K. A., & Hatzenbuehler, M. L. (2009). Stressful life events, anxiety sensitivity, and internalizing symptoms in adolescents. *Journal of Abnormal Psychology, 118*(3), 659-669. https://doi.org/10.1037/a0016499

Mendoza, K., & Bradley, L. (2021). Using Storytelling for Counseling with Children Who Have Experienced Trauma. *Journal of Mental Health Counseling, 43*(1), 1-18. https://doi.org/10.17744/mehc.43.1.01

Merolla, A. J., Otmar, C., & Hernandez, C. R. (2021). Day-to-day relational life during the COVID-19 pandemic: Linking mental health, daily relational experiences, and end-of-day outlook. *Journal of Social and Personal Relationships, 38*(8). https://doi.org/10.1177/02654075211020137

Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C. U., Byrne, L., Carr, S., Chen, E. Y. H., Gorwood, P., Johnson, S., Kärkkäinen, H., Krystal, J. H., Lee, J., Lieberman, J., López-Jaramillo, C., Männikkö, M, … Arango,

C. (2020). How mental health care should change as a consequence of the COVID-19 pandemic. *The Lancet Psychiatry, 7*(9), 813-824. https://doi.org/10.1016/S2215-0366(20)30307-2

Morren, M., van Dulmen, S., Ouwerkerk, J., & Bensing, J. (2009). Compliance with momentary pain measurement using electronic diaries: A systematic review. *European Journal of Pain, 13*(4), 354-365. https://doi.org/10.1016/j.ejpain.2008.05.010

Nakamura, J. (2013). Pride and the experience of meaning in daily life. *The Journal of Positive Psychology, 8*(6), 555-567. https://doi.org/10.1080/17439760.2013.830765

Nguyen, K., Stanley, N., Rank, A., Stanley, L., & Wang, Y. (2016). The relationship among storytelling, values, and resilience of college students from Eastern and Western cultural backgrounds. *Journal of Poetry Therapy, 29*(2), 73-88. https://doi.org/10.1080/08893675.2016.1176162

Nguyen-Feng, V. N., Greer, C. S., & Frazier, P. (2017). Using online interventions to deliver college student mental health resources: Evidence from randomized clinical trials. Psychological Services, 14(4), 481–489. https://doi.org/10.1037/ser0000154

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery, 78*, 185-193.

Niederkrotenthaler, T., Till, B., Kirchner, S., Sinyor, M., Braun, M., Pirkis, J., Tran, U. S., Voracek, M., Arendt, F., Ftanou, M., Kovacs, R., King, K., Schlichthorst, M., Stack, S., & Spittal, M. J. (2022). Effects of media stories of hope and recovery on suicidal ideation and help-seeking attitudes and intentions: Systematic review and meta-analysis. *The Lancet Public Health, 7*(2), e156-e168. https://doi.org/10.1016/S2468-2667(21)00274-7

Niederkrotenthaler, T., Voracek, M., Herberth, A., Till, B., Strauss, M., Etzersdorfer, E., Eisenwort, B., & Sonneck, G. (2010). Papageno v Werther effect. *British Medical Journal, 341*. https://doi.org/10.1136/bmj.c5841

Ninot, G., Fortes, M., & Delignières, D. (2005). The dynamics of self-esteem in adults over a 6-month period: An exploratory study. *The Journal of Psychology, 139*(4), 315-330. https://doi.org/10.3200/JRLP.139.4.315-330

Ocal, N. U., Kilic, M., Uslukilic, G. (2022). The relationship between university students' depression, anxiety, and stress with positivity attitudes and the COVID-19 pandemic. *Nigerian Journal of Clinical Practice, 25*(9), 1571-1579.

Onyema, E. M., Eucheria, N. C., Obafemi, F. A., Sen, S., Atonye, F. G., Sharma, A., & Alsayed, A. O. (2020). Impact of Coronavirus pandemic on education. *Journal of Education and Practice, 11*(13), 108-121.

Ortiz, R., & Sibinga, E. M. (2017). The role of mindfulness in reducing the adverse effects of childhood stress and trauma. *Children, 4*(3), 16. https://doi.org/10.3390/children4030016

Palm, S. (2020). Sustaining feminist hope in COVID-19 times of despair and anxiety. *The African Journal of Gender and Religion, 26*(2), 70-90.

Panchal, N., Kamal, R., Cox, C., & Garfield, R. (2021, February 10). *The implications of COVID-19 for mental health and substance use*. KFF. https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Kruger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). The Guilford Press.

Pedrelli, P., Nyer, M., Yeung, A., Zulauf, C., & Wilens, T. (2015). College students: Mental health problems and treatment considerations. *Academic Psychiatry, 39*, 503-511. https://doi.org/10.1007/s40596-014-0205-9

Peternelj-Taylor, C. (2018). Trauma-informed care: Responding to the call for action. *Journal of Forensic Nursing, 14*(4), 185-185. https://doi.org/10.1097/JFN.0000000000000224

Peterson, R. A. (2001). On the use of college students in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research, 28*(3), 450-461. https://doi.org/10.1086/323732

Peterson, R. A., & Merunka, D. R. (2014). Convenience samples of college students and research reproducibility. *Journal of Business Research, 67*(5), 1035-1041. https://doi.org/10.1016/j.jbusres.2013.08.010

Petursdottir, A. I., & Carr, J. E. (2018). Applying the taxonomy of validity threats from mainstream research design to single-case experiments in applied behavior analysis. *Behavior Analysis in Practice, 11*, 228-240. https://doi.org/10.1007/s40617-018-00294-6

Pfefferbaum, B., & North, C. S. (2020). Mental health and the Covid-19 pandemic. *The New England Journal of Medicine, 383*, 510-512. https://doi.org/10.1056/NEJMp2008017

Phillips, D. C., & Burbules, N. C. (2000). *Postpositivism and educational research*. Rowman & Littlefield.

Plano Clark, V. L., Anderson, N., Wertz, J. A., Zhou, Y., Schumacher, K., & Miaskowski, C. (2015). Conceptualizing longitudinal mixed methods designs: A methodological review of health sciences research. *Journal of Mixed Methods Research, 9*(4), 297-319.

Price, M., Legrand, A. C., Brier, Z. M. F., van Stolk-Cooke, K., Peck, K., Dodds, P. S., Danforth, C. M., & Adams, Z. W. (2022). Doomscrolling during COVID-19: The negative

association between daily social and traditional media consumption and mental health symptoms during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy, 14*(8), 1338–1346. https://doi.org/10.1037/tra0001202

Puhan, M. A., Akl, E. A., Bryant, D., Zie, F., Apolone, G., & ter Riet, G. (2012). Discussing study limitations in reports of biomedical studies: The need for more transparency. *Health and Quality of Life Outcomes, 10*(23). https://doi.org/10.1186/1477-7525-10-23

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Read, J. P., Ouimette, P., White, J., Colder, C., & Farrow, S. (2011). Rates of DSM–IV–TR trauma exposure and posttraumatic stress disorder among newly matriculated college students. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*(2), 148–156. https://doi.org/10.1037/a0021260

Reppond, H. (2019). *Many college students struggle to have their basic needs met*. American Psychological Association.

Resnick, D. B. (2015). Bioethical issues in providing financial incentives to research participants. *Medicolegal and Bioethics*, *5*, 35-41. https://doi.org/10.2147/MB.S70416

Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. *Digital Education Review*, (30), 17-29.

Robino, A. E., Corrigan, V. K., Anderson, B., Were, S., Farley, J. P. Marmagas, S. W., & Buechner-Maxwell, V. (2020). College student mental health in an animal-assisted intervention program: A preliminary study. *Journal of Creativity in Mental Health, 16*(1), 49-58. https://doi.org/10.1080/15401383.2020.1757002

Robinson, M. D., & Clore, G. L. (2002). Episodic and semantic knowledge in emotional self-report: Evidence for two judgment processes. *Journal of Personality and Social Psychology, 83*(1), 198–215. https://doi.org/10.1037/0022-3514.83.1.198

Robinson, C., & Rose, S. (2010). Predictive, construct, and convergent validity of general and domain-specific measures of hope for college student academic achievement. *Resaerch in the Schools, 17*(1), 38-52.

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin

Rosenberg, M. (1965). Rosenberg Self-Esteem Scale (RSES) [Database record]. APA PsycTests. https://doi.org/10.1037/t01038-000

Salimi, N., Gere, B., Talley, W., & Irioogbe, B. (2021). College students mental health challenges: Concerns and considerations in the COVID-19 pandemic. *Journal of College Student Psychotherapy.* https://doi.org/10.1080/87568225.2021.1890298

Sammons, M. T., Elchert, D. M., & Martin, J. N. (2021). Mental health provision during COVID-19: Results of the third survey of licensed psychologists. *Journal of Health Service Psychology, 47*. 119-127. https://doi.org/10.1007/s42843-021-00044-3

Santini, Z. I., Koyanagi, A., Tyrovolas, S., Mason, C., & Haro, J. M. (2015). The association between social relationships and depression: A systematic review. *Journal of Affective Disorders, 175*, 53-65. https://doi.org/10.1016/j.jad.2014.12.049

Sauter, D. A. (2017). The nonverbal communication of positive emotions: An emotion family approach. *Emotion Review, 9*(3), 222-234. https://doi.org/10.1177/1754073916667236

Sato A, & Yasuda A. (2000) Development of the Japanese version of Positive and Negative Affect Schedule (PANAS) scales. *Japanese Journal of Personality; 9*(2):138–139.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*(6), 1063–1078. https://doi.org/10.1037/0022-3514.67.6.1063

Schoenmakers, E. C., van Tilburg, T. G., & Fokkema, T. (2015). Problem-focused and emotion-focused coping options and loneliness: how are they related? *European Journal of Ageing, 12*, 153-161. https://doi.org/10.1007/s10433-015-0336-1

Schram, P. (2005). Elijah's cope of hope: Healing through the Jewish storytelling tradition. *Storytelling, Self, Society, 1*(2), 103-117.

Schreiner, L. A. (2015). Positive psychology and higher education. In J. C. Wade, L. I. Marks, & R. D. Hetzel (Eds.), *Positive psychology on the college campus*. Oxford.

Schulz, K. F., Altman, D. G., & Moher, D. (2010). CONSORT 2010 statement: Updated guidelines for reprting parallel group randomized trials. *Journal of Pharmacology & Pharmacotherapeutics, 1*(2), 100-107. https://doi.org/10.1371/journal.pmed.1000251

Schuster, R., Hammitt, W. E., & Moore, D. (2006). Stress appraisal and coping response to hassles experienced in outdoor recreational settings. *Leisure Sciences: An Interdiscliplinary Journal, 28*(2), 97-113. https://doi.org/10.1080/01490400500483919

Sedgwick, P. (2015). Bias in randomized controlled trials: Comparison of crossover group and parallel group designs. *BMJ, 351*. https://doi.org/10.1136/bmj.h4283

Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment.* Atria.

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.

Seligman, M. E. P. (2019). Positive psychology: A personal history. *Annual Review of Clinical Psychology, 15*, 1-23. https://doi.org/10.1146/annurev-clinpsy-050718-095653

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference.* Houghton Mifflin Harcourt.

Shafer, K., Jensen, T. M., & Holmes, E. K. (2017). Divorce stress, stepfamily stress, and depression among emerging adult stepchildren. *Journal of Child and Family Studies, 26*, 851-862. https://doi.org/10.1007/s10826-016-0617-0

Shechter, A., Diaz, F., Moise, N., Anstey, D. E., Ye, S., Agarwal, S., Birk, J. L., Brodie, D., Cannone, D. E., Chang, B., Claassen, J., Cornelius, T., Derby, L., Dong, M., Givens, R. C., Hochman, B., Homma, S., Kronish, I. M., Lee, S. A. J., [...] & Abdalla, M. (2020). Psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the Covid-19 pandemic. *General Hospital Psychiatry, 66*, 1-8. https://doi.org/10.1016/j.genhosppsych.2020.06.007

Silvia, P. J. (2010). Confusion and interest: The role of knowledge emotions in aesthetic experience. *Psychology of Aesthetics, Creativity, and the Arts, 4*(2), 75–80. https://doi.org/10.1037/a0017081

Smith, B. W., Ford, C. G., Erickson, K., & Guzman, A. (2021). The effects of a character strength focused positive psychology course on undergraduate happiness and well-being. *Journal of Happiness Studies, 22*, 343-362. https://doi.org/10.1007/s10902-020-00233-9

Snippe, E., Bos, E. H., van der Ploeg, K. M., Sanderman, R., Fleer, J., & Schroevers, M. J. (2014). Time-series analysis of daily changes in mindfulness, repetitive thinking, and depressive symptoms during mindfulness-based treatment. *Mindfulness, 6*, 1053-1062. https://doi.org/10.1007/s12671-014-0354-7

Snippe, E., Nyklíček, I., Schroevers, M. J., & Bos, E. H. (2015). The temporal order of change in daily mindfulness and affect during mindfulness-based stress reduction. *Journal of Counseling Psychology, 62*(2), 106-114. https://doi.org/10.1037/cou0000057

Snyder, C. R. (1994). *The psychology of hope: You can get there from here.* Simon and Schuster.

Snyder, C. R. (1995). Conceptualizing, measuring, and nurturing hope. *Journal of Counseling and Development, 73*(3), 355-360. https://doi.org/10.1002/j.1556-6676.1995.tb01764.x

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory, 13*(4), 249-275. https://doi.org/10.1207/S15327965PLI1304_01

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570–585. https://doi.org/10.1037/0022-3514.60.4.570

Snyder, C. R., Michael, S. T., & Cheavens, J. S. (1999). Hope as a psychotherapeutic foundation of common factors, placebos, and expectancies. In M. A. Hubble, B. L. Duncan, & S. D. Miller (Eds.), *The heart and soul of change: What works in therapy* (pp. 179–200). American Psychological Association. https://doi.org/10.1037/11132-005

Snyder, C. R., Shorey, H. S., Cheavens, J., Pulvers, K. M., Adams, V. H. III, & Wiklund, C. (2002). Hope and academic success in college. *Journal of Educational Psychology, 94*(4), 820–826. https://doi.org/10.1037/0022-0663.94.4.820

Snyder, C. R., Shorey, H. S., & Sympson, S. (2005). *Development and validation of the domain hope scale-revised*. Unpublished Manuscript, University of Kansas, Lawrence, Kansas.

Son, C., Hegde, S., Smith, A., Wang, X, & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research, 22*(9), e21279. https://doi.org/10.2196/21279

Spielberger, C. D., & Gorsuch, R. L. (1973). State-Trait Anxiety Inventory for Children: STAI-CH Manual:" How I Feel Questionnaire" *Professional Manual*. Mind Garden, Incorporated.

Stanley, E. A. (2019). *Widen the window: Training your brain and body to thrive during stress and recover from trauma*. Penguin.

StoryCorps. (2023). *About StoryCorps.* https://storycorps.org/about/

Sumi, K. (2006). Reliability and validity of the Japanese version of the Perceived Stress Scale. Japanese Journal of Health Psychology, 19(2), 44–53. https://doi.org/10.11560/jahp.19.2_44

Sunderman, H. M., Mccain, K. D., & Hastings, L. J. (2022). 'Under my wing': exploring the connection between generativity and mentoring through storytelling. *Mentoring & Tutoring: Partnership in Learning, 30*(4), 454-478. https://doi.org/10.1080/13611267.2022.2096805

Tabachnick, B. G., & Fidell, L. S. (2018). *Using multivariate statistics*. Harper Collins.

Tang, X., Renninger, K. A., Hidi, S. E., Murayama, K., Lavonen, J., Salmela-Aro, K. (2022). The differences and similarities between curiosity and interest: Meta-analysis and network analyses. *Learning and Instruction, 80*, 101628. https://doi.org/10.1016/j.learninstruc.2022.101628

Tasso, A. F., Hisli Sahin, N., & San Roman, G. J. (2021). COVID-19 disruption on college students: Academic and socioemotional implications. *Psychological Trauma: Theory, Research, Practice, and Policy*, *13*(1), 9–15. https://doi.org/10.1037/tra0000996

Teague, S., Youssef, G. J., Macdonald, J. A., Sciberras, E., Shatte, A., Fuller-Tyszkiewicz, M., Greenwood, C., McIntosh, J., Olsson, C. A., Huntchinson, D., & the SEED Lifecourse Sciences Theme. (2018). Retention strategies in longitudinal cohort studies: A systematic review and meta-analysis. *BMC Medical Research Methodology, 18*, 1-22. https://doi.org/10.1186/s12874-018-0586-7

Tendhar, T., Marcotte, M. A., Saikia, M. J., & de Mesquita, P. B. (2022). Relationship of compassion for self and others to sense of well-being of college students. *Journal of American College Health*, 1-8. https://doi.org/10.1080/07448481.2022.2074276

Theofanidis, D., & Fountouki, A. (2018). Limitations and delimitations in the research process. *Perioperative Nursing, 7*(3), 155-163. https://doi.org/10.5281/zenodo.2552022

Thiele, C., Laireiter, A-R., & Baumann, U. (2002). Diaries in clinical psychology and psychotherapy: A selective review. *Clinical Psychology and Psychotherapy*, *9*(1), 1-37. https://doi.org/10.1002/cpp.302

Thoits, P. A. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior*, 53-79.

Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of Personality and Social Psychology, 84*(4), 871–889. https://doi.org/10.1037/0022-3514.84.4.871

Thrash, T. M., & Elliot, A. J. (2004). Inspiration: Core Characteristics, Component Processes, Antecedents, and Function. *Journal of Personality and Social Psychology, 87*(6), 957–973. https://doi.org/10.1037/0022-3514.87.6.957

Thrash, T. M., Elliot, A. J., Maruskin, L. A., & Cassidy, S. E. (2010). Inspiration and the promotion of well-being: Tests of causality and mediation. *Journal of Personality and Social Psychology, 98*(3), 488–506. https://doi.org/10.1037/a0017906

Thrash, T. M., Moldovan, E. G., Oleynick, V. C., & Maruskin, L. A. (2014). The psychology of inspiration. *Social and Personality Psychology Compass, 8*(9), 495-510. https://doi.org/10.1111/spc3.12127

Tihanyi, B. T., Ferentzi, E., Beissner, F., Köteles, F. (2018). The neuropsychophysiology of tingling. *Consciousness and Cognition, 58*, 97-110. https://doi.org/10.1016/j.concog.2017.10.015

Titov, N., Staples, L., Kayrouz, R., Cross, S., Karin, E., Ryan, K., Dear, B., & Nielssen, O. (2020). Rapid report: Early demand, profiles and concerns of mental health users during the coronavirus (COVID-19) pandemic. *Internet Interventions, 21*, 100327. https://doi.org/10.1016/j.invent.2020.100327

Trippany, R. L., Kress, V. E. W., & Wilcoxon, S. A. (2004). Preventing vicarious trauma: What counselors should know when working with trauma survivors. *Journal of Counseling & Development*,*82*(1), 31–37. https://doi.org/10.1002/j.1556-6678.2004.tb00283.x

Tucker, R. P., Haydel, R., Zielinski, M., & Niederkrotenthaler, T. (2020). Storytelling of suicide attempt recovery and its relationship with mental health treatment-seeking attitudes and behaviors: An experimental study. *Journal of American College Health, 70*(3), 801-809. https://doi.org/10.1080/07448481.2020.1767110

Turner, J. C., Leno, E. V., Keller, A. (2013). Causes of mortality among American college students: A pilot study. *Journal of College Student Psychotherapy, 27*(1), 31–42.

Umucu, E. (2021). Examining the structure of the PERMA theory of well-being in veterans with mental illness. *Rehabilitation Counseling Bulletin, 64*(4), 244-247. https://doi.org/10.1177/0034355220957093

Valtakari, N. V., Hooge, I. T. C., Benjamins, J. S., & Keizer, A. (2019). An eye-tracking approach to autonomous sensory meridian response (ASMR): The physiology and nature of tingles in relation to the pupil. *PLoS One, 14*(12), e0226692. https://doi.org/10.1371/journal.pone.0226692

Van Ness, P. H., Fried, T. R., & Gill, T. M. (2011). Mixed methods for the interpretation of longitudinal gerontologic data: Insights from philosophical hermeneutics. *Journal of Mixed Methods Research, 5*(4), 293-308. https://doi.org/10.1177/1558689811412973

Varma, M. M., Chen, D., Lin, X., Aknin, L. B., & Hu, X. (2023). Prosocial behavior promotes positive emotion during the COVID-19 pandemic. *Emotion, 23*(2), 538–553. https://doi.org/10.1037/emo0001077

Veldhuis, C. B., Nesoff, E. D., McKowen, A. L. W., Rice, D. R., Ghoneima, H., Wootton, A. R., Papautsky, E. L., Arigo, D., Goldberg, S., & Anderson, J. C. (2021). Addressing the critical need for long-term mental health data during the COVID-19 pandemic: Changes

in mental health from April to September 2020. *Preventive Medicine, 146*. 106465. https://doi.org/10.1016/j.ypmed.2021.106465

Vereen, L. G., Hill, N. R., & Butler, S. K. (2013). The use of humor and storytelling with African American men: Innovative therapeutic strategies for success in counseling. *International Journal for the Advancement of Counselling, 35*, 57-63. https://doi.org/10.1007/s10447-012-9165-5

von Baeyer, C. L., Spagrud, L. J., McCormick, J. C., Choo, E., Neville, K., & Connelly, M. A. (2009). Three new datasets supporting use of the numerical rating scale (NRS-11) for children's self-reports of pain intensity. *PAIN, 143*(3), 223-227. https://doi.org/10.1016/j.pain.2009.03.002

Vos, P. (2017). Neither hypocrisy nor replication: A protestant account of imitating Christ as moral exemplar. *International Journal of Systematic Theology, 19*(3), 271-286. https://doi.org/10.1111/ijst.12223

Wallace, D. A., Pasick, P., Berman, Z., & Weber, E. (2014). Stories for Hope–Rwanda: a psychological–archival collaboration to promote healing and cultural continuity through intergenerational dialogue. *Archival Science*, *14*(3), 275-306. https://doi.org/10.1007/s10502-014-9232-2

Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating mental health of US college students during the COVID-19 pandemic: Cross-sectional survey study. *Journal of Medical Internet Research, 22*(9), e22817. https://doi.org/http://dx.doi.org/10.2196/22817

Wanzo, R. (2015*). The suffering will not be televised: African American women and sentimental political storytelling*. State University of New York Press.

Waters, L., Algoe, S. B., Dutton, J., Emmons, R., Fredrickson, B. L., Heaphy, E., Moskowitz, J. t., Neff, K., Niemiec, R., Pury, C., & Steger, M. (2022). Positive psychology in a pandemic: buffering, bolstering, and building mental health. *The Journal of Positive Psychology, 17*(3), 303-323. https://doi.org/10.1080/17439760.2021.1871945

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Weathers, F. W., Litz, B., Herman, D., Juska, J., & Keane, T. (1993). *PTSD Checklist—Civilian Version (PCL-C)* [Database record]. APA PsycTests. https://doi.org/10.1037/t02622-000

Weingarten, K. (2010). Reasonable hope: Construct, clinical applications, and supports. *Family Process, 49*(1), 5-25. https://doi.org/10.1111/j.1545-5300.2010.01305.x

Weltz, S. M., Armeli, S., Ford, J. D., & Tennen, H. (2016). A daily process examination of the relationship between childhood trauma and stress-reactivity. *Child Abuse & Neglect, 60*, 1-9. https://doi.org/10.1016/j.chiabu.2016.08.005

Wolfers, L. N., & Utz, S. (2022). Social media use, stress, and coping. *Current Opinion in Psychology, 45*, 101305. https://doi.org/10.1016/j.copsyc.2022.101305

Wood, A. W., Dorais, S., Gutierrez, D., Moore, C. M., & Schmit, M. K. (2021). Advancing the counseling profession through contemporary quantitative approaches. *Journal of Counseling & Development, 99*(2), 156-166. https://doi.org/10.1002/jcad.12363

Wood, A. M., Froh, J. J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*(7), 890-905. https://doi.org/10.1016/j.cpr.2010.03.005

Worsley, J., Pennington, A., & Corcoran, R. (2020). What interventions improve college and university students' mental health and wellbeing? A review of review-level evidence. *Student Mental Health.*

Xiao, H., Carney, D. M., Youn, S. J., Janis, R. A., Castonguay, L. G., Hayes, J. A., & Locke, B. D. (2017). Are we in crisis? National mental health and treatment trends in college counseling centers. Psychological Services, 14(4), 407–415. https://doi.org/10.1037/ser0000130

Yih, J., Kirby, L. D., & Smith, C. A. (2020). Profiles of appraisal, motivation, and coping for positive emotions. *Cognition and Emotion, 34*(3), 481-497. https://doi.org/10.1080/02699931.2019.1646212

Yıldırım, M., & Güler, A. (2021). Positivity explains how COVID-19 perceived risk increases death distress and reduces happiness. *Personality and Individual Differences, 168,* 110347. https://doi.org/10.1016/j.paid.2020.110347

Yıldırım, M., & Solmaz, F. (2020). COVID-19 burnout, COVID-19 stress and resilience: Initial psychometric properties of COVID-19 burnout scale. *Death Studies, 46*(3), 524-532. https://doi.org/10.1080/07481187.2020.1818885

Yohani, S. C., & Larsen, D. J. (2012). The cultivation of hope in trauma-focused counseling. In R. A. McMackin, E. Newman, J. M. Fogler, & T. M. Keane (Eds.), *Trauma therapy in context: The science and craft of evidence-based practice* (pp. 193–210). American Psychological Association. https://doi.org/10.1037/13746-009

Ytre-Arne, B., & Moe, H. (2021). Doomscrolling, monitoring and avoiding: News use in COVID-19 pandemic lockdown. *Journalism Studies, 22*(13), 1739-1755. https://doi.org/10.1080/1461670X.2021.1952475

Zarocostas, J. (2020). How to fight an infodemic. *The Lancet, 395*(10225), 676.

Zhang, J., & Li, Z. (2013). The association between depression and suicide when hopelessness is controlled for. *Comprehensive Psychiatry, 54*(7), 790-796. https://doi.org/10.1016/j.comppsych.2013.03.004

Zhang, R. (2017). The stress-buffering effect of self-disclosure on Facebook: An examination of stressful life events, social support, and mental health among college students. *Computers in Human Behavior, 75*, 527-537. https://doi.org/10.1016/j.chb.2017.05.043

Zheng, C., Yi, P., Shen, G., & Chen, W. (2021). Effects of school resumption on college students' mental health during the COVID-19 pandemic. *Journal of Psychosocial Nursing and Mental Health Services, 60*(5), 19-29. https://doi.org/10.3928/02793695-20211118-02

Zinck, K., & Cutcliffe, J. (2013). Hope inspiration among people living with HIV/AIDS: Theory and implications for counselors. *Journal of Me*(1), 60-75. https://doi.org/10.17744/mehc.35.1.5p40002302387401

Zuo, B., Yang, K., Yao, Y., Han, S., Nie, S., & Wen, F. (2021). The relationship of perceived social support to feelings of hopelessness under COVID-19 pandemic: The effects of epidemic risk and meaning in life. *Personality and Individual Differences, 183*, 111110. https://doi.org/10.1016/j.paid.2021.111110

Appendix A: Invitation to Administrators and Students

@@@DATE@@@

Hello @@NAME@@,

I hope this email finds you well. My name is Allison Dukes and I'm a doctoral candidate in counselor education at William & Mary. I am reaching out to you in hopes of gaining your assistance with collecting participants for a quantitative study on the effects of listening to a brief story of overcoming adversity on college students' positivity, stress, and trauma symptomatology. *My research team is looking for college students to participate in a four-week long study, asking participants to watch a brief clip and respond to several questions*. The study has been approved by the William & Mary Human Subjects Review Committee; I am the principal investigator (adukes@wm.edu) and the study has the oversight of faculty sponsors at William & Mary and Virginia Commonwealth University.

Please let me know if you would like to know further information about the study, HSRC approval, or the survey itself before potentially distributing it to your students. I would be so happy to talk with you further. The initial page of the survey contains informed consent and a detailed compensation schedule, outlining the requirements for and dates of payment; for complete participation, students will earn $35 by the end of the four weeks.

I am going to place the study's survey link within an announcement template below:

Hello!

My name is Allison Dukes and I'm a doctoral candidate in William & Mary's Counselor Education and Supervision program. The aim of my dissertation study is to understand the effects of listening to stories of overcoming adversity on college students over the course of four weeks.

I would like to invite you to participate in my four-week-long longitudinal research study. Your participation in this study is entirely voluntary with no consequence should you choose to participate at any point in the survey. *As compensation for participating, you will earn $35* (based on when you start the study, I will email you an expected *weekly* payment schedule). The survey takes approximately 5 minutes to complete each morning and night.

To be eligible to participate you must meet the following criteria:

1. Be at least 18 years of age.
2. Be a currently enrolled student in an undergraduate program.

Survey Link: https://wmsas.qualtrics.com/jfe/form/SV_b2d5gBx38BSJ8y2

You will be sent an email in the morning and evening, every day for four weeks. To be compensated, you must complete 50% of the distributed surveys. If you miss an evening, you can resume using the next link sent to you the following morning. The surveys should take you no longer than five minutes to complete. More detailed instructions will be provided upon completion of the survey link here: https://wmsas.qualtrics.com/jfe/form/SV_b2d5gBx38BSJ8y2

THIS PROJECT WAS APPROVED BY the W&M PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2022-10-28 AND EXPIRES ON 2023-10-28.

Thank you for your consideration! I hope you will consider participating. Please let me know if you have any questions before you decide to participate.

Appendix B: Transcript of Welcome Video Included in Registration

Hi. Thank you so much for your interest in joining this study. My name is Allison Dukes and I'm a PhD candidate in the Counselor Education and Supervision program at William & Mary in Williamsburg, Virginia. This study is looking to support college students like yourself through the ups and downs of the college experience. As indicated, you are being asked to participate in a four-week-long study, and you can get paid up to a total amount of $35, given in installments if you follow along with the study.

On the next pages, you will be asked to take a group of assessments that shouldn't take you longer than 5-7 minutes; this will earn you $5 for completing the survey today. Throughout the study, you will be emailed a link every morning and night asking you to complete a task and answer two to three questions; these will not take you longer than four minutes to complete. To get paid every week, you should aim to complete at least 50% of the surveys. If you fall behind one or two times, this is completely okay; just continue along to ensure you get the payment you deserve. One morning each week, you will find the emailed link will take you to a longer survey; this will take you a maximum of 5-7 minutes to complete. Completing those longer surveys on weeks 1 & 2 will earn you an additional $5; completing the final two weeks will earn you another $5. Assuming you complete 50% of the weekly daily tasks and all of the weekly assessments, you can expect to be paid $35 over the course of the next four weeks; as mentioned, these will be given in weekly installments, sent to the email address you entered in this survey.

I can't express my thanks enough for joining this study. If you have any questions, comments, or concerns throughout your participation, please email me at adukes@wm.edu. Thank you so much!

Appendix C: Informed Consent

You have been invited to participate in a research study conducted by Allison Dukes, a PhD candidate in counselor education at the William & Mary School of Education, under the faculty supervision of Drs. Spencer G. Niles, Stephanie Dorais, and Daniel Gutierrez.

Purpose: The purpose of this study is to explore the relationships between daily levels of hope and stress over the course of four weeks. The goal is to have 100 individuals complete this study. In order to participate, you must be:

- At least 18 years of age before beginning the study,
- Currently enrolled full-time in an undergraduate college program,
- Have access to internet at least twice a day.

What you will be asked to do: The collection of data in this study will take place over the course of the next four weeks. Each day, you will be asked to watch a brief 2-3 minute video once in the morning and once in the evening. After each video, you will be asked to complete a brief questionnaire, which will take you a maximum of one minute to complete. Once a week, you will be asked to complete a longer assessment, which should take you approximately five minutes to complete.

Confidentiality: The survey is anonymous and your participation is voluntary. Your email address will be collected and saved to a HIPAA compliant drive and will be deleted at the end of the study. Providing your email address will allow the researchers to send you your weekly

compensation, and allows us to send you your daily survey invitations. Your email address will not be associated with your name or any participant code.

Voluntary Participation: Your participation in the research is voluntary. You may choose not to answer any or all questions, and you may stop at any time. There is no penalty for not taking part in this research study.

Location: This is an online-based study; you can complete the surveys at any location of your choosing that has access to the internet.

Incentive for participation: All participants will be compensated weekly with an Amazon gift card in the amount of $5. In order to receive compensation, the primary investigator will verify that at least 50% of the survey invitations and the larger assessment on Saturday mornings have been completed. In addition, participants will receive a $5 gift card after week two for completion of weeks one and two, and an additional $5 gift card for completion of weeks three and four. The full compensation that a participant can receive for active participation is $35.

Potential Discomforts and Risks: There are no known risks associated with this study. You will be simply asked to respond to several survey items and watch the pre-selected videos. Any videos with potential content warnings will be indicated.

Potential Benefits for Participating: Participants can potentially receive the physical and mental benefits of watching the selected videos. This research will provide insight into the relationship among hope and stress for the college population.

If you have any questions regarding this study, please contact Allison Dukes (adukes@wm.edu).

PROTOCOL APPROVAL NUMBER

You may report dissatisfaction with any aspect of this study to Dr. Thomas Ward, the Chair of the Protection of Human Subjects Committee by telephone (757-221-2358) or email (tjward@wm.edu).

Thank you for your consideration!

Yes (this response will continue the study)

No (this response will close out the study)