When Thoughts Get in Our Way: Removing Cognitive Barriers so College Students can Thrive

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A Capstone Project Submitted
In Partial Fulfillment of the Requirements for the Degree of
Master of Applied Positive Psychology

Advisor: Sharon F. Danzger
August 1, 2019

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Abstract

College students are struggling. Anxiety and depression are negatively impacting academic performance and eroding students' social, physical and emotional well-being. In addition, counseling centers are struggling to keep up with demand. This paper considers a way to alleviate anxiety and depression on college campuses by teaching students how to reduce counterproductive thinking, develop mindfulness and realistic optimism, and enhance their coping and resilience skills. A recommendation to create an evidence-based curriculum informed by cognitive behavior therapy, positive psychology, and research on resilience is discussed. Embedding this curriculum in existing resident assistant (RA) training is suggested as a first step in a process to teach these skills to the general student body. As influential peer leaders and role models, RAs have the potential to spread their skills and knowledge to other students. A method to assess the training is provided and next steps are suggested. By teaching students to think more accurately, students might manage adversity with less stress, anxiety and depression, and thus we might begin to stem the tide of overwhelming anxiety and depression on college campuses.

Keywords: college students, cognitive behavior therapy, positive psychology, resilience, optimism, pessimism, realistic optimism, thinking traps, cognitive distortions, imposter phenomenon, perfectionism, anxiety, depression.

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Acknowledgements

I offer my heartfelt thanks and gratitude to my village, without whom this paper and my participation in MAPP 14 would not have been possible. In particular, I would like to thank the following people:

- Professor Ed Baptist, Dr. Ethan Stephenson and Associate Dean of Students, Janet Shortall for writing recommendations for my application to UPenn.
- Lisa Borst, Tom Weber, Taura and Craig McMeekin, and Chelsey and John Kingsley who took turns hosting my son, and Janet Shortall, Julie Nowlen and Rich Stedman, who took over care of my dog. Thank you for enabling me to pursue my passion.
- My MAPP 14 classmates who inspired and challenged me. Thank you for your intellectual curiosity, passion, openness, authenticity and supreme generosity.
- The MAPPsters who came before us. Thank you for paving the way and for welcoming us into the MAPP community.
- The assistant instructors in the MAPP program. Thank you for your feedback (which I referred back to during the writing of my capstone), and for generously sharing your knowledge, compassion, experience and intellect to help every student excel.
- To the MAPP team who painstakingly attended to logistics throughout the year. You made it look easy – a true sign of excellence. Your hard work and high standards enabled my classmates and me to focus on our learning and leave the rest to you.
- The MAPP faculty and guest speakers. I am grateful for the quality of scholarship I have been exposed to and for your enthusiasm, expertise, knowledge and genuine desire to teach and advance the learning of your students.

- Angela Duckworth for her ability to make complex ideas understandable, and her belief in her students' ability to accomplish more than they themselves believe they can.
- James Pawelski to whom I owe a special thanks. James' outstanding scholarship, artistry in teaching, and his humor and compassion make him a truly inspiring educator. Through his dedication, along with theory papers, integration papers, great questions and his subtle push to extend our learning, James always challenged and motivated me to think more deeply. Thank you for that.
- Jan Stanley, my MAPP 800 journal reader. Jan walked side-by-side with me on the journey to my capstone generously offering her expertise and wisdom as I worked to define my topic. Her guidance and unwavering enthusiasm allowed me to find my path.
- Sharon Danzger, productivity mastermind and my capstone advisor. Sharon generously advised and guided me long before she officially became my advisor. Through her straightforward and effective work strategies, she helped me streamline my work process, and become more efficient and, most importantly, more effective, in my classwork. What I learned from Sharon has spilled over into my day job and my personal life, positively affecting both. Sharon's accessibility and willingness to help me in whatever way I needed, made the daunting task of writing the capstone fly by with relative ease. Thank you, Sharon, for your feedback, guidance, and commitment during my capstone process, and for sharing your knowledge and wisdom throughout the year.
- Julien Carreiro, my son. Julien is my inspiration and my motivation to be the best version of myself. Thank you, Julien, for being who you are, for being my biggest fan and for helping me throughout my year in MAPP. I love you.

Situation Analysis

“Overwhelming anxiety” - this is the term used by more than 60% of college students (American College Health Association, 2018). What is going on during the college years? Almost 25% of college students were professionally treated or diagnosed with anxiety, and over 18% were treated or diagnosed with depression, at some point in the past 12 months. (American College Health Association, 2018). In the residential area where I work at Cornell University, students routinely talk about being anxious, overwhelmed, “stressed out”, depressed, and exhausted. Among college students, anxiety is the most prevalent mental health disorder, even more common than depression (Pedrelli, Nyer, Yeung, Zulauf, & Wilens, 2015). A 2018 report of data from almost 180,000 college students indicates that the rates of self-reported anxiety and depression are on the rise. For example, between 2010 and 2018 self-reported rates of anxiety rose from 18.3% to 26.5% and self-reported rates of depression rose from 11.7% to 18.7% (American College Health Association, 2010, 2018). In addition, clinicians report that the most common concerns of the college students they treat are anxiety and depression (Center for Collegiate Mental Health, 2019).

Mental health problems have important consequences for student well-being (Marcotte & Lévesque, 2018). Marcotte and Lévesque (2018) found that anxiety is negatively associated with well-being, and “students who were anxious were less likely to have a clear sense of who they were and what they were committed to” (p. 99). Anxiety and depression in young adults have a negative impact on student adjustment to college life and on academic performance (Bernal-Morales, Rodríguez-Landa, & Pulido-Criollo, 2015). In 2018, more than 25% of college students reported that anxiety had a negative effect on their academic performance and over 18% said the same thing about depression (American College Health Associate, 2018). In addition, anxiety, depression and problematic alcohol and drug use tend to occur together (Assari, 2018). Anxiety, especially if untreated, can affect students' academic, social, physical and personal lives (Mental Health America of Illinois, 2017). It diminishes well-being and is a roadblock to flourishing. In addition to affecting the lives of students, anxiety, depression and mental health disorders in general, are straining college counseling center resources (Auerbach et al., 2018).

Many psychiatric disorders, including depression and anxiety, have first onset during the college years, and counseling centers are struggling to keep up with demand (Auerbach et al., 2018). There are more than 20 million college students in the U.S. (Balon, Beresin, Coverdale, Louie, & Roberts, 2015) and approximately a quarter of them have used college psychological services (Couch, 2019). The number of students seeking treatment appears to be on the rise, and in many instances, exceeds counseling center resources (Xiao et al., 2017). In addition, as centers face this increasing need, many are doing so without significant increases in staff (Jones, Park, & Lefevor, 2018). In 152 colleges that were surveyed, from Fall 2009 to Spring 2015 enrollment increased by only 5% but utilization of counseling centers increased an average of 30 - 40%. (Center for Collegiate Mental Health, 2019). "Years of constantly rising demand lead to longer and longer wait times and a growing pressure to 'do something' so students can access services more quickly" (Center for Collegiate Mental Health, 2019, p. 8). Considering their resources, college counseling centers may do an admirable job of treating the clinical population, but more could be done to support students in the general population who are also not flourishing. In addition to treating students who are languishing and require clinical services, what if we could begin to shift the general student population towards flourishing (Figure 1)? The goal of this paper is to consider how to begin that process.

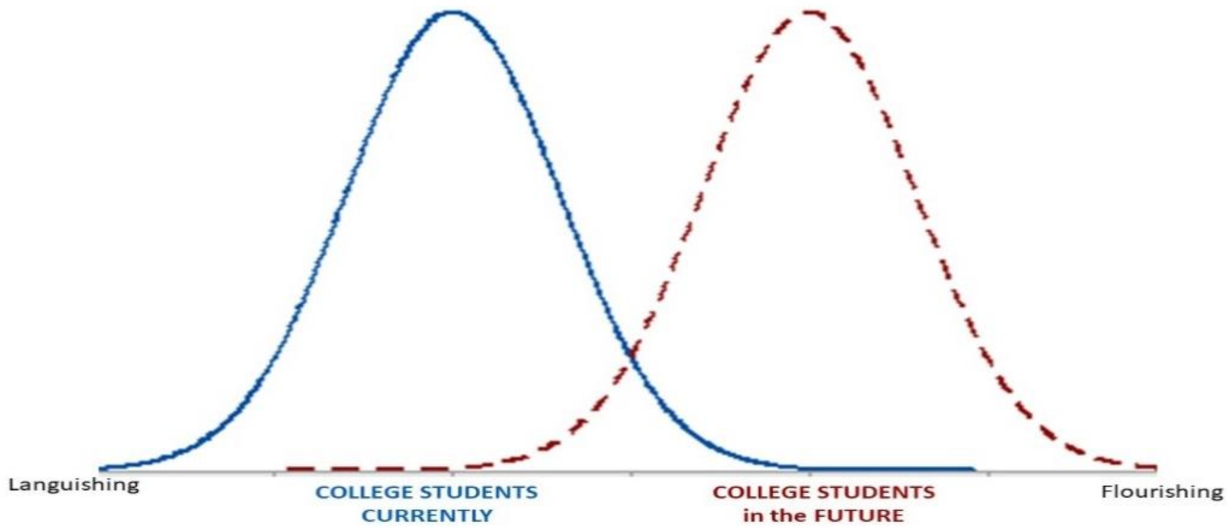

Figure 1. Shifting the college student population towards flourishing (not based on actual data).

Before we explore ways to reduce anxiety and depression on college campuses and begin to shift the general student population towards flourishing, it is helpful to clarify what we mean by “anxiety” and “depression”.

What is “anxiety”? What’s the difference between having “anxiety” and having an “anxiety disorder? Negative consequences of anxiety were discussed above, but anxiety isn’t always a bad thing (Feldman, 2018). In many instances, it can be helpful. For example, when crossing a busy road, anxiety makes us be vigilant about checking for oncoming traffic. Experiencing some anxiety about an upcoming test can motivate us to work hard to prepare. Anxiety becomes problematic when the duration or severity of symptoms gets out of hand, or reactions become exaggerated or out of proportion to the stressor (Feldman, 2018). An anxiety *disorder* typically involves recurring disruptive thoughts, and can lead individuals to avoid situations that might raise worrying thoughts (American Psychological Association, n.d.-a). Anxiety disorders may also include symptoms such as dizziness, trembling or rapid heartbeat (American Psychological Association, n.d. -a). “Anxiety” is an umbrella term that can be defined in different ways. Surveys assessing student mental health may include general anxiety, social anxiety, unspecified anxiety, test anxiety and specific phobias and panic attacks, all under the term “anxiety” (Center for Collegiate Mental Health, 2019). Researchers have attempted to identify and differentiate symptoms of anxiety disorders and other mood disorders (Craske et al., 2009). For clinical purposes, these distinctions and precise definitions of “anxiety” are important. For purposes of this paper, I will draw from two definitions of anxiety that capture the concerns I will be addressing. The Merriam-Webster dictionary defines “anxiety” as “an abnormal and overwhelming sense of apprehension and fear often marked by physical signs (such as tension, sweating, and increased pulse rate), by doubt concerning the reality and nature of the threat, and by self-doubt about one's capacity to cope with it” (Anxiety, n.d.). The American Psychological Association (n.d. -a) indicates that, “Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure”. Students across the country are suffering from feelings characterized by a perception of threat, feelings of tension and worried thoughts, and a lack of confidence in their ability to cope, and this is putting a strain on the students as well as on campus resources (Feldman, 2018).

What is “depression”? The term “depression” has a popular meaning as well as a clinical or professional meaning (Winnicott, 1964). An individual might feel depressed, without having clinical depression. We all have moments of sadness, but clinical depression is more than just feeling sad (American Psychological Association, n.d.-b). Depression is characterized by low energy, disruptions in sleeping and eating, difficulties concentrating, and feelings of irritability, sadness and hopelessness, and can include suicidal thoughts (Reivich, Gillham, Chaplin, & Seligman, 2013). People who have depression may experience on-going apathy and an inability to take pleasure in daily life, and a sense of worthlessness (American Psychological Association, n.d.-b).

Whether we are talking about clinical or non-clinical depression and anxiety, there is a multitude of causes for anxiety and depression, and different approaches to supporting students to maintain their mental well-being. Beiter and colleagues (2015) report that the top causes of anxiety and depression in college students are pressure to succeed, academic performance and post-graduate concerns. College students, however, face a myriad of stressors from issues concerning family and friends, financial, body image, and self-esteem, to choosing a major, and issues related to romantic relationship and living independently. In addition, students may miss home, they may be questioning whether they belong at college, and they are developing their identities. Students are trying to navigate a complex variety of issues in addition to the pressure to succeed, concerns about academic performance and post-graduate concerns. In short, students are trying to figure out who they want to be and what they want to do when they grow up, and they are realizing that the time to be a grown up is rapidly approaching. Beiter et al. (2015) recommend that colleges tailor interventions to the specific issues causing students' anxiety. For example, since academic performance is one of the top causes of college student stress, they suggest programs to enhance study skills (Beiter et al., 2015). While skill building to address specific causes of anxiety is important, it is also important to help students build skills to manage adversity in general. Students will face challenges throughout their lives. How well equipped will they be to respond effectively to the diversity of challenges they will face? Rather than creating a program or intervention for each source of anxiety and/or depression, it may be more effective to provide students with skills so that challenges are less likely to trigger overwhelming anxiety and depression.

Helping students learn to use effective strategies to manage problems may help stem the tide of students heading to counseling centers, and could equip students with skills that will help them thrive in college and beyond. For example, the Mayo Clinic (n.d.) reports that how people *think* about challenges and upsets influences how they feel about them. High levels of negative thinking tend to precipitate maladaptive strategies for managing problems (Beck & Clark, 1997), and negative cognitions and maladaptive coping strategies are directly related to anxiety (Mahmoud, Staten, Lennie, & Lynne, 2015). In a 2015 study of over 250 undergraduates, Mahmoud and colleagues, found that "negative thinking was the strongest predictor of both maladaptive coping and anxiety" (p. 97). College students might benefit from understanding the link between negative thinking and anxiety. They might benefit from building their capacity to recognize negative thoughts, identify when their coping strategies are hindering them, and use more adaptive strategies for managing adversity. By helping students learn effective coping strategies in young adulthood, we might help them face challenges more effectively and be more resilient throughout their lives. Research in the field of positive psychology suggests ways to help students cultivate effective strategies for managing adversity and to build their resilience, thus holding great potential to reduce anxiety and depression in college students. Below, first is an overview of the field of positive psychology that provides a framework for this paper; positive psychology suggests that we look not just at fixing problems, but also at building capacities. We briefly discuss, what is happiness and the good life, and then, we will explore the origins of cognitive behavior therapy and learned helplessness, and see how work in these areas provides a foundation for teaching students strategies to manage adversity and build resilience.

Literature Review

Positive Psychology Overview

Before World War II, psychology in this country had three goals: to cure mental illness, to help mentally healthy people be happier, and to "study genius and high talent" (Seligman, Parks, & Steen, 2004, p. 1379). After the world war, however, psychological research centered on just the first goal; assessing and remediating individual suffering (Seligman & Csikszentmihalyi, 2000). A coalescence of events turned the focus of research in psychology towards the treatment and cure of mental illness (Seligman et al., 2004). First, the National Institute of Mental Health made funds available for research on mental illness and pathology. Second, in 1946 the Veterans Administration (VA) was serving 17 million veterans, many of whom were suffering and needed psychological services (Fowler, 2002). The war left many in psychological distress, creating an immediate problem to be addressed (Seligman et al., 2004). Third, recognizing the need for more psychologists, the VA created new positions for psychologists in its rehabilitation and treatment centers, and “provided 200 graduate stipends, which began an explosive expansion in the development of clinical training programs throughout the country” (Fowler, 2002, p. 9). Researchers and practitioners could make a decent living studying and treating pathology, and so using a disease model, practitioners looked for what was damaged, and focused their careers on repairing it (Seligman et al., 2004).

Over the next 50 years, through the use of pharmacology and/or psychotherapy, psychology cured two psychological disorders and discovered effective treatments for twelve other mental illnesses (Seligman et al., 2004). This admirable accomplishment continues to relieve the suffering and misery of many people. At the close of the 20th century, psychology had accomplished much since World War II, but it had not addressed two of its original goals (Seligman et al., 2004). Psychology had relived suffering, but happiness is more than simply the absence of suffering; psychology had done little to make healthy people happier, nor had psychology made significant progress in identifying and cultivating genius and talent (Seligman et al., 2004). As the new millennium approached, psychologists knew little about what made life worth living (Seligman & Csikszentmihalyi, 2000).

In the 1998 presidential address at the American Psychology Association's (APA) annual convention, renown psychologist Martin Seligman, reminded the field that psychology is not only the study of weakness and damage, it is also the study of strengths and virtues, and what makes life worth living (Seligman & Csikszentmihalyi, 2000). Seligman told his colleagues, "When we became solely a healing profession, we forgot our larger mission: that of making the lives of all people better" (Fowler, Seligman, & Koocher, 1999, p. 561). Seligman felt that a reorientation of psychology toward the positive held "unprecedented promise" (Fowler et al., 1999, p. 562). It held great potential to teach us how to cultivate good lives and good communities, and demonstrate empirically what types of families help children flourish and what work environments foster engaged and satisfied employees (Seligman & Csikszentmihalyi, 2000). Seligman reminded the field that they could and should do more than fix what is broken; they should nurture and cultivate what is good. He argued that psychology had not done enough to make people's lives better, and encouraged psychology to turn its focus towards what is best in people. He called this new orientation, this investigation into happiness and human strengths, *positive psychology* (Fowler et al., 1999). Seligman felt that psychology could do more than understand how people endure and survive adverse circumstances; it could illuminate how people flourish (Seligman & Csikszentmihalyi, 2000). Psychology could "show the world what actions lead to well-being, to positive individuals, to flourishing communities, and to a just society"; it could "articulate a vision of the good life that is empirically sound and, at the same time, understandable and attractive" (Fowler et al., 1999, p. 560).

Around the time of the 1998 APA convention, questions were being asked about how psychologists could *prevent* depression, substance abuse and other mental health problems affecting young people (Seligman & Csikszentmihalyi, 2000). Interestingly, the strides made in prevention did not come from repairing damage and weakness, but instead came from a perspective of cultivating competency and building human strengths to buffer against mental illness (Seligman & Csikszentmihalyi, 2000). Researchers focused on prevention identified strengths such as hope, optimism, courage and perseverance, but much work was still needed to develop a science of happiness (Seligman & Csikszentmihalyi, 2000). It was time for psychology to remember its roots and reorient research and practice to include a study of happiness and well-being (Seligman & Csikszentmihalyi, 2000). In the pursuit of such a science, psychologists already had a leg up. Researchers could use the methods of psychology – methods already proven reliable and valid in the study of human weakness – to study human strengths (Seligman & Csikszentmihalyi, 2000). In doing so, psychology could begin to fulfill the two other goals of its original mission; to improve the quality of life for all people and to elucidate human potential (Seligman & Csikszentmihalyi, 2000).

Under the umbrella term “positive psychology”, disparate and scattered efforts to study what makes life meaningful and worth living were united (Seligman, Steen, Park, & Peterson, 2005). In the years after Seligman’s 1998 address, positive psychology progressed and three branches of this new science emerged: the investigation of positive emotion, positive personality or character, and positive communities or institutions (Seligman & Csikszentmihalyi, 2000). Positive psychology was not meant to replace traditional psychology, but instead to supplement it and provide a more balanced and complete understanding of the human experience (Seligman et al., 2004). Seligman urged psychologists to “work towards developing interventions that can help people become lastingly happier" (Seligman et al., 2004, p. 1379). But, to do so we must ask, what is happiness?

The Declaration of Independence, states that we have an "unalienable" right to "the pursuit of Happiness". To pursue happiness, however, we must understand at what goal we are aiming. What constitutes happiness and well-being? How we define these terms influences the path we must take to attain them. (Ryan & Deci, 2001). As far back as ancient Greece, philosophers have pondered what makes life worth living (Melchert, 2002). Does pursuing fame, fortune and power lead to a good life? College students often define a "good job" as one with a high salary and opportunities for advancement. Is this the route to happiness and well-being? Let us consider two paths to the good life proposed by ancient Greek philosophers.

A *hedonic* approach to cultivating a good life focuses on the pursuit of pleasures and pleasant activities (Ryan & Deci, 2001). The Greek philosopher Aristippus suggested that the more pleasurable and happy moments one has the better one's life is, suggesting that the goal in life is to maximize pleasure and happiness (Ryan & Deci, 2001). Certainly, to be happy, to enjoy many moments of positive emotion, is not a bad thing. If, however, we simply bounce from one happy moment to another, gratifying our desire for pleasurable experiences, will we have a good life? Will we be satisfied? We must consider the difference between *feeling* good in the moment "and doing good that leads us to feel satisfied and fulfilled after the task is completed" (Ryff, 1989, p. 1077). Momentary superficial pleasure does not always lead to satisfaction. Sometimes what feels good in the moment – whether it is sex, drugs or ice cream – can leave us with regret or even a feeling of self-loathing (Ryff, 1989). Rather than this hedonic perspective, Aristotle favored eudaimonia (Melchert, 2002).

Eudaimonia goes beyond the subjective, and often fleeting, sense of happiness; it is better understood as human flourishing and overall well-being (Pawelski & Moores, 2013). A *Eudaimonic* approach to well-being, suggests we pursue living to our full potential, becoming the best version of ourselves, and living “in accordance with their daimon, or true self” (Ryan & Deci, 2001, p. 146). Eudaimonia is about living in a manner consistent with our values, engaging fully in life, and striving to reach our full potential (Ryan & Deci, 2001). The eudiamonic approach focuses on creating meaning and pursuing personally fulfilling activities (Ryan & Deci, 2001). We see that lasting happiness - the good life - is not easily defined, and we see that the elements that drive happiness and well-being go beyond maximizing moments of pleasure and positive emotion. In the years since Seligman’s presidential address, the field of positive psychology has provided empirical evidence to help us better understand what drives happiness and what makes life worth living.

As Seligman hoped, positive psychology is on the road to articulating an empirically sound vision of what makes life worth living (Fowler et al., 1999). One of the most popular visions of well-being is Seligman’s own PERMA model. His theory includes the following five components or paths to well-being: positive emotion, engagement, meaning, relationships, and accomplishment (Seligman, 2011). While the PERMA model is well known among positive psychologists, not everyone agrees it captures all of the elements of well-being. For example, Ryff’s (1989) conception of well-being includes autonomy and, Ryff and Keyes (1995) suggest that self-acceptance is a distinct dimension of well-being. In addition, Prilleltensky (2016) posits that well-being is about mattering and meaning; it is about recognition and making an impact. We see that happiness and well-being are not simple concepts; these are complex human experiences and there is considerable debate regarding how to define happiness, well-being and human flourishing. While this debate continues, the focus of psychology is no longer solely on curing mental illness. Positive psychology has reoriented the field to include the other two goals of psychology; to investigate human potential and to make people happier. (Seligman et al., 2004).

Over the 20 years since Selgiman's presidential address, positive psychology has grown significantly. For example, over 18,000 documents on positive psychology-related topics exist, 86% of which were published after 1998 (Rusk & Waters, 2013). Also, "research into positive functioning is growing much faster than psychological research as a whole" (Rusk & Waters, 2013, p. 218), and early in the 2000s many positive psychology books were published (Seligman et al., 2005). In 2004, Peterson and Seligman published *The Character Strengths and Virtues: A Handbook and Classification (CSV)*. The CSV is a taxonomy of human strengths intended "to do for psychological well being what the Diagnostic and Statistical Manual of American Psychiatric Association (DSM: 1994) does for the psychological disorders that disable human beings" (Seligman et al., 2005, pp. 2-3). There are now national and international positive psychology conferences, websites disseminating the new science of positive psychology, and mainstream media sources are now routinely covering positive psychology topics (Seligman et al., 2005). In 2006 the University of Pennsylvania (UPenn) graduated the first ever class of master students in applied positive psychology (Seligman et al., 2005). A month after announcing the Masters of Applied Positive Psychology program in the spring of 2005, UPenn had over two hundred applicants to the program (Seligman et al., 2005). Random-assignment, placebo control experiments have been conducted on a plethora of positive psychology topics and specific interventions have been empirically tested and shown to make people lastingly happier (Seligman et al., 2005). Work in the field of positive psychology continues to grow.

Seligman was instrumental in shifting the field of psychology towards the positive. During his 1998 address, Seligman noted that there was “more than 10 times as much serious depression” at that time than there had been 40 years earlier (Fowler et al., 1999, p. 561). In 2019, we see that depression and anxiety continue to be the most prominent mental health disorders among college students (Center for Collegiate Mental Health, 2019). Traditional psychology offers pharmacological and/or psychotherapeutic means to alleviate the suffering of college students. We can complement this effort through applying positive psychology. We now have evidence-based means to build capacities and strengths to enhance college student well-being.

The idea of building strengths and capacities, in addition to overcoming deficits and fixing problems, provides a framework in which to consider how to help students meet the challenging demands of college life. Now let us see how cognitive behavior therapy and the idea that thoughts influence our feelings and behavior, provides a foundation upon which we can base skill building that may help students advance towards flourishing.

Cognitive Behavior Therapy

Albert Ellis is “the second most influential psychotherapist behind Carl Rogers and just ahead of Sigmund Freud” reports a survey of professional psychologists (Cherry, 2018, para. 1). Arron Beck is “widely recognized as the father of cognitive therapy” (Cherry, 2019, para. 6). When looking back at how we came to understand that our thoughts influence how we feel and behave, we must consider the work of Ellis and Beck. Their work lays the foundation for thinking skills that boost resilience (Reivich & Shatté, 2002) and if college students learn these skills, it may help them better navigate the challenges of college life.

In the 1960s, Ellis, a psychologist and extraordinary clinician, and Beck, a psychiatrist, presented ideas that fundamentally changed psychology's perspective and treatment of depression (Seligman, 1990). Traditionally, depression was viewed as either "a disease of the body" (a biomedical view) or "anger turned upon the self" (a Freudian view) (Seligman, 1990, p. 71). Ellis and Beck changed that. Ellis challenged the irrational beliefs of his depressed patients (Ellis, 1977). He came to believe that it was their thoughts that were causing their depression. As he challenged their inaccurate thoughts and encouraged his depressed patients to adopt rational thoughts, most of them improved (Ellis, 1977). In taking this approach, Ellis successfully challenged psychology's perspective that depression was curable *only* through the resolution of deep-seated, unconscious conflicts (the Freudian view) or through the relief of physical illness (the biomedical view) (Seligman, 1990). His relatively simplistic approach to the treatment of depression was quite revolutionary at the time (Seligman, 1990). Beck, meanwhile, found himself equally frustrated with the biomedical and Freudian views of depression (Seligman, 1990). In his clinical practice, Beck found that his depressed patients reported habitual negative thoughts about themselves and their future (A. Beck, 1963). Beck felt that the negative thoughts were not just a symptom of the depression, but instead that they *were* the depression; he thought, "negative thinking *is* the disease" (Seligman, 1990, p. 73). From this work, Beck articulated his new approach, which he called cognitive therapy (Seligman, 1990).

Cognitive behavioral therapy (CBT) is an umbrella term that captures a variety of therapies based on the premise that distorted thoughts influence our experience and behavior (Miller, 2019). Inaccurate thoughts and beliefs result in self-defeating behaviors, and correcting those inaccuracies can reduce suffering (J. Beck, 2010). Beck noticed that his depressed patients consistently experienced inaccurate (or distorted) negative thoughts, and that these thoughts appeared to be “automatic thoughts” (J. Beck, 2010, p. 353). Automatic thoughts are spontaneous, evaluative cognitions. They may go unnoticed and be accepted as true without questioning their validity (J. Beck, 2011). Depressed patients’ automatic thoughts were distorted and negative, and tended to be “about themselves, their worlds and their future” (J. Beck, 2010, p. 353). Beck found that when he worked with patients directly on solving problems and correcting inaccurate thinking (rather than using other, less direct approaches that were common practice at the time) his patients improved rapidly (J. Beck, 2010). After applying this new cognitive therapy in situations with depressed patients and seeing positive results, Beck and his colleagues developed treatments for other disorders based on the same premise – distorted thoughts can negatively influence experience. They found that different disorders tended to correspond with different thinking patterns (J. Beck, 2010). For example, they found that anxious patients’ thoughts tended to be fearful thoughts about risk, danger in the future, and an inability to manage or prevent adversity. The thoughts of patients suffering from panic disorders often had catastrophic distortions; they thought about the worst-case scenario of situations (J. Beck, 2010). “Emotion comes directly from what we think: Think ‘I am in danger’ and you feel anxiety. Think ‘I am being trespassed against’ and you feel anger. Think ‘loss’ and you feel sadness” (Seligman, 1990, p. 74).

Beck found that automatic thoughts were associated with deeper beliefs and maladaptive behavior patterns (J. Beck, 2010). As Beck’s work progressed, he focused on helping patients change these automatic thoughts and the associated maladaptive behaviors, which led to improved functioning and mood (J. Beck, 2010). In cognitive therapy, the therapist helps the patient recognize how his/her thoughts are influencing his/her emotions and behaviors. The therapist helps the patient evaluate whether his/her thoughts are helping or hindering, and gradually modify his/her thoughts and behavior, with the goal of having the patient do this for him/herself (J. Beck, 2010). Over time, patients are better able to appraise the accuracy of their thoughts, change maladaptive behaviors, and test for themselves whether their thoughts and behaviors are serving their goals (J. Beck, 2010). CBT takes a hands-on, problem-solving approach and teaches patients to interrupt maladaptive, automatic thoughts, and correct inaccuracies that disrupt their lives (Miller, 2019). If we introduce these concepts to college students and teach them to notice their negative thoughts, question the accuracy and usefulness of those thoughts, and change their maladaptive thoughts, we might help students avoid some of the anxiety and depression that so many experience during the college years.

Since the 1960s when it was first developed, cognitive therapy has been tested empirically in hundreds of validated experiments (using randomized controlled samples) that demonstrate its efficacy for many different psychiatric conditions (J. Beck, 2010). A 2012 survey of meta-analyses reports the efficacy of CBT for a variety of disorders, with especially strong support for the use of CBT to treat anxiety disorders and general stress (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). We can help people change their lives by helping them develop a deep understanding of the connection between their thoughts and their behaviors (Miller, 2019). This has potential to help students develop effective thinking skills as a strategy to meet the demands and challenges of college life. To understand better how thoughts and beliefs can lead us to faulty thinking and self-defeating behavior, next we will discuss the concept of learned helplessness. After that, we will see how learned helplessness led to work on optimism and pessimism, and we will discuss how developing realistic optimism may be useful to college students.

Learned Helplessness

In the 1960s and 1970s, research conducted on animals led to the study of learned helplessness in humans (Peterson & Steen, 2002). In the original studies, dogs were placed in shuttle boxes - a container divided in half by a low wall (Seligman & Maier, 1967). All of the dogs were capable of jumping the wall to escape an electric shock. Some of the dogs, however, had previously been in shuttle boxes in which both sides of the container were electrified. The dogs in those instances could not escape the shock even by jumping the wall. The researchers found that the dogs who had previously learned that their actions did not help them avoid the shock, became passive and did not attempt to jump the wall even when the other side of the box was not electrified (Seligman & Maier, 1967). After repeatedly experiencing uncontrollable adversity, the dogs became passive and powerless, and continued this passivity even when the adversity was controllable (Peterson & Steen, 2002). This passivity was termed *learned helplessness* (Seligman, 1990). Psychologists interested in human behavior, saw parallels between this work with animals and "maladaptive passivity" in humans (Peterson & Steen, 2002, p. 314). As work with humans progressed, researchers found that "uncontrollable bad events made anxiety and depression more likely" (Peterson & Steen, 2002, p. 314). Feeling that we have no control to influence outcomes, can have debilitating cognitive, motivational and emotional consequences. (Abramson et al., 1978). Experiencing a lack of control may result in the person learning to expect that s/he will not have control over outcomes in future circumstances (cognitive). Since the person has learned that his/her efforts do not influence outcomes, s/he is less likely to put forth effort (motivational). Finally, the consequence of learning that one has no control over the outcomes is depressed affect - an emotional deficit in which the person shows little or no emotion at all (Abramson et al., 1978). Researchers saw that it is the attribution - the causal interpretation of the adversity - that is generalized, and results in helplessness (Abramson, Seligman, & Teasdale, 1978). Observing that *some* subjects in the learned helplessness studies, however, did *not* become helpless, and finding that "previous exposure to controllable events immunized people against learned helplessness" (Peterson & Steen, 2002, p. 314), led Seligman (1990) to the idea that optimism could be learned. Let us turn our attention now to optimism and pessimism, and consider how these concepts relate to the well-being of college students.

Optimism and Pessimism

Sicinski (1972) suggests that the terms *optimism* and *pessimism* have been around since at least the 1700s. Philosophers dating back hundreds of years articulated nuances and "complexities that survive in everyday connotations of optimism and pessimism" (Peterson & Chang, 2003, p. 56). It is not the intent of this paper to delve into these complexities, but instead to provide a general overview of two perspectives on optimism that are popular in psychology today, and elucidate how optimism relates to resilience and may provide a path to helping college students flourish.

When it comes to optimism and pessimism, psychologists generally reside in one of two camps: the dispositional camp or the explanatory camp (Gillham, Shatté, Reivich, & Seligman, 2001). Below, is a brief description of each perspective.

Dispositional optimism.

Some researchers see optimism as a facet of personality; it is seen as part of the individual's disposition and thus is referred to as *dispositional optimism* (Carver & Scheier, 2014). Dispositional optimism is about expectations (Carver & Scheier, 2014). A person with an optimistic disposition expects good to prevail and the future to be favorable (Gillham et al., 2001). While these optimists expect a good future, those with a pessimistic disposition expect bad things to occur (Carver et al., 2010). This difference in perspective - being hopeful about the future or expecting a bad future - is associated with processes that influence behavior (Carver et al., 2010). Optimists and pessimists approach and cope with problems differently (Carver et al., 2010). Dispositional optimism is based on the assumption that people pursue goals that they value and that they feel are attainable (Forgeard & Seligman, 2012). “Optimism and pessimism are broad, generalized versions of confidence and doubt” (Carver et al., 2010, p. 880). If one generally feels confident and hopeful about future outcomes, s/he may persist towards his/her goals despite adversity. Whereas someone who generally feels doubtful and expects bad outcomes, is more likely to quit or not pursue goals in the first place (Carver et al., 2010).

Explanatory style.

While dispositional optimism is described as a facet of personality and is about expectations of the future, optimism as an explanatory style is about how people interpret or explain events in their lives (Peterson & Steen, 2002). When bad things occur, we try to explain what caused them (Gillham et al., 2001). A person with an optimistic explanatory style attributes negative events to temporary causes that are specific to the situation and external to the individual (Peterson & Steen, 2002). A person with a pessimistic explanatory style does the opposite; they interpret the causes of negative events to be permanent, pervasive and personal (Seligman, 1990). For example, if a person with a pessimistic explanatory style fails a math test s/he might tell him/herself “I always do bad in math” (permanent), “I’ll never get into grad school” (pervasive), and “It’s all my fault. I’m so stupid” (personal). On the other hand, a person with an optimistic explanatory style might say “I didn’t study enough for that test” (temporary), “That test was hard, but it’s only one test” (specific), and “That teacher is a tough grader" (external). These different interpretations tend to lead us towards different behaviors (Seligman, 1990). How we explain adversity - the causes we attribute to it - has a significant effect on our motivation and persistence (Gillham et al., 2001). An optimistic explanatory style can inspire us to try hard (e.g., study more before the next math test), while a pessimistic explanatory style may sap our motivation or even make us not try in the first place (e.g., take an easier class) (Gillham et al., 2001). Repeatedly interpreting negative events as personal, pervasive and permanent is problematic (Seligman, 1990).

Many of us have moments in which we feel hopeless and depressed. People with a pessimistic explanatory style, however, attribute failures and negative events to permanent and pervasive causes, and they project their present moment "failure into the future and into all new situations" (Seligman, 1990, p. 76). When we repeatedly blame adversity on aspects of our own character, interpret the factors leading to adversity as permanent and not likely to change over time, and expect adversity to effect multiple areas of our lives, we set ourselves up for enduring hopelessness and helplessness (Gillham et al., 2001). This pessimistic way of explaining to ourselves the causes of negative events, is self-defeating and overtime may lead to depression (Seligman, 1990).

Benefits of optimism.

Both dispositional optimism and having an optimistic explanatory style are associated with many benefits (Forgeard & Seligman, 2012). Carver, Scheier and Segerstrom (2010) report that dispositional optimism is associated with positive subjective well-being, better and more engaged coping strategies, less avoidance of problems, being proactive about one's health, having better physical health, and being more persistent in educational pursuits. While in some instances, dispositional optimism presents a disadvantage (e.g., persistence in betting despite poor outcomes while gambling) these instances are rare. Most of the time being an optimist is associated with beneficial outcomes (Carver et al., 2010). Much like dispositional optimism, an optimistic explanatory style is associated with positive outcomes such as good physical well-being, more motivation and achievement, and less depression (Gillham et al., 2001). Research has shown "that optimism, however measured, is linked to desirable characteristics - happiness, perseverance, achievement, and health - …pessimism is associated with undesirable characteristics" (Peterson & Chang, 2003, p. 57). Given the benefits of optimism, can we ever have too much of it? Can someone be *too* optimistic?

Realistic optimism.

While being optimistic generally comes with benefits, there is research suggesting that unconditional optimism that goes beyond common sense may have negative consequences (Forgeard & Seligman, 2012). Weinstein suggests unmitigated optimism may lead to underestimating health risks and reduce motivation to take proactive steps regarding one's health (as cited in Schneider, 2001). Expecting low risk *without evidence to support that assessment or in despite of contrary evidence*, is being unrealistically optimistic and may lead to negative consequences (Schneider, 2001). In many of life's situations, circumstances are ambiguous. In these situations, a slight (yet, not unrealistic) bias towards the positive appears to be beneficial (Schneider, 2001). "The most adaptive outlook therefore seems to be mostly optimistic, tempered with small doses of realistic pessimism when needed" (Forgeard & Seligman, 2012, p. 115). Optimism and pessimism act as filters through which we view the world, and as such, influence our behavior (Forgeard & Seligman, 2012). To be resilient, we must be able to respond to adversity in effective and healthy ways (Reivich & Shatté, 2002). A critical ingredient to success and resilience is to be *realistically* optimistic. Realistic optimism is about maintaining a positive approach and outlook while not denying the facts or ignoring what is negative about a situation (Reivich & Shatté, 2002). Realistic optimism gives us hope and motivation to pursue our goals, but with the understanding that problem solving and effort may be necessary to achieve them (Reivich & Shatté, 2002).

College Students

Optimism can be learned (Seligman, 1990), as can various factors that boost resilience (Reivich & Shatté, 2002). If we can help college students become more optimistic (while still being realistic), we may be able to reduce the suffering that is occurring on college campuses. Teaching college students the basics of cognitive behavior therapy and helping them develop a more optimistic explanatory style may help shift their perspective towards realistic optimism and buffer them from depression and anxiety. Cognitive therapy encompasses a set of skills that can be used throughout life (Seligman, Schulman, DeRubeis, & Hollon, 1999) and one of the goals in cognitive behavior therapy is for the patients to learn to monitor and dispute their thoughts *on their own*, (J. Beck, 2010). It seems possible then, that the general college student population could be taught the basics of CBT. They could be taught to recognize and dispute their counterproductive thoughts, and benefit from practicing checking the accuracy of their thinking to ensure it is realistic. In fact, the Penn Resiliency Program - an intervention program for adolescents and young adults that includes realistic optimism and uses techniques adapted from CBT - has been shown to improve explanatory style and reduce symptoms of depression and anxiety (Reivich et al., 2013). Students can be taught that their thoughts influence their experiences. They can learn to develop greater accuracy in their thinking and they can practice and learn a more optimistic explanatory style. Through incorporating these elements, college students can breakdown some of the cognitive barriers they have developed through maladaptive thinking patterns and better equip themselves with techniques to enhance resiliency and thriving.

Pulling It All Together

Let us review what we have covered so far. Students are suffering and need skills so that college life is less overwhelming. Positive psychology provides a new perspective. It suggests that we should pursue building strengths and capacities, not just fixing problems. In cognitive behavior therapy, we saw the important link between our thoughts, feelings and behaviors. We saw that attributing adversity to causes out of our control can lead to helplessness and expecting negative outcomes can lead us to quit or not take on challenges. In addition, we saw that optimism supports resilience, and we discussed the benefits of developing a realistic, yet optimistic, explanatory style. While depression and anxiety are caused by a complex interplay of biological, emotional, interpersonal and cognitive and behavioral factors (Reivich et al., 2013), this paper specifically focuses on cognitive and behavioral factors influencing resilience. Sometimes our own cognitions - our thoughts - negatively affect our resilience. How we interpret events influences our thoughts, feelings and behavior, and learning to think differently about challenges can boost resilience (Reivich & Shatté, 2002). Now, let us consider the meaning of resilience and explore other factors that may boost resilience and help college students thrive.

Resilience

“Invincible” and “invulnerable” were words used in the 1970s by scientists and mainstream media to portray children who were doing well despite living in adverse circumstances (Masten, 2001). Such descriptors made resilience seem extraordinary; it appeared to be based on processes that were anything but normal (Masten, 2001). Even into the mid-1990s, terms such as “superkids” made resilience appear remarkable and due to special attributes of individual children (Masten, 2001, p. 227). Masten (2001), however, documented the ordinariness of the processes underlying resilience.

Masten (2001) reports that resilience results from the normal functioning of human processes of adaptation. When these systems are working properly, even in adverse circumstances, people tend to be resilient (Masten, 2001). When these systems are undermined, however, the risk of developing problems increases. Underlying these processes of adaptation are systems associated with “brain development and cognition, caregiver-child relationships, regulation of emotion and behavior, and the motivation for learning and engaging in the environment” (Masten, 2001, p. 234). When circumstances jeopardize these systems, resilience is threatened. (Masten, 2001). Thus, protecting and enhancing these systems is beneficial, while impairments diminish resilience (Masten, 2001).

Defining resilience is complex and controversial (Masten, 2001). It involves setting a threshold above which we call positive adaptation and below which we consider to be negative outcomes. Yet, there can be little doubt that criteria to distinguish good and bad outcomes exists (Masten, 2001). For example, resilience could be defined by criteria based on societal expectations and milestones (e.g., graduation from high school and getting a job), or based on a lack of psychopathology, symptomology and impairments, or some combination of these external and internal criteria (Masten, 2001). How we define resilience influences how we attempt to develop it and who we considered to be resilient (Masten, 2001). In this paper, I will be using Reivich’s and Shatté’s (2002) definition of resilience; resilience is the “the ability to persevere and adapt when things go awry” (p. 1). Resilience helps us through chaotic moments and stressful times (Reivich & Shatté, 2002). Helping college students be more resilient could help them better manage the stress and hardships of college life.

We probably all know people who are resilient; people who seems to rise above challenges and move forward after setbacks with apparent ease (Reivich & Shatté, 2002). These people are inspiring. Resilient people thoughtfully and energetically address problems. They seek challenges and they utilize failures to learn and to propel them forward (Reivich & Shatté, 2002). Resilient people have doubts and feel anxiety, but they are able to prevent it from overwhelming them (Reivich & Shatté, 2002). We may wonder if we can be more like them, and the answer is, yes; resilience can be learned. We can learn to approach problems differently and to manage setbacks adaptively (Reivich & Shatté, 2002). All of us will encounter challenges and setbacks in our lives. Even though some people have developed resiliency from an early age, most of us could benefit from being more resilient than we currently are (Reivich & Shatté, 2002). We could benefit from learning to manage conflict better, garner meaning out of setbacks and failures, and notice and adapt our thinking when hardships arise. College students too could benefit from understanding what qualities lead to resilience and how to build greater resiliency. “Resilience…transforms hardship into challenge, failure into success, helplessness into power” (Reivich & Shatté, 2002, p. 4).

As mentioned above, it is through normative processes, not extraordinary qualities, that we are resilient (Masten, 2001). Through the study of positive psychology and resilience, many personal qualities have been identified that enable people to thrive when faced with day-to-day hassles, and that help them adapt when adversity strikes (Gillham et al., 2013). The following skills and strengths are associated with resilience: awareness and regulation of emotions, self-regulation (goal-setting, impulse control), social awareness and competence (perspective taking, communication), decision-making and problem solving, self-efficacy (believing you have the ability to achieve your goals), sense of meaning and purpose, and optimism. (Gillham et al., 2013). College students can build their resiliency by enhancing some or all of these *protective factors* (i.e., these skills and strengths) (Reivich et al., 2013). To do so, they will need to attend to their thoughts and internal processes.

Attention

In order to take advantage of resilience protective factors, we need to attend to what we are experiencing. We can't hope to regulate emotions and impulses, for example, if we are not aware of them. If we are unable to step back and *notice* our thoughts, feelings and sensations, we have little ability to *regulate* them (Dahl, Lutz, & Richardson, 2015). Below I suggest that learning to focus our attention (and notice our unhelpful thoughts) is a foundational skill that supports resilience.

Attention is a limited resource that we deploy either with conscious intention, or automatically through habitual ways of thinking, argues psychologist Mihaly Csikszentmihalyi (1990), a leading researcher known for his work on the psychology of optimal experiences. When we attend to information consistent with our goals and our identity, we may enter a state of highly focused attention Csikszentmihalyi (1990) calls "flow". In flow, we function optimally, without distraction. People who experience flow report feeling deeply satisfied, exhilarated and joyful. Through flow experiences confidence is gained and quality of life is improved (Csikszentmihalyi, 1990). On the other hand, when information entering our consciousness is *inconsistent* with our goals and identity it causes disordered thinking and a disruption in the flow state (Csikszentmihalyi, 1990). Jealousy, anger, fear and anxiety, for example, can divert our attention, and distract us from our goals leading to ineffectiveness and feelings of distress (Csikszentmihalyi, 1990). As college students juggle a rigorous academic load, adjust to independent living and life away from their families, acclimate to new social contexts, and plan for their future, fear, worry and anxiety may make it difficult to focus. This may disrupt their thinking and divert their attention away from important goals. Based on Csikszentmihalyi's (1990) work, it is reasonable to conclude that if students build their capacity to focus and sustain their attention, it could decrease distractions and disordered thinking. This could increase the frequency of experiencing the benefits of optimal functioning, and help students be more confident and effective in whatever they choose to do, thus increasing the quality of their lives. What we see then, is that how we use this limited resource - our attention - matters (Csikszentmihalyi, 1990). Attention influences our ability to take advantage of resilience protective factors.

Self-regulation - a protective factor - is the ability to *control* one's thoughts, feelings and actions (Baumeister, Gailliot, DeWall, & Oaten, 2006). Self-regulation allows us to adapt to our environment, use our values to guide our actions, and lead successful lives (Baumeister et al., 2006). However, an instability of attention and a lack of awareness of cognitive processes can impede self-regulation (Dahl et al., 2015). A lack of meta-awareness (conscious state of *noticing* our thinking) can also impede self-regulation (Dahl et al., 2015). Another protective factor requiring focused attention, emotion regulation, is associated with decreased negative mood, improved positive mood, a reduction in distracting thoughts, less rumination and diminished reactivity (Hölzel et al., 2011). Through control of our attention, we can increase self-regulation and emotion regulation, and build our capacity to notice cognitive patterns and the dynamics between our thoughts, feelings and actions (Dahl et al., 2015). Being able to control our attention and attend to our thoughts and emotions, is important because a diminished capacity to look at the self is associated with depression and anxiety (Dahl et al., 2015). Helping college students develop their ability to focus their attention on their present-moment internal experiences may help them build and enhance important resilience protective factors, such as self-regulation. Teaching college students to be more mindful, may be a way to do just that.

Mindfulness

Mindfulness is paying attention to what is occurring, moment-to-moment, without criticism or judgment (Smalley & Winston, 2010). "Mindfulness has to do with particular qualities of attention and awareness that can be cultivated and developed through meditation" (Kabat-Zinn, 2003, p. 145). Being aware of one's thoughts, emotions, and sensations in the body as they unfold in the moment, without judging them, and controlling one's attention and not being reactive, are all important parts of mindfulness (Bamber & Scheider, 2016). Being non-judgmental means noticing what is happening without latching on to an opinion of whether it is good or bad. And being non-reactive means, noticing but not automatically reacting to what's happening, and being able to emotionally let go of it and move on as needed (Bamber & Scheider, 2016). When a typical student does poorly on an exam, s/he may ruminate on it and engage in self-critical, negative thoughts (e.g., "I'm so stupid" "how could I have let this happen", etc.). A student in the same situation who is practicing mindful awareness, on the other hand, is likely to acknowledge the reality of the situation, but not get "consumed by negative emotions" (Bamber & Scheider, 2016, p. 3). Being non-reactive and aware without judging, allows the individual to "act with awareness, tractability, and emotional stability" (Bamber & Scheider, 2016, p. 3). Mindfulness allows for a thoughtful response to difficult situations.

Benefits of mindfulness meditation.

Over the past 20 years, there has been a significant increase in research investigating the benefits associated with a mindfulness practice (Smalley & Winston, 2010). Neuroscientists have investigated the relationship between a mindfulness practice and changes in brain functioning and structure (Baime, 2011). In meditators, as compared to non-meditators, researchers found a greater thickness in the area of the brain associated with executive functions such as judgment, decision-making, and planning (Lazar et al., 2005) - likely important functions for most college students. Changes in areas of the brain that are important to learning, attention and emotion regulation are also associated with mindfulness meditation (Baime, 2011). Enhancing judgment, decision-making, planning, learning, attention, and emotion regulation through mindfulness, might better equip students to meet the demands of college life. Mindfulness allows us to see competing motives in the moment, to create the opportunity for choice rather than being reactive, and it increases our ability to satisfy our needs (Deci & Ryan, 1985). The ability to monitor and control one’s thoughts and feelings in the moment, could help students develop resilience and cope more gracefully with the myriad of challenges associated with college life.

Mindfulness meditation decreases symptoms of depression, anxiety and irritability (Baer, 2003), improves memory (Jha, Krompinger, & Baime, 2007) and reduces key indicators of stress (Low, Stanton, & Bower, 2008). Benefits of meditation, including the ability to direct and focus attention, have been shown in as few as eight-weeks of mindfulness meditation training (Jha et al., 2007). The ability to focus our attention has positive impacts on our learning and memory, and can provide insights into how we can influence cognitive processes to enhance well-being (Dahl et al., 2015). We see then a plethora of benefits from cultivating mindfulness, many of which might enhance resilience protective factors, and enhance the life and well-being of a college student. In classes, students are expected to learn and commit information to memory, and to pay attention without lapses. In order to get along socializing and living with peers, students are expected to regulate their emotions. Moreover, given the mental health statistics quoted at the start of this paper, reducing symptoms of stress and decreasing depression and anxiety, would likely have a positive impact on student well-being. Furthermore, research shows that a practice of mindfulness meditation supports immune functioning (Carlson, Speca, Faris, & Patel, 2007) which could result in fewer missed classes due to illness. Mindfulness mediation offers college students a coping strategy to manage stress and reduce anxiety (Bamber & Scheider, 2016). Mindfulness meditation could be integrated into college orientation programs or even into the classroom (e.g., starting class with a brief meditation), and has the potential to improve student success by decreasing anxiety (Bamber & Scheider, 2016). Through mindfulness meditation, then, students can develop their capacity to focus and direct their attention, improve their resilience through learning to better control their thoughts, feelings and emotions, and improve their psychological and physical well-being, which will help them thrive in college. Now, let us turn our attention to thinking styles and particular patterns of thought that may undermine college students' resilience.

Thinking Styles

We all have developed ways we analyze, think and respond to challenging events. This is called our *thinking style* - it is the lens through which we view situations (Reivich & Shatté, 2002, p. 3). Our thinking style first develops during childhood, but thinking styles are not set in stone, we can learn and practice new ways of thinking (Reivich & Shatté, 2002). "Thinking styles determine people's resilience and that resilience determines how well they do in life" (Reivich & Shatté, 2002, p. 59). Sometimes our thinking style helps us, but sometimes it creates barriers to our success. We can learn, however, to notice and navigate around the cognitive barriers our particular thinking style presents (Reivich & Shatté, 2002). Helping college students notice their thinking style and change counterproductive thinking, is one way to enhance their ability to adapt to challenges and boost their resilience.

The success of cognitive behavioral therapy underscores the important role that our thoughts and emotions play in our lives, and it is the foundation upon which many resilience skills are built. (Reivich & Shatté, 2002). Earlier in this paper, I mentioned that automatic negative thoughts are associated with depression; catastrophic thinking is associated with panic disorders; and fearful thoughts about future danger are associated with anxiety (J. Beck, 2010). In addition, we saw that a pessimistic explanatory style and expecting bad outcomes in the future is self-defeating and can lead to depression (Seligman, 1990). Understanding the particular thoughts that cause our suffering and undermine resilience may provide a first step in the process of changing our thinking styles to build our resilience.

Thinking Traps

In any given situation, it may seem that we are objectively taking in, comprehending and accurately assessing what is happening (Reivich & Shatté, 2002). Our senses, however, are capable of taking in far more information than we can process, so we look for shortcuts to understand the world around us (Reivich & Shatté, 2002). In doing so, we are prone to errors. Thinking traps - our overly rigid patterns of thought - are some of the common thinking errors that reduce resilience (Reivich & Shatté, 2002). When we face adversity, being accurate and thorough makes us better problem solvers, but thinking traps reduce both accuracy and thoroughness (Reivich & Shatté, 2002). Teaching students about thinking traps may help them recognize when their thoughts are leading them astray.

Below are some of the common thinking errors that Reivich and Shatté (2002) refer to as thinking traps.

- Jumping to conclusions - making assumptions or automatically believing something without supporting data. For example, if a professor asks to speak with you after class and you immediately assume you've done something wrong, you may have fallen into the jumping-to-conclusions thinking trap. To help avoid jumping to conclusions, slow down. Slowing down our thinking allows us time to gather facts and consider alternative explanations (Reivich & Shatté, 2002).
- Tunnel vision - biased intake of information in which only the negative aspects of the environment or situation are processed. This thinking trap tends to reinforce preconceived notions and leads to wrong conclusions. For example, when giving a presentation in class if you only notice negative behaviors, such as a student yawning or texting, or the professor appearing bored or distracted while you are presenting, you may be experiencing the tunnel vision trap. Look around and pay attention to *all* of the information available to ensure you are accurately assessing the situation (Reivich & Shatté, 2002).
- Magnifying and minimizing - registering both negative and positive aspects of the situation, but overvaluing or undervaluing certain aspects. Overvaluing negative and undervaluing positive aspects of a situation can lead to negative emotions, less clarity in thought, reduced creativity and problem solving, and less enthusiasm (Reivich & Shatté, 2002). For example, when you get a paper back from a professor with many comments on it, if you skim the positive comments and fixate on the negative ones, you may be suffering from magnifying and minimizing. Take your time, think about all of the feedback, and remember the goal is accurately interpreting and valuing both the positive and the negative in any given situation.

- Personalizing - tendency to blame yourself; to assume that you are at fault when problems occur. For example, if you get a bad grade on a group project and you tell yourself "this is entirely my fault" it is likely you have fallen into the personalizing trap. Personalizing can reduce one's sense of self-worth and lead to feelings of guilt and sadness (Reivich & Shatté, 2002).
- Externalizing - assuming others are to blame; not realizing the aspects of a difficulty that are under one's own control or due to one's own actions; this is the opposite of personalizing. For example, if you blame everyone else for a bad grade on a group project without considering your role and contribution, it is likely that you are externalizing. This tends to lead to anger towards others (Reivich & Shatté, 2002).
- Overgeneralizing - explaining the cause of problems with "always" and "everything"; attributing the cause of problems to character rather than behavior. Personalizers overgeneralize about themselves, attributing problems to their character (e.g., "I'm a terrible friend"), while externalizers overgeneralize about others, assassinating their character (e.g., "She is so selfish"). If a classmate you're working with on a group project arrives late and unprepared for a group meeting and you assume the classmate is lazy and is never going get his/her share of the work done, you've fall into this trap. You've attributed a specific problem to your classmate's character in general and in doing so you've made the problem seem more intractable. If you tend to overgeneralize, as a personalizer or an externalizer, "ask yourself: Is there a behavior - either mine or someone else's - that could have caused this problem?" (Reivich & Shatté, 2002, p. 109). Focusing on specific behaviors provides an opportunity to address, and possibly change, that behavior.

- Mind reading - believing we know what others are thinking and then acting on those beliefs; or assuming others know what we're thinking or feeling when we have not articulated our thoughts or feelings. When we mind read, we often jump to conclusions. We tend to mind read more with some people than we do with others (Reivich & Shatté, 2002). For example, if a friend asks me why I chose a certain topic for my paper, I may think nothing of it. If my professor asks me the same question, however, I may think "she doesn't think this is a good topic" or "she thinks I'm not a good enough student to take on this topic". This is an example of the mind reading trap.
- Emotional Reasoning - drawing conclusions based on how you feel. For example, imagine you hate giving presentations in class, but in this one class a large portion of your grade is based on how well you do in your final presentation. Leading up to the presentation your anxiety builds. You know presentations are not your strength. You're worried that your hands will shake while holding your notes, your classmates will know how nervous you are, and you fear you'll bomb the presentation and do poorly in the class. You're dreading the day you have to stand in front of the class and give the presentation. The day comes and you don't bomb the presentation. You don't think anyone noticed your hands shaking and you made it through the material. When you finish you feel a surge of positive emotion. If you attribute those good feelings to having done well, you may be experiencing the emotional reasoning trap. There are many reasons you might feel really good after the presentation. It could be because you did well, but it also could be that a huge weight is off your shoulders. You could simply be feeling relieved that the presentation is over. Sometimes we draw the wrong conclusions when we base our conclusions on how we feel (Reivich & Shatté, 2002). This is the

> emotional reasoning trap. Also, if you allow your anxiety to cloud your judgment regarding the magnitude of a threat, it can lead you to misinterpret the situation as worse than it really is. Again, this is emotional reasoning and an example of when you may not be accurately assessing adversity.

Reivich and Shatté (2002) refer to the thinking errors outlined above as thinking traps. These faulty and inaccurate thinking habits are also sometimes called *cognitive distortions* (Kelly, 2015). Individuals can experience multiple cognitive distortions at the same time (Kelly, 2015). *Perfectionism* is an all-or-nothing cognitive style prevalent among college students that includes various thinking errors (Halgin & Leahy, 1989). Perfectionism is a "tendency to demand flawless performance" in which even minor flaws threaten to erode self-esteem (Pirbaglou et al., 2013). A desire for excellence is not a bad thing, but it becomes problematic when accompanied by cognitive distortions such as, all-or nothing thinking, unrealistically high expectations, and repeated self-criticism (Pirbaglou et al., 2013). Perfectionists also tend to personalize; they blame themselves for things that are not entirely their fault (Kelly, 2015). Perfectionism is associated with anxiety and negatively affects academic performance (Pirbaglou et al., 2013).

The *imposter phenomenon* is another pattern of cognitive distortions often made by high achieving college students (Bernard, Dollinger, & Ramaniah, 2002). People who experience the imposter phenomenon feel that they are intellectual phonies; that they are somehow masquerading as intellectuals (McGregor, Gee, & Posey, 2008). Fear and self-doubt may discourage these individuals from pursuing challenges and may prevent them from reaching their full potential (King & Cooley, 1995). These individuals often attribute their success to external causes such as "luck, knowing the right people, [and/or] being in the right place at the right time…rather than to ability or competence" (Clance & O'Toole, 1987, pp. 51-52). People who feel like imposters often lack self-confidence and they experience symptoms of depression and anxiety (Clance & Imes, 1978). These people "find innumerable means of negating any external evidence that contradicts their belief that they are, in reality, unintelligent" (Clance & Imes, 1978, p. 1). This is inaccurate thinking. These individuals constantly fear that they will be discovered as the frauds they believe they are, *despite consistent, external evidence to the contrary*, (Clance & Imes, 1978).

Thinking styles have a profound effect on our resilience (Reivich & Shatté, 2002). Our thinking styles - how we interpret the meaning of challenges and the thinking errors we make - may be impeding our success and well-being (Reivich & Shatté, 2002). It is not just what happens, but how we interpret and respond to it, that influences the quality of our lives. "The principal obstacle to tapping into our inner strength lies with our cognitive style" (Reivich & Shatté, 2002, p. 11). The goal is accuracy in thinking (Reivich & Shatté, 2002). Enhancing accuracy in thinking can help reduce, or even prevent, internalizing disorders such as depression and anxiety (Reivich et al., 2013). Through various strategies drawn from cognitive behavior therapy and positive psychology, we may be able to help college students better understand their thoughts and beliefs and develop more adaptive thinking styles. We can help them develop their ability to focus their attention, notice their thoughts and identify their thinking errors, and learn to think more accurately. If we can give college students the tools to think more accurately, avoid these thinking traps, and build their resilience, maybe we can stem the tide of rising rates of anxiety and depression on college campuses. Next, we need to consider how to bring this information into the college setting and start helping students build these skills.

Application

Where to Begin

"Academic success goes hand in hand with emotional and physical well-being…but dysfunctional coping styles can cripple" college students' effort to succeed (Kadison, 2004). Resilience is about coping effectively; it is "the capacity to respond in healthy and productive ways when faced with adversity" (Reivich & Shatté, 2002, p. 26). Cognitive therapy forms the foundation of the skills necessary to build resilience and these skills can be taught, practiced and learned (Reivich & Shatté, 2002). Given the high rates of depression and anxiety on college campuses, college students might benefit from learning how to build their resilience and develop healthy coping strategies. Through introducing skills and concepts from cognitive behavior therapy, positive psychology and the literature on resilience, we might help students improve their thinking skills, develop realistic optimism, and build their resilience. I propose that we start with the peer leaders on campus, especially those in residence life.

Since the 1960s, a large body of research has been amassed demonstrating the positive influence of peer leaders on students, especially on new students (Ganser & Kennedy, 2012). "Perhaps the most important generalization to be derived from this massive study is that the strongest single source of influence on cognitive and affective development is the student's peer group" (Astin, 1996, p. 126). This has "enormous potential for influencing virtually all aspects of the student's educational and personal development" (Astin, 1996, p. 126). Peers influence students' academic performance, satisfaction with college, and their development of problem-solving and critical thinking skills (Astin, 1993). Ganser and Kennedy (2012) reported that while informal peer mentoring in residence life has been part of college life for centuries, undergraduate students working in formal peer leadership roles in residence halls is a relatively new phenomenon; the emergence of these roles in residence life was first recorded in 1959 (as cited in Powell, 1959). Peer leaders in residence life go by many different titles, but are most commonly known as resident assistants. Peer mentoring is fundamentally about seasoned students passing down their knowledge to their less experienced peers in order to improve learning and experience (Minor, 2007). Due to the proven benefits of peer leaders in residential life, these roles are now standard practice in the field of student services (Ganser & Kennedy, 2012).

Resident assistants (RAs) are influential student leaders who live in residence halls with undergraduate students (Healea, 2006). RAs are typically upper level undergraduates (sophomores, juniors and seniors) who are responsible for community building, policy enforcement, peer mentoring, administrative tasks and assisting students in various ways (Healea, 2006). Typically, RAs are responsible for a group of students (e.g., a floor in a residence hall) (Ganser & Kennedy, 2012) and are tasked with promoting the personal, social and academic well-being of these students, while also mediating student conflicts as they arise (McLaughlin, 2018). In addition, RAs are expected to plan and implement programs in the residence and refer students to campus resources as needed (McLaughlin, 2018). Their fellow students often see the RA as a role model (Healea, 2006) and as a resource person who can help them connect to support services on campus (Ganser & Kennedy, 2012). RAs are on the frontlines and may serve as the first person to respond when a student is in crisis, even before campus police (Ganser & Kennedy, 2012). The RA position, with its various responsibilities, is challenging and can take a toll on the students who hold these positions (McLaughlin, 2018).

RAs are undergraduates and thus face the same potential for stress, depression and anxiety as do other college students. In addition, RAs “are often overwhelmed by the conflicting demands of their various duties” and RAs often experience even more personal challenges than do their non-RA peers (Brecheisen, 2015, p. 196). While RAs report a variety of benefits of the position, they also report that the position involves unexpected challenges and, at times, is overwhelming (Kauffman, 2008). I have worked in residence life for over 20 years. I have often told student staff members that, anything that can happen to a person, can happen to a student on your floor. This means a resident assistant might be the first person to learn that a student is having a mental health crisis, is grieving the loss of a parent, sibling or friend, was assaulted, is dealing with a drug or alcohol issue, is lonely, homesick or depressed, or is having health problems. It is not surprising then, that undergraduate RAs sometimes find the position to be overwhelming. Interestingly, however, the RA training intended to help the RA serve other students, is of significant value to the RA in managing the challenges of his/her own college experience (Brecheisen, 2015). RA training has been shown to decrease stress and increase emotional resiliency (Brecheisen, 2015). The RA training is typically extensive and covers a wealth of topics that support the student in the RA position as well as in his/her own success in college (Brecheisen, 2015).

Given the challenges that RAs face balancing their roles as students with the various roles, responsibilities and demands of the RA position, RAs might particularly benefit from training to enhance their coping and resilience skills. If they are better able to manage their own challenges during college, perhaps they would be better positioned to assist other students. Also, given their daily interaction with students, RAs hold great potential to transfer what they learn to other students, either through formal or informal means (Healea, 2006). As role models and peer mentors, RAs are an important target population to learn new skills and potentially spread those skills to other students. Better thinking skills, coping strategies and overall resilience, might help

RAs better manage the demands of college life. In addition, it might help them in their capacity as mentors, role models, peer leaders and problem solvers. The hope is that in building their resilience skills, RAs will model the behaviors we hope to see in the general student population. We may see a trickle down or spread effect of their skills to other students with whom they interact. In addition, if the RAs learn to think more accurately and assimilate cognitive therapy and resilience skills, they may be able to notice and draw attention to other students' faulty thinking when they are helping those students work through difficulties. This may further spread what the RAs learn. Furthermore, since RAs are typically required to participate in pre-service and in-service training (Winston, Ullom, & Werring, 1984), there is an opportunity to implement resilience education in the existing RA training structure.

As peer leaders, RAs are in a position to influence the development of the students with whom they serve in the residence halls (Healea, 2006). Teaching resilience skills to resident assistants may be a productive first step in introducing these skills to the general student population. One way we might help reduce depression and anxiety symptoms in college students is to teach RAs to think better, avoid thinking traps, develop realistic optimism and develop their resilience and coping skills.

When Thoughts Get in Our Way

College students are struggling. Anxiety and depression are negatively impacting their adjustment to college and their academic performance (Bernal-Morales et al., 2015). In addition, depression and anxiety tend to co-occur with drug and alcohol problems (Assari, 2018), and they erode college students' social, physical and emotional well-being (Mental Health America of Illinois, 2017). As mentioned earlier, the problem is getting worse; self-reported rates of anxiety and depression have been on the rise for the past decade (American College Health Association, 2018). Adding to the problem, college counseling centers are being stretched to their limits trying to keep up with the increasing need for their services (Jones et al., 2018), despite the fact that many college students with struggling with mental health issues are not seeking help (Zivin, Eisenberg, Gollust, & Golberstein, 2009). With over 20 million young adults in college in the U.S. today (Balon et al., 2015), this is an alarming situation. College students need tools to buffer themselves against the damaging effects of overwhelming anxiety and depression. We can provide these tools through workshops and trainings that teach students the basics of cognitive behavior therapy and principles of positive psychology so they can learn to think better and develop greater resilience. By teaching these skills to resident assistants, we might begin to shift the general student population towards flourishing.

Based on the information provided above, I propose to create a training curriculum drawing on CBT, positive psychology, mindfulness and the literature on resilience to enhance students' ability to notice and change counterproductive thinking and build their resilience. This curriculum, called *When Thoughts Get in Our Way*, could be presented to resident assistants in a workshop during pre-service training, and reinforced through follow up sessions during in-service training.

To begin, students would take the Perceived Stress Scale (PSS) (Cohen, Kamarck, & Stein, 1983) - a validated and reliable measure of perceived stress in one's current life situation (Cohen & Williamson, 1988). The PSS (Appendix A) is a brief assessment "designed to tap the degree to which respondents find their lives unpredictable, uncontrollable and overloading" (Örücü & Demir, 2008, p. 104). Students face many challenges during college life, however, for an event to be experienced as stressful, one must *perceive* it as stressful (Lazarus, 1966). Lazarus (1966) found that the impact of an event, a stressor, was dependent on two factors: first, the stressor had to be perceived as challenging or threatening, and second, the individual had to perceive that s/he lacked the resources or capacity to cope with the stressor. The PSS might help students evaluate their current level of stress to determine whether or not they want to make changes to reduce or better manage their stress. In addition, using the PSS in the resident assistant population might help professional staff better understand their resident assistants' stress level and it might provide an indication of who is in need of support and mentoring. Finally, by taking the PSS before and after participation in the *When Thoughts Get in Our Way* (WTGOW) training, we can assess the program's effectiveness.

The training would be designed to combine a didactic approach with discussion, hands-on and experiential learning, as well as role playing as a way to demonstrate and practice various skills. After a brief introduction to positive psychology, with a focus on the benefits of building strengths and capacities, rather than trying to remediate deficiencies, the WTGOW curriculum would include the following three sections

- **Exploring mindfulness meditation:** Students would be introduced to mindfulness meditation as a method to build their capacity to focus their attention and notice their thoughts and feelings. See Appendix B for a sample of content designed for this section of the training.
- **Understanding explanatory styles:** Students would learn how their explanatory style influences feelings, behaviors and outcomes. See Appendix C for sample content.
- **Building resilience:** Students would be taught the relationship between thoughts and behaviors and the importance of accuracy in thinking, and would learn how to avoid common common thinking errors and put resilience strategies into practice. See below and Appendices D and E for samples of content designed for this section.

Sample content.

Building resilience: ABC model.

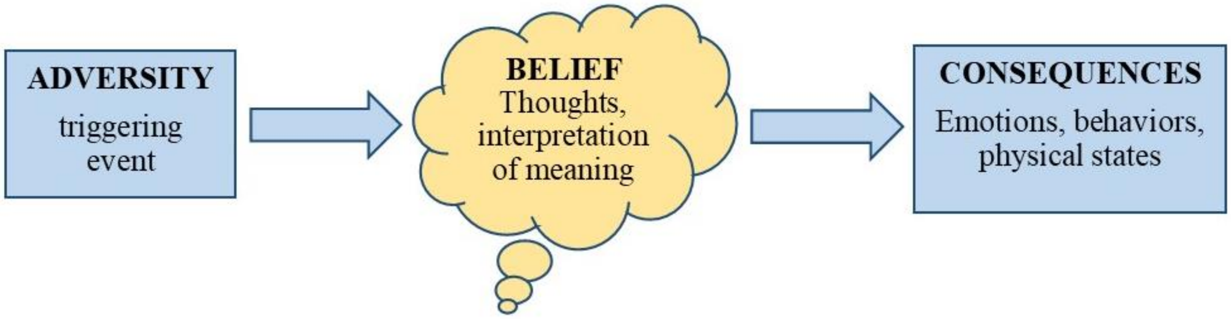
ADVERSITY
triggering event
BELIEF
Thoughts, interpretation of meaning
CONSEQUENCES
Emotions, behaviors, physical states

Figure 2. ABC Model of the relationship between thoughts, beliefs and consequences (Ellis, 1991).

Into each life, a little rain must fall. We will all face adversity and when we do, we will react. We often think that what happens - the adversity (A) - leads directly to the consequence (C) (how we feel and what we do) (Ellis, 1991). You get a lower grade than you expected (A) and you feel annoyed (C). This seems logical, but it is not accurate. You get a lower grade than expected - *you interpret that event*, including having some thoughts and beliefs about what it means - and *then* you feel annoyed (see Figure 2). It is our thoughts and beliefs (B), that determine the consequence (Ellis, 1991). Our beliefs - our thoughts and interpretation - influence how we feel and what we do in response (Ellis, 1991). Awareness of the beliefs that influence our feelings and behaviors provides an opportunity to interrupt the ABC process and make different choices (Reivich & Shatte, 2002).

Building Resilience: Beliefs and consequences.

Although we all have our own unique internal dialogue, there are “belief-consequence couplets” (beliefs linked to specific consequences) that hold true for most of us (Reivich & Shatté, 2002, p. 75). Understanding these couplets is a foundation on which to build self-awareness that can enhance resilience (Reivich & Shatté, 2002). These couplets are listed in

Table 1 below. This table could be used to help students gain a better understanding of why they feel the way they do in response to negative events. The table could be discussed and then provided as a handout to the students in the workshop.

Table 1.
Belief and consequence couplets.

Beliefs and/or thoughts	**Consequence**
Sense of trespass, rights being violated, thoughts of injustice, thoughts that one's rights have been violated.	Anger
Thoughts of loss, loss of self-worth, real-world loss.	Sadness, depression
Trespass against others, sense that one has violated another's rights, belief that one has done a disservice or injustice to another.	Guilt
Negative comparison to others.	Embarrassment
Belief of future threat, fearful thoughts about risk or danger in the future and an inability to manage or prevent it.	Anxiety, fear
Catastrophic distortions, repetitive worst-case scenario thoughts.	Panic

Note. The content in table 1 is adapted from *The Resilience Factor* by K. Reivich and A. Shatté (2002), and from J. Beck (2010).

Next steps

If the *When Thoughts Get in Our Way* training proves effective with resident assistants, I recommend expanding the training to other student leaders on campus such as members of the executive board of student hall councils and student organizations, and then expanding the training to the general student body through workshops during new student orientation. To deliver the training on a larger scale, I recommend creating a train-the-trainer workshop to offer to residential life and other student affairs professionals, so they can provide the training to students in their areas. In addition, to expand the reach of this work, the train-the-trainer workshop could be presented at national conferences on higher education.

Conclusion

This paper considers a way to reduce the overwhelming anxiety and depression experienced by college students. We need to provide students with skills to reframe destructive thoughts and beliefs and build their resilience. We can begin by training resident assistants. Students can develop skills that will help them manage day-to-day hassles, as well as more significant hardships, with less stress, anxiety and depression. These skills might help them manage college life better and flourish during their college years. In addition, students can use these skills well beyond the college years to cope more gracefully with adversity throughout their lives. “Resilience….is the basic strength, underpinning all the positive characteristics in a person’s emotional and psychological make up” and “resilience rests on an accurate appraisal of one’s life” (Reivich & Shatté, 2002, p. 59, 105). Training resident assistants to better understand themselves, their thinking and how their thoughts and beliefs lead to behaviors and feelings, is a step towards preparing them to take on challenges throughout their lives. In addition to helping them in their own lives, college students who can think accurately and who understand how their thoughts influence their feelings and behaviors, may be better positioned to understand, and therefore influence, the behavior of others. As resilient students graduate from college, they may have a greater capacity to address adversity and thus be well positioned to take on our nation’s challenges. Let us take the first step towards helping students, and our society, flourish, by teaching students to think accurately and develop resilience.

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Appendix A

Perceived Stress Scale

Instructions

The questions in this scale ask you about your feelings and thoughts during *the last month*. In each case, please indicate your response by placing an "X" over the circle representing *how often* you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

2. In the last month, how often have you felt that you were unable to control the important things in your life?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

3. In the last month, how often have you felt nervous and "stressed"?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

5. In the last month, how often have you felt that things were going your way?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

7. In the last month, how often have you been able to control irritations in your life?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

8. In the last month, how often have you felt that you were on top of things?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

9. In the last month, how often have you been angered because of things that were outside your control?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Never	Almost Never	Sometimes	Fairly Often	Very Often
○	○	○	○	○

Scoring: PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. A short 4 item scale can be made from questions 2, 4, 5 and 10 of the PSS 10 item scale.

Reference: Cohen, S. (n.d.). *Perceived Stress Scale* [Measurement instrument]. Retrieved June 29, 2019 from http://www.psy.cmu.edu/~scohen/scales.html

Appendix B

Exploring Mindfulness Meditation: An Introduction

Mindfulness is paying attention to what is occurring, moment-to-moment, without criticism or judgment (Smalley & Winston, 2010). If we are unable to step back and *notice* our thoughts, feelings and sensations, we have little ability to *regulate* them (Dahl et al., 2015). Through control of our attention, we can increase emotion regulation, and build our capacity to notice cognitive patterns and the dynamics between our thoughts, feelings and actions (Dahl et al., 2015). Being able to control our attention and attend to our thoughts and emotions, is important because a diminished capacity to look at the self is associated with depression and anxiety (Dahl et al., 2015). Mindfulness allows us to see competing motives in the moment, it creates the opportunity for choice rather than being reactive, and it increases our ability to satisfy our needs (Deci & Ryan, 1985). Mindfulness can be developed through a daily practice of mindfulness meditation (Williams & Penman, 2011). Through mindfulness meditation, then, we can learn to better regulate our emotions and develop our capacity to focus and self-direct our actions.

Exercises

After being introduced to mindfulness and its benefits, students would be given the opportunity to try a simple mindfulness meditation exercise such as *The Raisin Meditation* (Williams & Penman, 2011) in which one eats a raisin extremely slowly while attending to each of his/her senses, or *Mindfulness of the Body and Breath* (Williams & Penman, 2011) in which one follows a guided meditation focusing on the body and breath.

Resources

Students could be given a handout of resources including a list of guided meditation apps (e.g., “Simple Habit”, “Calm”, and “Headspace”), online resources and books on meditation such as, *Mindfulness: An Eight-Week Plan for Finding Peace in a Frantic World* by Mark Williams, and Danny Penman (2011). In addition, students could be provided with on-campus resources related to meditation, such as information on meditation classes and drop-in meditation sessions.

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Appendix C

Understanding explanatory styles: The "why" of bad events

When bad things happen in our lives, we try to explain what caused them (Gillham et al., 2001). Optimists interpret negative events to temporary and specific causes that are external to the individual (Peterson & Steen, 2002). Pessimists do the opposite; they attribute negative events to permanent, pervasive and personal causes (Seligman, 1990). Table 2 below contrasts how pessimists and optimists respond to negative and positive events.

Table 2.
Explanatory styles - to what we attribute the cause of negative events.

	Positive Event	Negative event
Optimistic explanatory style	Permanent (always), pervasive (everything) personal (internal, me)	Temporary (unstable), specific (not everything), external (not me)
Pessimistic explanatory style	Temporary (unstable), specific (not everything), external (not me)	Permanent (always), pervasive (everything) personal (internal, me)

Note. The information in table 2 is adapted from Reivich, & Shatte, (2002) and Seligman (1990).

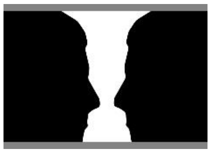
The content above could be presented to students, and then the students could participate in an exercise using the ABC model to analyze their explanations of a recent negative event in their lives. This might help them identify their explanatory style and begin to uncover inaccuracies in their thinking. Additionally, students could use Appendix E, *Building resilience: Reframing negative experiences*, to practice noticing unproductive thoughts and beliefs, and developing more accurate and productive explanations of negative events they’ve experienced.

Appendix D

Building resilience: Navigating Life's Challenges

The information below could be presented during a workshop and also be provided as a handout for students to refer back to as they develop their resilience skills. If students begin to recognize their common thinking errors, they may be better able to develop an accurate and productive thinking style.

Resilience is the ability to navigate and grow from adversity and challenge. It is not *all* you need to live a good life, but it is part of the tool kit needed to flourish (Saltzberg, personal communication, January 13, 2019). Resilience is ordinary. It arises from normal, adaptive processes that you are already using (Masten, 2001). You are already resilient and you can become more resilient.



Interpretation: How you *interpret* events influences your thoughts, feelings and behavior (Reivich & Shatté, 2002).

Self-regulation: The ability to exert control over your thoughts, feelings and actions is a capacity that allows you to choose deliberately to respond in adaptive and socially accepted ways that can enhance your well-being (Baumeister et al., 2006).

KNOW
THYSELF.
Socrates

Self-Awareness: Being able to step back and *notice* your thoughts, feelings and sensations, provides an opportunity to control them (Dahl et al., 2015).

What are thinking traps?

In any given situation, it may seem that we are objectively taking in, comprehending and accurately assessing what is happening (Reivich & Shatté, 2002). Our senses, however, are capable of taking in far more information than we can process, so we look for shortcuts to understand the world around us (Reivich & Shatté, 2002). In doing so, we are prone to errors. Thinking traps - our overly rigid patterns of thought - are some of the common thinking errors that reduce resilience (Reivich & Shatté, 2002). When facing adversity, being accurate and thorough makes us better problem solvers, but thinking traps reduce both accuracy and thoroughness. In *The Resilience Factor*, Reivich and Shatté (2002) outline the following eight thinking traps:

8 Common Thinking Traps

Jumping To Conclusions
Comes At Great Peril

Jumping to conclusions - making assumptions or automatically believing something without supporting data. For example, if a professor asks to speak with you after class and you immediately assume you’ve done something wrong, you may have fallen into the jumping-to-conclusions thinking trap. To help avoid jumping to conclusions, slow down. Slowing down our thinking allows us time to gather facts and consider alternative explanations (Reivich & Shatté, 2002).

Tunnel vision - biased intake of information in which only the negative aspects of the environment or situation are processed. This thinking trap tends to reinforce preconceived notions and leads to wrong conclusions. For example, when giving a presentation in class if you only notice negative behaviors, such as a student yawning or texting, or the professor appearing bored or distracted while you are presenting, you may be experiencing the tunnel vision trap. Look around and pay attention to *all* of the information available to ensure you are accurately assessing the situation.

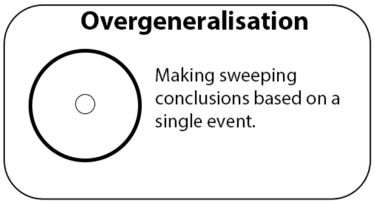
Magnifying and minimizing - registering both negative and positive aspects of the situation, but overvaluing or undervaluing certain aspects. Overvaluing negative and undervaluing positive aspects of a

situation can lead to negative emotions, less clarity in thought, reduced creativity and problem solving, and less enthusiasm (Reivich & Shatté, 2002). For example, when you get a paper back from a professor with many comments on it, if you skim the positive comments and fixate on the negative ones, you may be suffering from magnifying and minimizing. Take time, think about all of the feedback, and remember the goal is accurately interpreting and valuing both the positive and the negative in any given situation.

It's all about
me

Personalizing - tendency to blame yourself; to assume that you are at fault when problems occur. For example, if you get a bad grade on a group project and you tell yourself "this is entirely my fault" it is likely you have fallen into the personalizing trap. Personalizing can reduce one's sense of self-worth and lead to feelings of guilt and sadness (Reivich & Shatté, 2002).

Externalizing - assuming others are to blame; not realizing the aspects of a difficulty that are under one's own control or due to one's own actions; this is the opposite of personalizing. For example, if you blame everyone else for a bad grade on a group project without considering your role and contribution, it is likely that you are externalizing. This tends to lead to anger towards others (Reivich & Shatté, 2002).

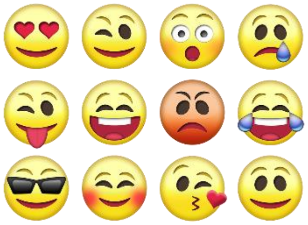


Overgeneralizing - explaining the cause of problems with "always" and "everything"; attributing the cause of problems to character rather than behavior. Personalizers overgeneralize about themselves, attributing problems to their character (e.g., "I'm a terrible friend"), while externalizers overgeneralize about others, assassinating their character (e.g., "She is so selfish"). If a classmate you're working with on a group project arrives late and unprepared for a group meeting and you assume the classmate is lazy and is never going get his/her share of the work done, you've fall into this trap. You've attributed a specific problem to your classmate's character in general and in doing so you've made the problem seem more intractable. If you tend to overgeneralize, as a personalizer or an externalizer, "ask yourself: Is there a behavior – either mine or someone else's – that could have caused this problem?" (Reivich & Shatté, 2002, p. 109). Focusing on specific behaviors provides an opportunity to address, and possibly change, that behavior.

Mind reading - believing we know what others are thinking and then acting on those beliefs; or assuming others know what we're thinking or feeling when we have not articulated our thoughts or feelings. When we mind read, we often jump to conclusions. We tend to mind read more with some people than we do with others (Reivich & Shatté, 2002). For example, if a friend asks me why I chose a certain topic for my paper, I may think nothing of it. If my professor asks me the same question, however, I may think "she doesn't think this is a good topic" or "she thinks I'm not a good enough student to take on this topic". This is an example of the mind reading trap.

Mind
Reading

Emotional Reasoning - drawing conclusions based on how you feel. For example, imagine you hate giving presentations in class, but in this one class a large portion of your grade is based on how well you do in your final presentation. Leading up to the presentation your anxiety builds. You know presentations are not your strength. You're worried that your hands will shake while holding your notes, your classmates will know you're nervous, and you fear you'll bomb the presentation and do poorly in the class. You're dreading the day you have to stand in front of the class and give the presentation. The day comes, and you don't bomb the presentation. You make it through the material and you don't think anyone could tell how



nervous you were. When you finish you feel a surge of positive emotion. If you attribute those good feelings to having done well, you may be experiencing the emotional reasoning trap. There are many reasons you might feel really good after the presentation. It could be because you did well, but it also could be that a huge weight is off your shoulders. You could simply be feeling relieved that the presentation is over. Sometimes we draw the wrong conclusions when we base our conclusions on how we feel. This is the emotional reasoning trap. Also, if you allow your anxiety to cloud your judgment regarding the magnitude of a threat, it can lead you to misinterpret the situation as worse than it really is. Again, this is emotional reasoning and an example of when you may not be accurately assessing adversity.

Perfectionists and Imposters

The Perfectio-nist Demon

Perfectionism is an all-or-nothing cognitive style prevalent among college students that includes various thinking errors (Halgin & Leahy, 1989). Perfectionism is a “tendency to demand flawless performance” in which even minor flaws threaten to erode self-esteem (Pirbaglou et al., 2013). A desire for excellence is not a bad thing, but it becomes problematic when accompanied by cognitive distortions such as, all-or nothing thinking, unrealistically high expectations, and repeated self-criticism (Pirbaglou et al., 2013). Perfectionists also tend to personalize; they blame themselves for things that are not entirely their fault (Kelly, 2015). Perfectionism is associated with anxiety and negatively affects academic performance (Pirbaglou et al., 2013).

The **imposter phenomenon** is another pattern of cognitive distortions often made by high achieving college students (Bernard et al., 2002). People who experience the imposter phenomenon feel that they are intellectual phonies; that they are somehow masquerading as intellectuals (McGregor et al., 2008). Fear and self-doubt may discourage these individuals from pursuing challenges and may prevent them from reaching their full potential (King & Cooley, 1995). These individuals often attribute their success to external causes such as “luck, knowing the right people, [and/or] being in the right place at the right time…rather than to ability or competence” (Clance & O’Toole, 1987, pp. 51-52). People who feel like an imposter often lack self-confidence and they experience symptoms of depression and anxiety (Clance & Imes, 1978). These people “find innumerable means of negating any external evidence that contradicts their belief that they are, in reality, unintelligent” (Clance & Imes, 1978, p. 1). This is inaccurate thinking. These individuals constantly fear that they will be discovered as the frauds they believe they are, *despite consistent, external evidence to the contrary*, (Clance & Imes, 1978).

Appendix E

Building resilience: Reframing negative experiences

Below is a sample exercise that would be used in a workshop focused on helping students notice and change their destructive thoughts. This exercise might also help students understand their emotions better. For example, if a student tends to experience a lot of anxiety, understanding belief and consequence couplets (shown in the table below) may help the student recognize the source of his/her anxiety (e.g., fearful thoughts). In addition, working through reframing his/her interpretation of the anxiety producing event, may provide an opportunity to assess threats and danger more accurately.

Exercise

When you face a challenge or disappointment, be aware of your thoughts and the voice in your head. What are you telling yourself? Try to tune into your automatic self-talk and your feelings. Then, think through the ABC model (see below).

ABC Model

(A) What was the activating event?

(B) What were your thoughts and beliefs about the event? What did you tell yourself about the meaning of the activating event?

(C) What were the consequences? How did you feel? How did you behave?

Changing your response to the situation

Using the questions below as a guide, write a 2-3 paragraph reflection about this experience.

1. How did the situation make you *feel*? (see note at bottom of page)

2. What initial or automatic thoughts did you have about the situation? What did you tell yourself about the meaning of the activating event *immediately* after it occurred?
3. Were those thoughts accurate? Did you consider all the information available to you? What are some other explanations for what happened? What might someone else believe or think about what happened? Are there other ways to interpret the meaning of the situation?
4. What aspects of the situation did you have control over? What aspects were out of your control? Imagine that the activating event happened to someone else, this might help you see better where you had control and where you did not.
5. How could you reframe your automatic response or self-talk? What could you say to yourself instead? If this happened to a friend or younger sibling, what would you say to him/her?
6. Write out what you could have told yourself, thought about, done differently, etc. that would have been a more useful orientation, or a more positive or more optimistic interpretation.

Note

If you get stuck on identifying (B) the beliefs, pay attention to how you felt immediately following the activating event. Using the belief and consequence connections listed in the table below, see if you can work backwards from your feelings to identify your beliefs. What was your initial feeling after the activating event? Were you angry? Sad? Anxious? Match this feeling with the corresponding beliefs and thoughts in the table below as a guide to help you identify your specific beliefs that were triggered.

Beliefs and/or thoughts	**Consequences**
Sense of trespass, rights being violated, thoughts of injustice “My rights have been violated”.	Anger
Thoughts of loss, loss of self-worth, real-world loss.	Sadness, depression
Trespass against others, sense that one has violated another’s rights, belief that one has done a disservice or injustice to another	Guilt
Negative comparison to others	Embarrassment
Belief of future threat, fearful thoughts about risk, danger in the future and an inability to manage or prevent it. “I’m in danger”.	Anxiety, fear
Catastrophic distortions, repetitive worst-case scenario thoughts	Panic

Note. The table above is adapted from *The Resilience Factor* by K. Reivich and A. Shatté (2002), and from J. Beck (2010).