# Testing the Wellbeing Effects of an Expedited Version of the ENHANCE Program

by

# Alana B. Rosa

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Pamel a. Jackson	5/9/2022
Dr. Pamela Jackson	Date
Thesis Advisor	
Per Orn Um	5/12/2022
Dr. Pei-Chun Tsai	Date
Committee Member	
	5/8/2022
Dr. Francis C. Dane	Date
Committee Member	
Shomus W. Piere	5/21/22
Dr. Thomas Pierce	Date
Committee Member	
TE DIN	5/23/22
Dr. M. Joseph Sirgy	Date
Committee Member	

#### **ABSTRACT**

ENHANCE is a wellness intervention program developed by the late Ed Diener and his team that teaches individuals how to boost their subjective wellbeing (SWB) through daily exercises (Kushlev et al., 2017). After onset of the COVID-19 pandemic, researchers have found that people are experiencing higher rates of stress, depression, and anxiety in the post-pandemic world (Huckins, 2020; Li et al., 2020; Sibley et al., 2020). The current study used a shortened version of Ed Diener's ENHANCE intervention on Radford University's campus during the fall of 2020 and spring of 2021. Participants were separated into a treatment and control group; the treatment group was administered the expedited version of ENHANCE while the control group was put on a waiting list. Measures of wellbeing and negative affect were administered in a pre-, post-, and follow-up test to track the effectiveness of the program at increasing wellbeing. It was predicted that the expedited version would increase wellbeing in the experimental group. Those that participated in the fall semester had higher scores on wellbeing measures compared to those in the spring semester, but there were no significant differences between the control and experimental groups. Unfortunately, none of the proposed hypotheses were supported. Differences were present in groups at baseline and between semesters. The expedited treatment was not effective in increasing wellbeing, implying that wellbeing increases may only be seen in the full ENHANCE program. Regarding the demographic of the population, it is possible as well that if the program had been presented in person as originally planned, a wellbeing increase may have been observed. While the results were not what the principal investigator expected, the most important information gained from this study is a better understanding of the ENHANCE Program. It is suggested that the most effective way to increase wellbeing with ENHANCE is with the full version of the program.

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#### INTRODUCTION

In the wake of COVID-19, many people have been stripped of their security, certainty, and, perhaps most importantly, their wellbeing (Li et al., 2020; Sibley et al., 2020). The measures taken to prevent the spread of COVID may keep us safe physically, but mentally may have left us in a worse position. Many stressors have made themselves known as a result of the outbreak, from losing one's job, to increased demands at work, to fear of the unknown, to the impending sense of doom many seem to have (Huckins et al., 2020).

The experience of acute stress is not immediately harmful, and it can even be beneficial if it helps the organism get out of a harmful situation; however, the experience of chronic stress can have negative side effects on physical and mental health, including but not limited to the development of ulcers, enlarged adrenal glands, and decreased hippocampal volume (McEwen, 2008; Schneiderman et al., 2005). The experience of stress triggers a response within most organisms, stimulating the release of cortisol, which temporarily shuts down bodily functions for growth and digestion and stimulates quickened pulse, perspiration, faster heartbeat, and a general sense of unease and restlessness. This feeling may come with or without warning, and is triggered as an attempt to warn the organism that they are in a situation that is potentially harmful to their wellbeing and that they must attempt to move back to homeostasis (Pinel & Barnes, 2018, p. 465-471; Selye, 1950).

Anxiety is described as a feeling of unease, restlessness, and uncertainty. Most individuals only experience anxiety when faced with a situation that is immediately causing stress, while others may experience generalized anxiety disorder (GAD). GAD is the almost constant feeling of worrying and tension. Individuals suffering from GAD often report having difficulty functioning socially and staying productive at work (Wittchen, 2002). Experiencing

anxiety for prolonged periods of time has the potential to cause both mental and physical ailments, including insomnia, chronic pain, and digestive problems (Schneiderman et al., 2005; Seyle, 1950). Alternatively, or often in addition to anxiety, an individual facing stress may begin experiencing symptoms of depression, or vice-versa. Depression is characterized by sadness, loss of pleasure, hopelessness, and changes in sleep/appetite (Pinel & Barnes, 2018, p. 481). Depression can be especially harmful to individuals, as experiencing it can bring about thoughts of suicide. The experience of these or other feelings of negativity can be described as negative affect. When an individual experiences more negative affect relative to positive affect, they can be thought of, or labeled, as unhappy. Conversely, individuals who experience more positive affect relative to negative affect, can be thought of, or labeled, as happy (Diener, 1984, 2000; Jackson et al., 2018, p. 135-155).

Subjective wellbeing (SWB) is defined as a person's view of or feelings about his or her life (Diener, 1984). When we are happy, we typically have a higher SWB (Diener, 1984, 2000). According to Diener (1984), in order to experience high SWB, an individual must be experiencing greater positive affect and lower negative affect, and be satisfied with their life. Satisfaction with oneself is the strongest form of wellbeing (i.e., high self-confidence), and personal satisfaction is important as well (i.e., different people have different criteria for being satisfied with life). Diener (1984, 2000) also noted that there are many factors that influence wellbeing; no one thing can cause wellbeing to increase nor decrease, but a combination of things. Those with a strong sense of subjective wellbeing tend to experience a higher frequency of desirable life outcomes, including having higher positive perceptions of oneself and others, being more social, active, likable, and cooperative (Lyubomirsky et al., 2005). Research also shows that, in addition to feeling better, there are many benefits to having a strong sense of

subjective wellbeing, including better relationships, better work performance (Diener et al., 2015), and even better health outcomes (Diener & Chan, 2011).

One threat to happiness is the experience of mental health disorders. Unfortunately, mental disorders are on the rise among college students (Francis & Horn, 2017). One longitudinal study (Duffy et al., 2019) tracked the mental health of undergraduate students over the course of 10 years (2007-2017) and found that mental health disorders are increasing at an alarming rate. These disorders included overwhelming anxiety, severe depression, and suicidal ideation/suicide attempts. Before the pandemic, roughly 20% of first-year college students experienced major depressive disorder (MDD), while roughly 17% experienced general anxiety disorder (Auerbach et al., 2018). In the months following the pandemic, many researchers have begun to examine what, if any, detrimental effects there were on the mental health and wellbeing of the general public.

One study conducted by Sibley et al. (2020) reported an increase in psychological distress in an annual report of the social attitudes, personality, and health outcomes of New Zealand citizens when compared to the same report a year prior (before the onset of COVID-19). Li et al. (2020) conducted a longitudinal study that reported the frequency of the use of positive words/phrases and negative words/phrases on a Chinese social app. After the onset of COVID-19, they noted an increase in the use of negative emotion indicators for anxiety and depression and a decrease in the use of positive emotion and life satisfaction indicators when compared to before the onset. A longitudinal study by Huckins et al. (2020) utilized an app to track the habits, behaviors, and feelings of undergraduate students at Dartmouth University before COVID-19 struck and caused widespread lifestyle changes. The researchers took advantage of their situation and examined the data from cohorts before and after the onset of COVID-19. They found that

students were more sedentary, used their cellphones more, and also experienced greater feelings of anxiety and depression after the onset of COVID-19 when compared to before.

So, why focus on boosting wellbeing? Why not simply focus on reducing these anxious and depressive symptoms? According to Diener (1984, 2000) having greater wellbeing is not simply about the lack of negative affect, but also a greater experience of positive affect and greater life-satisfaction. Research suggests that about half of our happiness is determined by genes, and 10% by our circumstances, leaving about 40% of the variability to intentional activities (Lyubomirsky et al., 2005). This means that a rather large portion of our happiness can be determined by our actions and isn't just left up to chance (Lyubomirsky et al., 2005). We all have a happiness set-point that remains somewhat constant; however, according to Diener et al. (2015, 2017), participating in activities that increase our happiness has been found to put us in the upper-range of that set-point.

Research suggests that interventions designed to enhance the wellbeing of an individual might be a good start. Thankfully, they are becoming more prevalent in the literature, with many focusing on the practice of mindfulness as an effective tool to reduce negative affect and increase positive affect (Fuchs et al., 2016; Schumer et al., 2018; Sirgy & Jackson, 2015). But what kind of intervention program works best? Lyubomirsky and Layous (2013) suggested that practicing simple positive activities can increase the experience of positive emotions. Their research shows that the quality of one's wellbeing practice depends on the variety of activities (the more variety, the better), the frequency (the more frequent, the better), the effort (the more effort, the better), and targeting these wellbeing activities to the specific person (they should practice activities that they are lacking in). Programs that are used to enhance wellbeing tend to produce stronger effects the longer the intervention lasts (Bolier et al., 2013); in addition to increasing SWB, they

are also effective at reducing depressive symptoms (Bolier et al., 2013; Sin & Lyubomirsky, 2009). The field of SWB is diverse, with applications that can benefit various sub-fields of psychology, including clinical, organizational, and experimental (Diener et al., 2017). The range of findings covered indicate that having a higher sense of SWB is not only crucial for healthy individuals, but the findings also suggest that happier societies are more productive as well (Diener et al., 2015, 2017).

The goal of the present study was for the researchers to use their knowledge of SWB in an attempt to help increase baseline SWB in college-aged individuals. This study used an intervention program that had been recently developed by the founders of wellbeing science, and thus showed promise for increasing wellbeing in a time when many struggled to maintain it. So, what intervention did this study use? Who developed it? Ed Diener, with the help of his colleagues, developed a program meant to enhance wellbeing that focused on tailoring a variety of skills that, when studied separately, have been shown to improve wellbeing (Emmons & McCullough, 2003; Huber et al., 2020; Lindsay et al., 2018; MacLeod et al., 2008; Morelli et al., 2015; Wilson et al., 2020). Aptly named, the ENduring HAppiness and Continued self-Enhancement (ENHANCE) program was designed to be 12 weeks long, and it included lessons on the practice of mindfulness, setting goals, identifying strengths and values, and discovering character strengths (Kushlev et al., 2017). This program has been shown to be effective at increasing wellbeing in those who participate in the experimental group, particularly when compared to the control group, who did not experience any of the modules offered. Heintzelman et al. (2020) found evidence that those who participated in the experimental group experienced lower negative affect, increased positive affect, and an increased sense of wellbeing upon completion of the program. This study included mostly middle-aged men and women in return

for financial compensation, and was delivered to both an online and in-person group. Similar results were found in online and in-person groups, with the online group having more overall participants by the end of the study. The ENHANCE program was designed for non-clinical populations to give individuals a way to increase their happiness and SWB (Kushlev et al., 2017). The program itself included assessments that measured the experience of stress, symptoms of anxiety and depression, as well as SWB. The program was designed to be tailored to the situation (or participants) at hand, and allowed for some modules to be used while others were not (Kushlev et al., 2017). For instance, the current experiment's protocol is based on a pilot study that was conducted during the spring semester of 2020 (Tsai et al., 2020), where the investigators opted for an 8-week program rather than the full 12 weeks, tailored by an expert in the field of wellbeing, a counseling professor, and a learning and behavior specialist (Dr. Joe Sirgy, Dr. Pei-Chun Tsai, and Dr. Pam Jackson respectively). The six modules that were included in the 2020 project, and are used in the current project, are available in Appendix A. Preliminary results from the pilot study suggested that the ENHANCE program may be effective in reducing symptoms of depression and anxiety for those in the experimental group. While the initial plan had been to deliver the program in-person, due to the onset of COVID, it was translated to an online format for the health and wellbeing of the staff and students. The pilot study was also unique in the fact that baseline SWB data was obtained before the onset of the pandemic, while post-test data was collected during COVID, so researchers were given the opportunity to track wellbeing among the control group before and as the pandemic progressed. While findings from that study will be mentioned in this thesis, the data itself will not be addressed.

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Kushlev et al. (2017) proposed that the lessons themselves would last for 12 weeks (3 months of treatment), and the investigators also proposed 3 months of follow-up, for a total of a 6-month long program. However, research has shown that short-term, self-help interventions can still be effective in enhancing an individual's wellbeing (Sin & Lyubomirsky, 2009). They tend to be more cost-effective, and many positive psychology interventions are already formatted this way. Kushlev et al.'s (2017) original proposal also described a target demographic of adults that were not college-aged (25 or older); however, in the case of the pilot study conducted at Radford University and the current project, college-aged students were the target demographic. The current study and the pilot (Tsai et al., 2020) used an ENHANCE program that was tailored for a short, semester-long bout to best accommodate university students. Part of the reason for this change in program length results from the length of the proposed project and the target population for the project. The hope was that a shorter program would help combat the high attrition rates that often occur during long-term intervention studies. The total time for the current intervention was 10 weeks: 1 week was spent on the introduction of the program, 6 weeks were spent on the lessons, 1 week was spent on the conclusion of the program, and 2 for the follow-up testing phase. Testing this expedited version of ENHANCE also provided evidence as to whether the shorter-term program can be effective in increasing SWB, increasing positive affect, and reducing negative affect in a college-aged population during a particularly stressful period in the world.

Another difference in the current project is that it is a hybrid of online and in-person lessons. In the original proposal, Kushlev et al. (2017) suggested that two different groups be included: one that attended the lessons online while the other attended lessons in-person, to test the differences in the effectiveness of the program through multiple formats. The study that was

conducted by Heintzelman et al. (2020) was able to offer both online and in-person lessons due to the study occurring before the onset of COVID-19. Due to the COVID-19 pandemic and the effort to make attending the lessons both more convenient and safer for the participants, the current study was conducted predominantly through an online format and the lessons were delivered via live Zoom meetings. In addition to live Zoom sessions where the principal investigator (PI) explained the lessons to the participants, the lessons were also digitized and made available for the participants to view and complete outside of the live Zoom sessions.

Results provided by Heintzelman et al. (2020) show that experimental participants had higher scores in life satisfaction, tended to experience more positive affect, as well as less negative affect. The preliminary results obtained from the pilot study (Tsai et al., 2020) provided evidence of a decrease in symptoms related to both depression and anxiety. Given these findings, it is predicted that this expedited version of ENHANCE will increase the wellbeing (measured using the Meaning in Life Questionnaire as well as Diener's Satisfaction with Life Scale) of participants who are assigned to the experimental condition when compared to those in the waitlisted control. Then, it is predicted that the participants in the experimental condition will experience less symptoms of stress and anxiety (both measured using the Depression, Anxiety, and Stress Subscales; stress and anxiety subscales only) and less symptoms of depression (measured using the Center for Epidemiologic Studies Depression Scale) when compared to those in the wait-listed control. Finally, it is also predicted that the participants in the experimental condition will experience less negative affect and more positive affect (both measured using scores on the Scale of Positive and Negative Experience) when comparing the pre and the post conditions, as well as compared to the wait-listed control.

#### Method

# **Participants**

Participants were recruited from the Radford University campus via fliers advertising the wellness program, in addition to the Psychology Department's SONA system, which makes surveys and studies easily accessible to students so that they may participate in research and earn extra credit in the process. After completion of the pre-test, there were 139 qualifying Radford University students. Qualifying students had to complete the survey and had to be classified as not depressed (score below 15 on the PHQ-9). These students ranged between the ages of 18 and 26 (M = 20.47, SD = 4.96), with 81.6% of them being female while the remaining 18.4% were male. Other demographics analyzed included year in school: 38.3% were freshman, 23.4% were juniors, and 23.4% were sophomores. In terms of ethnicity, 61.7% identified as White, 14.9% identified as African American, and 10.6% identified as Latino. Finally, when reporting relationship status, 42.6% were single and 53.2% were in a relationship. For the first phase of the study, the participants were randomly assigned to either the ENHANCE group (N = 57) or the wait-listed control group (N = 59). The ENHANCE group attended live Zoom meetings once a week during the fall semester while the control group only completed the pre-, post-, and followup surveys. At the end of the experiment the wait-listed participants had the opportunity to enroll in the wellness program the following semester. The participants (both experimental and control) recruited from the SONA system were compensated with SONA credits each time they filled out the pre-, post-, and follow-up assessments, for a total of three possible SONA credits. The participants (both experimental and control) recruited via fliers were compensated with the opportunity to enter a \$25 gift card raffle each time they filled out the pre-, post-, and follow-up assessments, for a total of three possible chances to win a \$25 gift card. In addition to this, all

participants had the opportunity to enter a raffle for the chance to win a \$10 gift card. There were two drawings each week in both the experimental and control groups: one for the participants obtained via SONA, and one for the participants obtained via fliers, for a total of six drawings over the course of the 6-week intervention period. Because this study was conducted across two semesters, there was a total of six \$25 gift cards awarded, as well as twenty-four \$10 gift cards awarded, for a total of \$390 total being awarded by the end of the study.

#### **Materials**

In addition to a laptop computer that was used to contact students and conduct meetings, the materials used in the wellbeing intervention for the experimental condition were based on the ENHANCE Program created and tested by Ed Diener's team (Kushlev et al., 2017) and the assessments. The original version of ENHANCE was 6 months long, and included 12 weeks of intervention as well as a follow-up assessment 3 months after the final lesson. For this particular experiment, a shortened version of the ENHANCE program that was 8 weeks long was used, with 6 weeks of happiness principles as well as a follow-up assessment 2 weeks after the final lesson. The lessons that were used were decided upon during the pilot study (Tsai et al., 2020) by experts in clinical psychology, experimental psychology, and SWB. These experts felt that the lessons chosen held the most relevant information for the participants, and were an apt choice for a condensed version of the ENHANCE program. For 8 weeks, this version of ENHANCE taught the participants about different skills they could use to develop a greater sense of SWB. Along with learning about each principle, the participants could take an assessment measuring the skill that they were developing (Appendix B). Each of these assessments complemented the lesson. Additionally, they also helped participants determine what principles they were strong in and what principles they might need to practice more (Kushlev et al., 2017). These assessments could also be used as a manipulation check, to ensure that the experimental participants were staying engaged and actively participating in the ENHANCE program.

The control participants were told that they were put on a waiting list, and that they had the opportunity to participate in the study at a later date. They were sent at least one email a week asking them to complete the same assessments as the experimental participants, and were also offered a chance to win a \$10 raffle for completing those assessments, just like the experimental participants. The only difference between the groups was that the control participants did not have access to the wellness literature or lesson. The following sections detail the surveys used, including each of the weekly surveys as well as the pre-, post-, and follow-up assessments.

# Overview of the Pre-, Post-, and Follow-up Assessments

The pre-, post-, and follow-up assessments consisted of the same assessments (see Appendix C for the full versions of each assessment), and included a demographics section. The demographics section asked the participants' age, gender, year in school, ethnicity, and relationship status. Their university email was also used in order to keep in contact with/serve as an identifier for each participant. The participants' names and their contact information were not recorded. The pre-, post-, and follow-up surveys also included the following scales.

**State Depression.** The Center for Epidemiologic Studies Depression Scale (CESD) measured state depression (Andresen et al., 1994; Irwin et al., 1999; Radloff, 1977). The CESD measured the participant's symptoms of depression using 10 Likert-style questions that each score from 0 (rarely or none of the time) to 3 (most or all of the time), with a possible score of 0 to 30. A higher score indicates a greater severity of symptoms experienced.

Anxiety and Stress. The Depression, Anxiety, and Stress Scales (DASS; Lovibond & Lovibond, 1995) stress and anxiety subscales measured the participant's symptoms of anxiety and stress using 14 Likert-style questions that each score from 0 (rarely or none of the time) to 3 (most or all of the time), with a possible score of 0 to 21 for each subscale used: anxiety and stress. A higher score indicates a greater severity of symptoms experienced.

**Basic Need Satisfaction.** The Basic Need Satisfaction in General (BNS; Deci & Ryan, 2000) measures the degree to which a participant's basic needs are satisfied using 21 Likert-style questions that each score from 1 (not true at all) to 7 (very true), with a possible score of 21 to 147. A higher score indicates a greater degree to which the participant's basic needs are satisfied.

Meaning in Life. The Meaning in Life Questionnaire (MLQ; Steger et al., 2006; Steger & Shin, 2010) measures how full of meaning participants feel that their lives are, how engaged and motivated participants are to find meaning and deepen their understanding of their lives. The scale has 10 Likert-style questions that each score from 1 (absolutely untrue) to 7 (absolutely true), with a possible score of 10 to 70. A higher score indicates a greater degree to which the participant finds their life to be meaningful.

**Satisfaction with Life.** The Satisfaction with Life Scale (SWLS; Diener et al., 1985) measures the subjective wellbeing of an individual using five Likert-style questions that each score from 1 (strongly disagree) to 7 (strongly agree), with a possible score of 5 to 35. A higher score indicates a greater subjective wellbeing.

**Positive, Negative, and Total Affect.** The battery also contained the Scale of Positive and Negative Experience (SPANE; Diener et al., 2010). The SPANE measured the degree to which a participant experiences positive and negative affect. Each subscale contains six Likert-style items that participants score from 1 (very rarely or never) to 5 (very often or always).

Scores can vary from 6 (lowest possible) to 30 (highest possible). Each of the subscales measures feelings of positive or negative affect, and whether the total affect of that participant is primarily positive or negative.

Trait Depression. Finally, this battery contained the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001), which is used to provisionally diagnose depression and grade severity of symptoms in general medical and mental health settings using nine Likert-style questions that each score from 0 (not at all) to 3 (nearly every day), with a possible score of 0 (lowest possible) to 27 (highest possible). A higher score indicates a greater severity of depression. Those scoring a 15 or more were excluded from final analyses but were still welcome to participate in the program. It has been hypothesized by Diener and his team that individuals with depression should not be measured against those who are not depressed; their wellbeing tends to be in a lower place at baseline, making them outliers in the analyses.

## Week 1 / Introduction

In the first week, participants were introduced to the study either through email advertisements forwarded from their professors or through the SONA system. They were told that ENHANCE stands for ENduring HAppiness aNd Continued self-Enhancement, then, they were told that this study involves seeing whether the ENHANCE project can increase their happiness. Next, they were told that if they agree to participate, they would fill out several assessments at the beginning (pre-test) and twice at the end of the program (post-test and follow-up). Filling out these surveys would take about 30 minutes each time. The experimental participants were also introduced to weekly presentations (over 8 weeks) about happiness in live Zoom meetings, given access to additional readings, as well as encouraged to participate in weekly happiness exercises. Finally, both groups were told about the compensation for their

time. If they signed up through email, they had the opportunity to register for a random drawing for one \$25 gift card upon the completion of the pre-, post-, and follow-up assessments respectively (a total of three separate opportunities to win). Registration for the drawing was completely voluntary. If they signed up through SONA, they had the opportunity to earn a SONA research credit every time they completed the pre-, post-, and follow-up assessments respectively (for a total of three SONA credits). When participants from the ENHANCE and control groups filled out the weekly assessments, regardless of signing up through email or SONA, they also had the opportunity to register for a random drawing for one \$10 gift card each time they participated.

#### Week 2 / First Principle

In the second week, the first principle the experimental participants were introduced to was setting goals that were right for them. Those who practice setting and achieving goals have been found to have increased wellbeing, possibly due to the increased positive affect they feel when making progress towards and achieving the goals that participants set for themselves (MacLeod et al., 2008). Other studies have also found that those more involved in setting and achieving goals participate more in life activities and tend to grow more both personally and socially, increasing their wellbeing in the process (Sheldon et al., 2002). The accompanying scale that both the experimental and control groups had the opportunity to fill out is known as the State Hope Scale (also known as the Goals Scale; Snyder et al., 1996), which measures the participant's experience of hopefulness and achieving goals: where they currently are, where they are going, and where they would like to be. This was done using 14 Likert-style questions that each score from 1 (definitely false) to 8 (definitely true), with a possible score of 6 to 48.

#### Week 3 / Second Principle

In the third week, the second principle covered was teaching the participant about utilizing their personal strengths. Research has shown that the application of some character strengths can produce positive outcomes, including increases in wellbeing and positive affect (honesty and love), while the application of others can inhibit personal accomplishment (fairness) and even create emotional exhaustion (judgement) (Huber et al., 2020). In addition, knowing what character strengths one possesses can be helpful in determining the optimum work environment for the individual, leading to greater life satisfaction and wellbeing (Höfer et al., 2020). The accompanying scale that both the experimental and control groups had the opportunity to fill out is known as the Strengths Use Scale (Govindji & Linley, 2007), which measures the participant's confidence in and their comfort utilizing their strengths, where they currently are, where they are going, and where they would like to be. This was done using six Likert-style questions that each score from 1 (strongly disagree) to 7 (strongly agree), with a possible score of 14 to 98.

## Week 4 / Third Principle

In the fourth week, the third principle covered was becoming more mindful. Research has shown that a brief mindfulness intervention can be effective in reducing negative affect and increasing positive affect, by guiding an individual's focus to the present and the positive events in their lives and helping them accept and let go of the negative events in their lives (Lindsay et al., 2018). Mindfulness practices have also been shown to be effective in increasing wellbeing, reducing stress, and reducing reported negative health symptoms (Carmody & Baer, 2008). The accompanying scale that both the experimental and control groups had the opportunity to fill out is known as the Cognitive and Affective Mindfulness Scale – Revised (CAMS-R; Feldman et al., 2007), which measures the participant's mindfulness skill. This was done using 12 Likert-style

questions that each score from 1 (rarely/not at all) to 4 (almost always), with a possible score of 12 to 48.

# Week 5 / Fourth Principle

In the fifth week, the fourth principle covered dealing with negative thoughts, experiences, and circumstances. Having compassion for oneself is important, as experiencing negative compassion (i.e., isolation and self-judgement) can result in increased feelings of both depression and anxiety (Soysa & Wilcombe, 2015), whereas having increased positive compassion for oneself produces increases in wellbeing and reduces negative affect (Wilson et al., 2020). The accompanying scale that both the experimental and control groups had the opportunity to fill out is known as the Self-Compassion Scale – Short Form (Raes et al., 2011), which measures the participant's compassion towards themselves. This was done using 12 Likert-style questions that each score from 1 (almost never) to 5 (almost always), with a possible score of 12 to 60.

## Week 6 / Fifth Principle

In the sixth week, the fifth principle covered was appreciating the people in their lives. Research shows that practicing gratitude can promote the formation of relationships and the maintenance of them (Algoe et al., 2008). Being social has also been noted as being important for wellbeing (Diener, 2000). One study found that when having an experimental group focus on writing down their daily feelings and gratitude (as opposed to their feelings and hassles), it produced greater positive affect and wellbeing (Emmons & McCullough, 2003). The accompanying scale that both the experimental and control groups had the opportunity to fill out is known as the Gratitude Questionnaire (GQ-6; McCullough et al., 2002), which measures the

participant's levels of gratitude using 12 Likert-style questions that each score from 1 (strongly disagree) to 7 (strongly agree), with a possible score of 6 to 42.

# Week 7 / Sixth Principle

In the seventh week, the sixth principle covered was contributing to the happiness of others. Research has shown that showing compassion to others resulted in increased happiness and greater self-esteem than those in a control condition (Mongrain et al., 2011). Additional findings also suggest that sharing in, celebrating, and enjoying others' positive emotions can increase individual wellbeing and relationship strength (including increased prosocial behavior and social closeness; Morelli et al., 2015). The accompanying scale that both the experimental and control groups had the opportunity to fill out is known as the Perceived Prosocial Impact scale (Grant, 2008), which has the participant focus on a recent project they performed and measures their perceived prosocial impact on said project. This was done using three Likert-style questions that each score from 1 (strongly disagree) to 5 (strongly agree), with a possible score of 3 to 15.

# Week 8 / Moving Forward

Finally, the ENHANCE participants learned about integrating the happiness principles and moving forward. Both the experimental and control participants were asked to complete the post-assessments.

#### Week 10 / Final Assessments

Then, approximately 2 weeks later, both the ENHANCE and control participants were asked to complete the follow-up assessment.

#### **Procedure**

The procedure was modeled after the ENHANCE project proposal by Kushlev et al. (2017) and the pilot study conducted on the Radford University campus in 2020 (Tsai et al., 2020). Recruiting for participants took place on the Radford University campus. Fliers were posted, promotional emails were sent to students, and SONA was used as part of the advertising process for the wellness program. The program was presented as an opportunity for participants to increase their happiness. Of the participants that signed up for the program, half of them were randomly assigned to a wait-listed control, while the other half were enrolled in weekly lessons for the happiness principles. Which group the participants fell in was determined via random assignment through the use of a numbered list (those with odd numbers were experimental, those with even numbers were control). Both groups completed the pre-assessment that took baseline measures of stress, depression, anxiety, and wellbeing before learning to which group they were assigned. Both groups took the same measures after completion of the program, and once more after a period of 2 weeks past the post-assessment to determine if the participants maintained any improvement in mood or life satisfaction.

The weekly Zoom meetings consisted of 15-45-minute sessions that took place over the course of 8 weeks, in which the following topics of wellness were explained and discussed: setting goals that are right for you; utilizing your personal strengths; becoming more mindful; dealing with negative thoughts, experiences, and circumstances; appreciating the people in your life; contributing to the happiness of others; and finally, integrating the happiness principles to move forward (see Appendix A). After the participants completed the baseline measures and were separated into either an experimental or wait-listed control, then they were invited via e-mail to participate in the first session of wellness lessons, which focused on identifying goals.

Those in the experimental group were invited to attend the session via a Zoom meeting link. They had the choice to attend live or view a pre-recorded version of the session. Those attending the live session had the opportunity to watch the PI walk the participants through the weekly practice they should try to complete, as well as explain the accompanying survey that measures the skill (see Appendix B). Appendix A describes the lessons in greater detail and was adapted from the Diener team's proposal of the ENHANCE program. The control participants, on other hand, were not invited to the live wellness lessons or given additional literature to read. They did receive an email at least once a week to take the same surveys as the experimental group so that they could be an active control group, rather than a passive control group. Once the final lesson of wellness was completed, both the control and experimental participants completed the postassessments, and after 2 weeks, they completed the follow-up assessments. The wait-listed control group was then offered the opportunity to complete the same wellness program the following semester, and was once again offered the opportunity to either earn SONA credits or enter drawings for more \$25 raffles as compensation for completing the pre-, post-, and followup surveys, as well as additional surveys administered throughout the weekly program.

#### Week 1 / Introduction

Participants signed up through SONA or by emailing the PI and expressing their interest. Once they had signed up/contacted the PI, these individuals were sent links to the surveys to be completed via Qualtrics. The signup period lasted 2 weeks from the surveys first being made available to the deadline the evening before the first meeting. Once the deadline had passed, the PI gathered the university emails of each of the participants. If the participant did not provide a university email, then they could not enroll in the study. The PI then compiled two lists: one list composed of the SONA students, and the other composed of the email students. These lists were

kept separate due to the separate compensation methods (SONA credits for the former and cash raffles for the latter). These participants in this list were then numbered: even numbered participants were assigned to the control group, while odd numbered participants were assigned to the experimental group. Those assigned to the control group were told via email that they were put on a waiting list, and would only be contacted weekly in order to complete the assessments, while the experimental participants were told via email that their first meeting would be the following Friday at 12 p.m. via Zoom. The experimental participants were given a Zoom link, as well as instructions and contact information from the PI, should they have any additional questions.

#### Week 2 / First Principle

In the second week, the first principle the ENHANCE participants were introduced to was setting goals that were right for them. When the experimental participants were informed of their first meeting, they were also given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the lesson. During this session, the PI introduced themself to the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. The survey included in the first email was the State Hope Scale (also known as the Goals Scale; Snyder et al., 1996), which measured the participant's experience of hopefulness and achieving goals: where they currently are, where they are going, and where they would like to be. Both

experimental and control participants were compensated for their time filling out the survey with an entry to a \$10 raffle. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times. The surveys had to be completed before the next meeting the following week.

## Week 3 / Second Principle

In the third week, the second principle covered was teaching the participant about utilizing their personal strengths. When the experimental participants were informed of their second meeting, they were again given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the lesson. During this session, the PI greeted the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. The survey included in the second email was the Strengths Use Scale (Govindji & Linley, 2007), which measures the participant's confidence in and their comfort utilizing their strengths, where they currently are, where they are going, and where they would like to be. Both ENHANCE and control participants were compensated for their time filling out the survey with an entry to a \$10 raffle. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times. The surveys had to be completed before the next meeting the following week.

#### Week 4 / Third Principle

In the fourth week, the third principle covered was becoming more mindful. When the experimental participants were informed of their third meeting, they were again given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the lesson. During this session, the PI greeted the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. The survey included in the second email was Cognitive and Affective Mindfulness Scale – Revised (CAMS-R; Feldman et al., 2007), which measures the participant's mindfulness skill. Both experimental and control participants were compensated for their time filling out the survey with an entry to a \$10 raffle. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times. The surveys had to be completed before the next meeting the following week.

# Week 5 / Fourth Principle

In the fifth week, the fourth principle covered dealing with negative thoughts, experiences, and circumstances. When the experimental participants were informed of their fourth meeting they were again given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the lesson. During this session, the PI greeted the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to

the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. The survey included in the fourth email was the Self-Compassion Scale – Short Form (Raes et al., 2011), which measures the participant's compassion towards themselves. Both ENHANCE and control participants were compensated for their time filling out the survey with an entry to a \$10 raffle. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times. The surveys had to be completed before the next meeting the following week.

## Week 6 / Fifth Principle

In the sixth week, the fifth principle covered was appreciating the people in their lives. When the experimental participants were informed of their fifth meeting, they were again given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the lesson. During this session, the PI greeted the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. The survey included was the Gratitude Questionnaire (GQ-6; McCullough et al., 2002), which measures the participant's levels of gratitude. Both experimental and control participants were compensated for their time filling out the survey with an entry to a \$10 raffle. They were given 1 week to fill out the surveys, and were reminded of the

deadline multiple times. The surveys had to be completed before the next meeting the following week.

### Week 7 / Sixth Principle

In the seventh week, the sixth principle covered was contributing to the happiness of others. When the ENHANCE participants were informed of their sixth meeting, they were again given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the lesson. During this session, the PI greeted the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. The survey included was the Perceived Prosocial Impact scale (Grant, 2008), which has the participant focus on a recent project they performed and measures their perceived prosocial impact on said project. Both experimental and control participants were compensated for their time filling out the survey with an entry to a \$10 raffle. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times. The surveys had to be completed before the next meeting the following week.

# Week 8 / Moving Forward

Finally, the participants learned about integrating the happiness principles and moving forward. When the experimental participants were informed of their seventh meeting, they were again given a Zoom link via email to the live session. They were also informed that they did not have to be present at the meeting, as the PI would send the same instructional video after the

lesson. During this session, the PI greeted the participants, thanked them for agreeing to participate, then gave them a summary of the program. Once the formalities were taken care of and questions were addressed, the PI presented a pre-recorded lesson video to the participants, and once it was finished, answered any questions/concerns that the participants had. They were thanked for their time and reminded to look out for a survey link in their email, as well as additional readings on the lesson for the week. For their next survey, they were asked to complete the post-assessments. The participants who signed up via email were compensated for their time filling out the survey with an entry to a \$25 raffle, while the participants who signed up via SONA were compensated for their time with SONA credits. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times.

#### Week 10 / Final Assessments

Then, approximately 2 weeks later, a follow-up assessment was conducted. The participants were emailed a link to their final survey. The participants who signed up via email were compensated for their time filling out the survey with an entry to a \$25 raffle, while the participants who signed up via SONA were compensated for their time with SONA credits. They were given 1 week to fill out the surveys, and were reminded of the deadline multiple times.

## **Results**

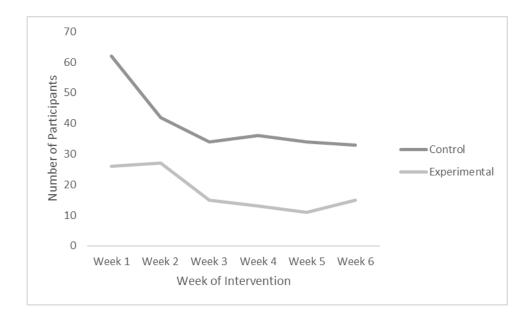
Data was collected through surveys created on Qualtrics, which were then made available either by email or through the Radford University research system (SONA). Participants had a time limit to complete the surveys after they were presented, and on average were given 7 full days to respond. Once the cutoff point had passed, the data in Qualtrics was converted to an Excel file for cleaning. The cleaning process involved removing mostly incomplete surveys (16 altogether) and surveys that individuals spent less than 300 seconds (or 5 minutes) on (pre, post,

and follow-up tests; 20 altogether). After the data was cleaned in Excel, it was then exported to SPSS for data analysis.

After signing up, the participants completed the pre-test (N = 135). Qualifying participants were then randomly assigned to either a control group (N = 59) or an experimental group (N = 57). Of those qualifying participants, a total of 59 completed both the pre and posttest; however, 12 of these participants were dropped due to scoring 15 or higher on the PHQ9 in the pre-test, indicating that they were depressed. This left a grand total of 47 participants (Control N = 25, Experimental N = 22). Of these participants, 33 were from the fall semester sessions, and 14 were from the spring semester. Follow-up data was not included in the final analyses because the 12 participants that responded were all from the control group.

Once the data cleaning was complete, the pre- and post-test data for the groups (experimental/ENHANCE vs. control) and semester data (fall vs. spring) was analyzed. Unfortunately, group differences and semester differences were present at baseline for a variety of the pre-test data (see more in-depth description below). These differences were likely due to the fact that this was a long-term intervention study. Even if the participants were matched from the beginning, it is likely that they would still have ended up looking different by the end due to the amount of dropouts and dropped participants (see Figure 1).

Figure 1
Weekly Assessments



*Note*. The number of participants that completed the weekly manipulation checks over the course of the six weeks of treatment. There was considerable drop-out over the course of the ENHANCE program.

Below, findings and data from each of the examined scales is described in greater detail. A 2 (pre vs. post) x 2 (experimental vs. control group) x 2 (fall vs. spring semester) repeated measures ANOVA design was used to analyze the mean data for each scale. Between and within-subjects effects were listed below. Follow-up analyses were conducted using a 2 (group) x 2 (semester) design, examining pre-test and post-test (post-test data) separately.

#### **State Depression (CESD)**

There were no significant results regarding tests of within-subject effects on the CESD.

These included no main effect of pre versus post, and no significant interactions of pre/post by group, pre/post by semester, or pre/post by group by semester.

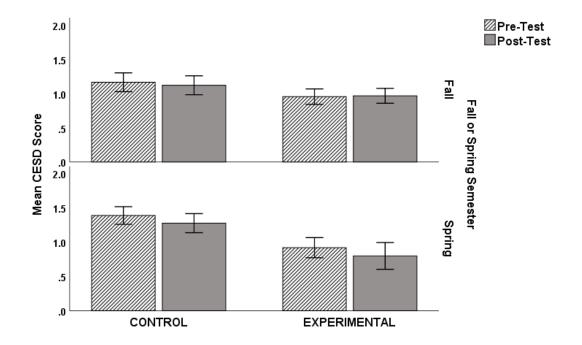
There was a group main effect in terms of mean scores on the CESD between the control and experimental groups, F(1, 43) = 5.26, p = .027,  $\eta^2 = .109$ . Mean scores were significantly higher for the control group (M = 1.24) when compared to the experimental group (M = .91), meaning that participants in the control group were more depressed overall (at both baseline and post-test). There were no significant differences between scores for semester or group by semester.

The main effect of group was found to be significant in the follow-up analysis for pretest, F(1, 43) = 4.80, p = .034,  $\dot{\eta}^2 = .100$ . Mean scores were significantly higher for the control group (M = 1.28) when compared to the experimental group (M = .94), meaning that participants in the control group had a higher state depression at pre-test when compared to the experimental group. Once again, there were no significant differences between scores for semester or group x semester.

A group effect was almost significant in the follow-up analysis for the post-test as well, F(1, 43) = 3.99, p = .052,  $\dot{\eta}^2 = .085$ . Mean scores were higher for the control group (M = 1.20) when compared to the experimental group (M = .88), meaning that participants in the control group had an almost significantly higher state depression at post-test when compared to the experimental group. Once again, there were no significant differences between scores for semester or group x semester. The data are graphed in Figure 2.

Figure 2

Center for Epidemiological Studies - Depression (CESD)



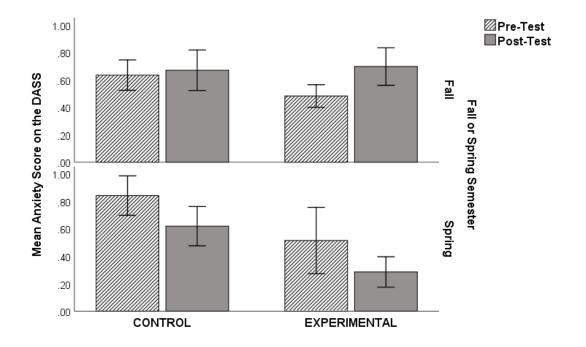
*Note*. CESD score on the pre- and post-test as a function of group for each semester. Mean scores ranged between 0.4 to 2.2, and the highest mean score could be 3.0. Higher scores indicated a greater experience of symptoms of depression.

## Anxiety (DASSa)

There were no significant main effects and no significant interactions on the anxiety subscale of the DASS. As can be seen in the mean data presented in Figure 3, there was a great deal of variability. The graph suggested a pre vs. post by semester interaction (but this effect only approached significance, F(1, 42) = 3.57 p = .066,  $\dot{\eta}^2 = .078$ ).

Figure 3

Depression, Anxiety, and Stress Scales (DASS)



*Note*. The mean anxiety score on the DASS as a function of pre- versus post-test, group and semester. Mean scores ranged between 0 and 1.57, and the highest mean score could be 3.0. Higher scores indicated a greater experience of symptoms of anxiety. The group differences were not significant.

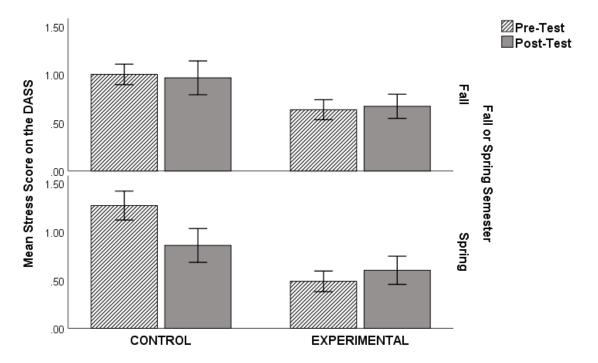
# Stress (DASSs)

There was a pre versus post by group interaction that was almost significant on mean scores for stress (DASSs), F(1, 42) = 3.84, p = .057,  $\dot{\eta}^2 = .084$ . Mean stress scores for the control group at pre-test (M = 1.13) were almost significantly higher than mean stress scores for the control group at post-test (M = .91). These results imply that participants in the control group were more stressed before the intervention. On the contrary, mean scores on stress for the experimental group at pre-test (M = .56) were lower than at post-test (M = .64). These results imply that participants in the experimental group were somewhat more stressed after the intervention.

The main effect for group on mean scores of stress was significant, F(1, 42) = 8.55, p = .006,  $\dot{\eta}^2 = .169$ . Mean scores on stress for the control group (M = 1.02) were significantly higher than mean stress scores for the experimental group (M = .60). Unfortunately, this implies that the groups were different regardless of the intervention. The stress data for all groups is graphed in Figure 4.

Figure 4

Depression, Anxiety, and Stress Scales (DASS)



*Note*. The mean stress score on the DASS as a function of pre- versus post-test, group and semester. Mean scores ranged between 0 and 1.85, and the highest mean score could be 3.0. Higher scores indicated a greater experience of symptoms of stress.

#### **Basic Needs Satisfaction**

### Autonomy

There were no significant results regarding tests of within-subject effects, nor betweensubjects tests on the BNSa.

#### Relatedness

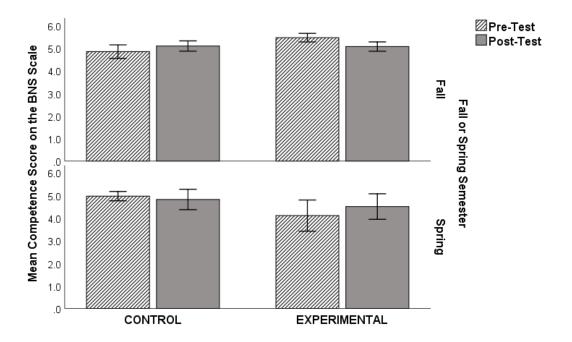
There were no significant results regarding tests of within-subject effects on the BNSr. There was, however, a main effect for semester for the relatedness scores on the BNS, F(1, 42) = 4.73, p = .035,  $\dot{\eta}^2 = .101$ . Participants from the fall semester (M = 5.57) had a significantly higher mean score on relatedness when compared with the mean score for participants in the spring semester (M = 4.95). This finding implies that, in terms of relatedness, the participants in the fall semester were more likely to have their basic needs met than participants in the spring semester.

# Competence

There was a significant three-way interaction, pre versus post x group x semester effect on scores of the competence portion of the BNS, F(1, 42) = 4.34, p = .043,  $\dot{\eta}^2 = .094$ . There were no significant differences when examining the between-groups effects. Experimental participants during the fall semester saw a decrease in their BNS Competence scores, while experimental participants during the spring semester saw an increase in their BNS Competence scores. A reverse effect was observed for the control participants. The mean Competence data are graphed in Figure 5.

Figure 5

Basic Need Satisfaction Competency Subscale (BNS)



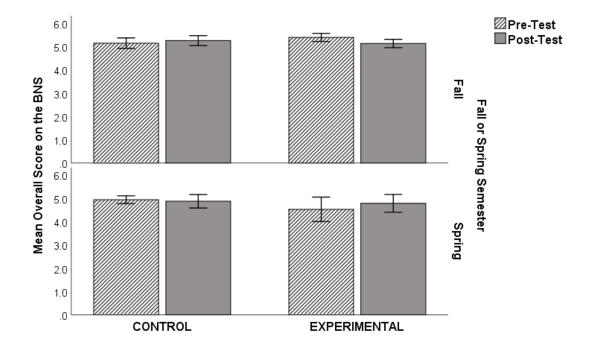
*Note*. The mean competence score on the BNS as a function of pre- versus post-test, group and semester. Mean scores ranged between 1.85 to 5.57, and the highest mean score could be 7.0. Higher scores indicated a greater degree to which the participant's needs were satisfied.

## Overall

The mean scores on the overall BNS Scale mirror results on the competency portion, in that the three-way interaction approached significance: pre versus post x group x Semester effect on scores, F(1, 40) = 3.85, p = .057,  $\dot{\eta}^2 = .088$ . These data are graphed in Figure 6. There were no significant differences when examining the between-groups effects. Experimental participants during the fall semester saw a decrease in their BNS scores, while experimental participants during the spring semester saw an increase in their BNS scores. A reverse effect was observed for the control participants. This effect is possibly piggybacking off of the scores from the competency portion of the BNS.

Figure 6

Basic Need Satisfaction Overall (BNS)



*Note*. The overall mean score on the BNS as a function of pre- versus post-test, group and semester. Mean scores ranged between 2.66 to 6.47, and the highest mean score could be 7.0. Higher scores indicated a greater degree to which the participant's needs were satisfied.

# **Meaning in Life**

### Presence

There were no significant findings regarding tests of within-subject effects on the presence of meaning subscale in the participants' lives. There were no significant results regarding tests of between-subject effects as well.

### Search

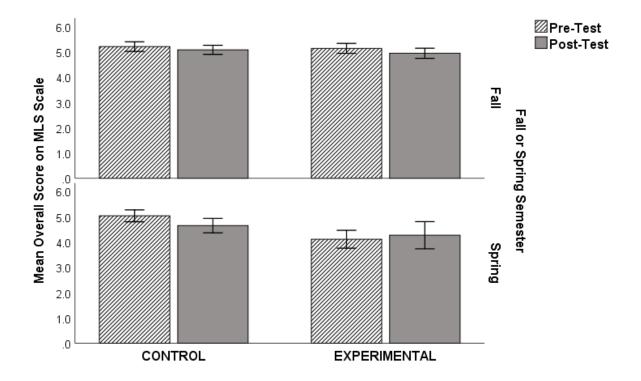
There were no significant within-subject effects nor tests of between-subject effects on the search for meaning in life subscale.

### **Overall**

There were no significant results regarding tests of within-subject effects on the overall MLQ. However, there was a significant main effect of semester regarding scores on the overall MLQ, F(1, 41) = 5.701, p = .022,  $\dot{\eta}^2 = .122$ . Participants in the fall semester (M = 5.08) had significantly higher mean scores on the overall MLQ when compared to participants in the spring semester (M = 4.51). These results imply that participants in the fall semester had a higher sense/presence of meaning in their lives compared to participants in the spring semester. The overall mean data is graphed in Figure 7.

Figure 7

Meaning in Life Questionnaire (MLQ)



*Note*. The overall mean score on the MLQ scale as a function of pre- versus post-test, group and semester. Mean scores ranged between 3.2 and 6.8, and the highest mean score could be 7.0. Higher scores indicated a greater feeling of meaningfulness in the participant's life.

# SPANE: Positive, Negative, and Total Affect

### Positive

There were no significant results regarding tests of within-subject effects on the positive SPANE. There was a significant main effect of semester regarding scores on the positive portion of the SPANE, F(1, 41) = 4.82, p = .034,  $\hat{\eta}^2 = .105$ . Participants in the fall semester (M = 3.88) had significantly higher scores on positive affect when compared to participants in the spring (M = 3.46). These results imply that all of the participants in the fall had a greater experience of positive emotions than all participants in the spring. The mean positive affect data for all groups is graphed in Figure 8.

# Negative

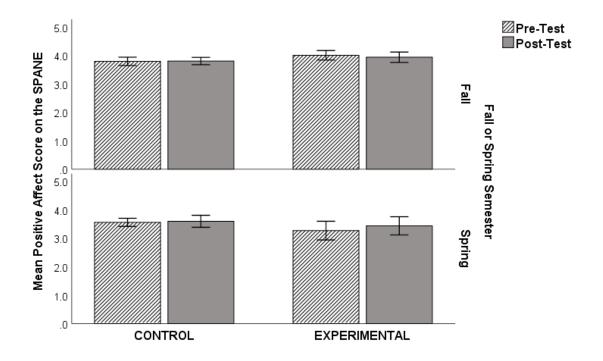
There were no significant results regarding tests of within-subject effects regarding scores on negative affect. There were no significant results regarding tests of between-subject effects on negative affect either.

### **Total**

There were no significant results regarding tests of within-subject effects regarding scores on overall affect. There were no significant results regarding tests of between-subject effects on overall affect, F(1, 41) = 3.14, p = .084,  $\dot{\eta}^2 = .071$ , although the effect of semester was similar in that the fall semester scores were higher (M = 8.02) than the spring semester (M = 4.66).

Figure 8

Scale of Positive and Negative Experiences Positive Subscale (SPANE)



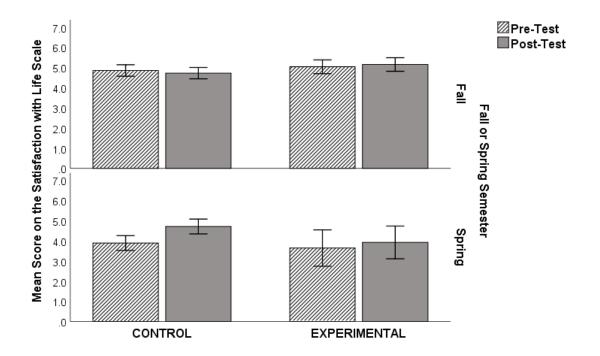
*Note.* The mean positive score on the SPANE as a function of pre- versus post-test, group and semester. Mean scores could range between 2.33 and 5, and the highest mean score could be 7.0. Higher scores indicated a greater experience of positive emotions.

## **SWLS: Satisfaction with Life Scale**

Regarding scores on the SWLS subjective wellbeing scale, there was a pre versus post effect in the within-subject effects, F(1, 41) = 4.07, p = .050,  $\acute{\eta}^2 = .090$ . The mean post-test score (M = 4.63) was significantly higher for all participants than the pre-test score (M = 4.36). However, the pre versus post effect interacted with semester, F(1, 41) = 4.39, p = .042,  $\acute{\eta}^2 = .097$ . Participants in the spring semester exhibited a significant increase in wellbeing from pre-test (M = 3.76) to post-test (M = 4.32), whereas participants in the fall semester did not show any significant changes in wellbeing scores from pre-test (M = 4.95) to post-test (M = 4.94). These results imply that participants in the spring semester may have experienced significant increases in wellbeing from the pre-test to the post-test.

Concomitantly, there was a significant between-groups effect of semester on wellbeing scores, F(1, 41) = 4.85, p = .033,  $\dot{\eta}^2 = .106$ . Participants in the fall semester (M = 4.94) had significantly higher scores on wellbeing than participants in the spring semester (M = 4.04) on the average. These results imply that participants in the fall semester had higher wellbeing overall than the participants in the spring semester. The mean scores are graphed in Figure 9.

Figure 9
Satisfaction with Life Scale (SWLS)



*Note.* The mean scores on the SWLS as a function of pre- versus post-test, group and semester. Mean scores ranged between 1 and 7. Higher scores indicated a greater degree to which the participant was satisfied with their life.

#### **Discussion**

It was predicted that this expedited version of ENHANCE would increase the wellbeing of participants who were assigned to the experimental condition when compared to those in the wait-listed control. This hypothesis was not supported. Then, it was predicted that the participants in the experimental condition would experience less symptoms of stress and anxiety and less symptoms of depression when compared to those in the wait-listed control. This hypothesis was not supported. Finally, it was also predicted that the participants in the experimental condition would experience less negative affect and more positive affect when comparing the pre and the post conditions, as well as compared to the wait-listed control. This hypothesis was also not supported. Unfortunately, in conclusion, none of the proposed hypotheses were supported. The expedited ENHANCE program was not effective at increasing wellbeing among university students in this study.

The following results will be broken down into sections based on the traits that were assessed in the pre-, post-, and follow-up assessments. Only significant effects, or results approaching significance, will be discussed.

# **State Depression (CESD)**

Participants in the control group had a higher state depression at pre-test and at post-test when compared to the experimental ENHANCE group. Unfortunately, this means that this study's control and experimental groups were different from the beginning. This likely came as a result of the high dropout rate that occurred over the course of the study (43.7% of participants that participated in the pre-test also completed the post-test), so, despite looking different by the conclusion of the study, it is difficult to say that the differences observed were due to the

treatment. High dropout rates occurred among the Tsai et al. (2020) study, as well as the Heintzelman et al. (2020) study, so this study's dropout rate was not surprising.

### **Anxiety (DASS)**

Participants in the control group were also more anxious before the intervention when compared to the ENHANCE group. This finding implies that the groups were different regardless of intervention in terms of anxiety. These results may be the product of dropout among this study's participants.

### Stress (DASS)

Participants in the control group were more stressed before the intervention when compared to the ENHANCE group. Unfortunately, similar to the findings in terms of depression, this finding implies that the groups were different regardless of intervention in terms of stress.

These results may once again be the product of dropout among this study's participants.

### **Basic Needs (BNS)**

In terms of relatedness, the participants in the fall semester were more likely to have their basic needs met than participants in the spring semester. This could come from the fact that the pool of fall participants consisted heavily of university freshman; those just arriving or new to university generally make new relationships and experience freedom with like-minded individuals for the first time. It could very well be that by the time the spring semester arrived, a shift had occurred among students, possibly due to a combination of the long-term effects of the pandemic as well as changes that occurred in the student population. These changes included classes that may not have met in person or were socially distanced, or students that chose to learn virtually rather than stay on campus. By this time, many individuals could have lost friends and classmates to sickness or other life conflicts. Also, this could have been partially due to the first-

semester freshmen's expectations of college not being fulfilled due to the pandemic or otherwise.

They could be struggling to keep their social and academic lives in balance, causing the spring semester participants to be worse off when compared to the fall semester participants.

## Meaning in Life (MLQ)

Participants in the fall semester had a higher sense/presence of meaning in their lives compared to participants in the spring semester. Once again, the PI believes that these results have similar reasons as those discussed above. Meaning in life is a strong indicator of overall wellbeing, and was found with the other results; there is a theme of those in the fall semester having a stronger sense of wellbeing than those in the spring semester.

## **Positive and Negative Affect (SPANE)**

Participants in the fall had a greater experience of positive emotions than participants in the spring, consistent with this study's other findings that participants in the fall had a higher overall wellbeing than their spring counterparts. Those with a higher sense of wellbeing tend to feel more positive emotions than negative.

# Subjective Wellbeing (SWLS)-

Participants in the spring semester exhibited a significant increase in wellbeing over the course of the program, whereas participants in the fall semester did not show any significant changes in wellbeing scores in the same time frame. This could have come as a result of the higher baseline wellbeing score that fall participants started with, whereas spring participants started out with lower wellbeing scores, and had the most room for improvement. Wellbeing for a university student could likely be high in the fall, during the beginning of a new and exciting experience. They have just graduated high school and have started pursuing their passion. They are meeting new people, making friends, possibly traveling in from far off places. College is a

very exciting time for most people, and unfortunately, it seems, at least from these results, that by the time they make it to the spring semester, a lot of that excitement has worn off, becoming replaced with distance and stress as the university students struggle to cope, especially in the midst of the pandemic. So, it should come as no surprise that participants in the fall semester had higher wellbeing than the participants in the spring semester.

While the goal of the current study was to look at the college population as a whole, the majority of the demographic consisted of freshman participants, meaning that this study's results could have been strongly influenced by how wellbeing looked over the course of an individual transitioning from fall to spring semester, along with the added stress of COVID-19. Gathering data from a wider range of students could possibly yield different results. Experienced students may have been more active within the ENHANCE program. Due to COVID-19, the PI was unable to meet the participants face to face. This potentially contributed to a lack of commitment with the program, as many people could have felt that it was unimportant or useless to attend. In similar vein, while the participants were offered both encouragement and the chance at monetary compensation for their time, the assessments that occurred during treatment and participation in the lessons was always optional. If the PI had made it a requirement to complete these assessments/attend, then there would be an even smaller pool of participants, but it could have also led to more accurate/different results when examining the effect of the ENHANCE program during COVID-19 (if any). Unfortunately, few participants in both the control and experimental groups responded to these weekly assessments. The negative feelings that have resulted from the effects of COVID-19 are likely to produce negative affect, which negatively impacts our mental wellbeing. While the intention of this study was not to help alleviate the effects of COVID-19, but rather to actually improve general wellbeing, this event must be acknowledged as potentially

having an impact on the study. The focus of the study is in fact the ENHANCE program, and whether or not a shortened version could be effective at increasing wellbeing in a college population. All of this is to say that COVID-19 may have impacted this study's results, but also provided a unique opportunity to assess a wellbeing intervention program during a pandemic. It very well may have obscured the variables the researchers were truly attempting to measure.

It is this researcher's firm belief that in-person delivery of this version of the ENHANCE program would result in a higher likelihood of increasing wellbeing. Especially with the particular demographic examined, university students may be more motivated and involved with an in-person program. Changes could also been made to the way that participants are contacted/reminded, as participation from the experimental group dropped off faster and more severely than participation from the control group, who were contacted less often and had less demands placed on them. The most important information gained from this study, however, is a better understanding of how the expedited ENHANCE program works and the knowledge that it may not be as reliable in increasing wellbeing as hoped. Given results from the pilot study and this study, which both failed to see an increase in wellbeing among the participants, it is possible that the most effective or only effective way to increase wellbeing with ENHANCE is with the full version of the program. While this study may not have yielded the results the PI hoped for, it offers a snapshot into a "once in a lifetime opportunity" to examine the effects that a pandemic has on the mental health and wellbeing of university students.

#### References

- Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: Gratitude and relationships in everyday life. *Emotion*, 8(3), 425–429. <a href="https://doi.org/10.1037/1528-3542.8.3.425">https://doi.org/10.1037/1528-3542.8.3.425</a>
- Andresen, E. M., Malmgren, J. A., Carter, W. B., & Patrick, D. L. (1994). Screening for depression in well older adults: Evaluation of a short form of the CES-D (Center for Epidemiologic Studies Depression Scale). *American Journal of Preventive Medicine*, 10(2), 77–84.
- Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., Demyttenaere,
  K., Ebert, D. D., Green, J. G., Hasking, P., Murray, E., Nock, M. K., Pinder-Amaker, S.,
  Sampson, N. A., Stein, D. J., Vilagut, G., Zaslavsky, A. M., Kessler, R. C., & WHO
  WMH-ICS Collaborators. (2018). WHO World Mental Health Surveys International
  College Student Project: Prevalence and distribution of mental disorders. *Journal of Abnormal Psychology*, 127(7), 623–638. https://doi.org/10.1037/abn0000362
- Berthold, A., & Ruch, W. (2014). Satisfaction with life and character strengths of non-religious and religious people: It's practicing one's religion that makes the difference. *Frontiers in Psychology*, 5. https://doi.org/10.3389/fpsyg.2014.00876
- Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013).

  Positive psychology interventions: A meta-analysis of randomized controlled studies.

  BMC Public Health, 13(1), 1–20. https://doi.org/10.1186/1471-2458-13-119
- Carmody, J., & Baer, R. A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and wellbeing in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine*, 31(1), 23–33. https://doi.org/10.1007/s10865-007-9130-7

- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104\_01
- Diener, E. (1984). Subjective wellbeing. *Psychological Bulletin*, 95(3), 542–575. https://doi.org/10.1037/0033-2909.95.3.542
- Diener, E. (2000). Subjective wellbeing: The science of happiness and a proposal for a national index. *American Psychologist*, *55*(1), 34–43. <a href="https://doi.org/10.1037/0003-066X.55.1.34">https://doi.org/10.1037/0003-066X.55.1.34</a>
- Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective wellbeing contributes to health and longevity. *Applied Psychology Health and Wellbeing*, *3*, 1–43. http://dx.doi.org/10.1111/j.1758-0854 .2010.01045.x
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale.

  \*\*Journal of Personality Assessment, 49(1), 71–75.\*\*

  https://doi.org/10.1207/s15327752jpa4901\_13
- Diener, E., Heintzelman, S. J., Kushlev, K., Tay, L., Wirtz, D., Lutes, L. D., & Oishi, S. (2017). Findings all psychologists should know from the new science on subjective wellbeing. 

  Canadian Psychology, 58(2), 87–104. <a href="https://doi.org/10.1037/cap0000063">https://doi.org/10.1037/cap0000063</a>
- Diener, E., Inglehart, R. & Tay, L. (2013). Theory and validity of Life Satisfaction Scales. *Social Indicators Research*, 112(3), 497–527. http://doi.org/10.1007/s11205-012-0076-y
- Diener, E., Oishi, S., & Lucas, R. E. (2015). National accounts of subjective wellbeing. *The American Psychologist*, 70(3), 234–242. https://doi.org/10.1037/a0038899
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010).

  New wellbeing measures: Short scales to assess flourishing and positive and negative

- feelings. *Social Indicators Research*, *97*, 143–156. https://doi.org/10.1007/s11205-009-9493-y
- Duffy, M. E., Twenge, J. M. & Joiner, T. E. (2019). Trends in mood and anxiety symptoms and suicide-related outcomes among U.S. undergraduates, 2007-2018: Evidence from two national surveys. *Journal of Adolescent Health*, 65, 590–598. https://doi.org/10.1016/j.jadohealth.2019.04.033
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective wellbeing in daily life. *Journal of Personality and Social Psychology*, 84(2), 377–389. <a href="https://doi.org/10.1037/0022-3514.84.2.377">https://doi.org/10.1037/0022-3514.84.2.377</a>
- Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J. P. (2007). Mindfulness and emotion regulation: The development and initial validation of the cognitive and affective mindfulness scale-revised (CAMS-R). *Journal of Psychopathology & Behavioral Assessment*, 29(3), 177–190. https://doi.org/10.1007/s10862-006-9035-8
- Francis, P. C., & Horn, A. S. (2017). Mental health issues and counseling services in US higher education: An overview of recent research and recommended practices. *Higher Education Policy*, *30*, 263–277. https://doi.org/10.1057/s41307-016-0036-2
- Fuchs, C. H., Haradhvala, N., Evans, D. R., Nash, J. M., Weisberg, R. B., & Uebelacker, L. A. (2016). Implementation of an acceptance- and mindfulness-based group for depression and anxiety in primary care: Initial outcomes. *Families, Systems, and Health, 34*(4), 386–395. https://dx.doi.org/10.1037/fsh0000237

- Govindji, R., & Linley, P. A. (2007). Strengths use, self-concordance and wellbeing:

  Implications for strengths coaching and coaching psychologists. *International Coaching Psychology Review*, 2(2), 143–153.
- Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, *93*(1), 108–124. https://doi.org/10.1037/0021-9010.93.1.108
- Heintzelman, S., Kushlev, K., Diener, E., Lutes, L., Wirtz, D., Kanipayor, J., Leitner, D., & Diener, C. (2016). *Enhance: Enduring happiness and continued self-enhancement*. Diener Education Fund.
- Heintzelman, S. J., Kushlev, K., Lutes, L. D., Wirtz, D., Kanippayoor, J. M., Leitner, D., Oishi, S., & Diener, E. (2020). ENHANCE: Evidence for the efficacy of a comprehensive intervention program to promote subjective well-being. *Journal of Experimental Psychology: Applied*, 26(2), 360–383. https://doi.org/10.1037/xap0000254.supp
- Höfer, S., Gander, F., Höge, T., & Ruch, W. (2020). Special issue: Character strengths, wellbeing, and health in educational and vocational settings. *Applied Research in Quality of Life*, *15*(2), 301–306. <a href="https://doi.org/10.1007/s11482-018-9688-y">https://doi.org/10.1007/s11482-018-9688-y</a>
- Huber, A., Strecker, C., Hausler, M., Kachel, T., Höge, T., & Höfer, S. (2020). Possession and applicability of signature character strengths: What is essential for wellbeing, work engagement, and burnout? *Applied Research in Quality of Life*, *15*(2), 415–436. https://doi.org/10.1007/s11482-018-9699-8
- Huckins, J. F., daSilva, A. W., Wang, W., Hedlund, E., Rogers, C., Nepal, S. K., Wu, J., Obuchi,
  M., Murphy, E. I., Meyer, M. L., Wagner, D. D., Holtzheimer, P. E., & Campbell, A. T.
  (2020). Mental health and behavior of college students during the early phases of the

- COVID-19 pandemic: Longitudinal smartphone and ecological momentary assessment study. *Journal of Medical Internet Research*, 22(6), 1–13. https://doi.org/10.2196/20185
- Irwin, M., Artin, K. H., & Oxman, M. N. (1999). Screening for depression in the older adult:

  Criterion validity of the 10-item Center for Epidemiological Studies Depression Scale

  (CES-D). Archives of Internal Medicine, 159(15), 1701–1704.
- Jackson, P. A., Sirgy, M. J., & Medley, G. D. (2018). Neurobiology of well-being. *Scientific Concepts Behind Happiness, Kindness, and Empathy in Contemporary Society*, 135–155.
- Kroenke, K., Spitzer, R. L., &Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606
- Kushlev, K., Heintzelman, S. J., Lutes, L. D., Wirtz, D., Oishi, S. & Diener, E. (2017).
  ENHANCE: Design and rationale of a randomized controlled trial for promoting enduring happiness & wellbeing. *Contemporary Clinical Trials*, 52, 62–74.
  https://dx.doi.org/10.1016/j.cct.2016.11.003
- Li, S., Wang, Y., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of COVID-19 epidemic declaration on psychological consequences: A study on active Weibo users. *International Journal of Environmental Research and Public Health*, 17(6).
  <a href="https://doi.org/10.3390/ijerph17062032">https://doi.org/10.3390/ijerph17062032</a>
- Lindsay, E. K., Chin, B., Greco, C. M., Young, S., Brown, K. W., Wright, A. G. C., Smyth, J. M., Burkett, D., & Creswell, J. D. (2018). How mindfulness training promotes positive emotions: Dismantling acceptance skills training in two randomized controlled trials.
  Journal of Personality and Social Psychology, 115(6), 944–973.
  <a href="https://doi.org/10.1037/pspa0000134">https://doi.org/10.1037/pspa0000134</a>

- Lovibond, S.H., & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales*. (2nd ed.). Psychology Foundation.
- Lyubomirsky, S., & K. Layous, K. (2013). How do simple positive activities increase wellbeing?

  \*Current Direction of Psychological Science, 22, 57–62.

  https://doi.org/10.1177/0963721412469809
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, *131*, 803–855. https://doi.org/10.1037/0033-2909.131.6.803
- MacLeod, A. K., Coates, E., & Hetherton, J. (2008). Increasing wellbeing through teaching goal-setting and planning skills: Results of a brief intervention. *Journal of Happiness Studies*, 9(2), 185–196. https://doi.org/10.1007/s10902-007-9057-2
- McCullough, M. E., Emmons, R. A., & Tsang, J.A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality & Social Psychology*, 82(1), 112–127. <a href="https://doi.org/10.1037/0022-3514.82.1.112">https://doi.org/10.1037/0022-3514.82.1.112</a>
- McEwen, B. S. (2008). Central effects of stress hormones in health and disease: Understanding the protective and damaging effects of stress and stress mediators. *European Journal of Pharmacology*, 583(2-3), 174–185. https://doi.org/10.1016/j.ejphar.2007.11.071
- Mongrain, M., Chin, J., & Shapira, L. (2011). Practicing compassion increases happiness and self-esteem. *Journal of Happiness Studies*, *12*(6), 963–981. https://doi.org/10.1007/s10902-010-9239-1
- Morelli, S. A., Lieberman, M. D., & Zaki, J. (2015). The emerging study of positive empathy. *Social & Personality Psychology Compass*, 9(2), 57–68.

  https://doi.org/10.1111/spc3.12157

- Pal, S., & Bhardwaj, R. (2016). Personality, stress and coping resources among working women. *Indian Journal of Health & Wellbeing*, 7(9), 877–883.
- Pinel, P. J., & Barnes, S. (2018). *Biopsychology* (10th ed.). Pearson.
- Quoidbach, J., Mikolajczak, M., & Gross, J. J. (2015). Positive interventions: An emotion regulation perspective. *Psychological Bulletin*, 655–693. https://doi.org/10.1037/a0038648
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychology Measurement*, 1, 385–401.
- Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy*, 18(3), 250–255. <a href="https://doi.org/10.1002/cpp.702">https://doi.org/10.1002/cpp.702</a>
- Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). Stress and health: Psychological, behavioral, and biological determinants. *Annual Review of Clinical Psychology*, *1*, 607–628. https://doi.org/10.1146/annurev.clinpsy.1.102803.144141
- Schumer, M. C., Lindsay, E. K., & Creswell, J. D. (2018). Brief mindfulness training for negative affectivity: A systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology*, 86(7), 569-583. https://dx.doi.org/10.1037/ccp0000324
- Selye, H. (1950). Stress and the general adaptation syndrome. *British Medical Journal*, *1*, 1383–1392.
- Sheldon, K. M., Kasser, T., Smith, K., & Share, T. (2002). Personal goals and psychological growth: Testing an intervention to enhance goal attainment and personality integration.

  \*Journal of Personality, 70(1), 5–31. <a href="https://doi.org/10.1111/1467-6494.00176">https://doi.org/10.1111/1467-6494.00176</a>

- Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H. J., Milojev, P., Bulbulia, J., Osborne, D., Milfont, T. L., Houkamau, C. A., Duck, I. M., Vickers-Jones, R., & Barlow, F. K. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and wellbeing. *American Psychologist*, 75(5), 618–630. https://doi.org/10.1037/amp0000662
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing wellbeing and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis.

  \*Journal of Clinical Psychology, 65, 467–487. https://doi.org/10.1002/jclp.20593
- Sirgy, M. J., & Jackson, P. A. (2015). How to enhance the wellbeing of healthcare service providers and their patients? A mindfulness proposal. *Frontiers in Psychology*, *6*, 1–3. https://doi.org/10.3389/fpsyg.2015.00276
- Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology*, 70(2), 321–335. https://doi.org/10.1037/0022-3514.70.2.321
- Soysa, C. K., & Wilcomb, C. J. (2015). Mindfulness, self-compassion, self-efficacy, and gender as predictors of depression, anxiety, stress, and wellbeing. *Mindfulness*, 6(2), 217–226. https://doi.org/10.1007/s12671-013-0247-1
- Steger, M. F., & Shin, J. Y. (2010). The relevance of the Meaning in Life Questionnaire to therapeutic practice: A look at the initial evidence. *International Forum for Logotherapy*, 33(2), 95–104.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire:

  Assessing the presence of and search for meaning in life. *Journal of Counseling*Psychology, 53(1), 80–93. https://doi.org/10.1037/0022-0167.53.1.80

- Tsai, P., Rosa, A., Thelen, C., Bucy, J., Young, J., Roesch, P., Jackson, P., & Sirgy, M. J. (2020, August 17-20). *Testing the effectiveness of a well-being intervention program A pilot study*. International Society for Quality of Life Studies, 2020 Virtual Conference. https://isqols.org/Conference-Forums/9084356?mlpg=2
- Wilson, J. M., Weiss, A., & Shook, N. J. (2020). Mindfulness, self-compassion, and savoring:

  Factors that explain the relation between perceived social support and wellbeing.

  Personality and Individual Differences, 152. https://doi.org/10.1016/j.paid.2019.109568
- Wittchen, H. (2002). Generalized anxiety disorder: Prevalence, burden, and cost to society.

  \*Depression and Anxiety, 16, 162–167. https://doi.org/10.1002/da.10065

# Appendix A

# **Experimental Group Modules**

The wellbeing intervention for the experimental condition is based on the Enhance Program created and tested by: Heintzelman, S., Kushlev, K., **Diener, E.,** Lutes, L., Wirtz, D., Kanipayor, J., Leitner, D., & Diener, C. (2016). *Enhance: Enduring happiness and continued self-enhancement*. Diener Education Fund, Salt Lake City, Utah.

## **Week 1: Welcome Package**

Welcome to **ENHANCE: ENduring HAppiness and Continued self-Enhancement**, a program designed to help you increase your level of happiness and learn how to sustain that it.

We all want to find happiness and fulfillment in our lives. But how do we go about pursuing happiness? In the past several decades, psychologists have accumulated a great deal of scientific evidence on the factors that underlie human wellbeing. Using the best evidence from this new science of happiness, we have identified 10 Principles of Happiness. In this program, you was learn about these principles and how to apply them in your daily life.

# What Is Happiness?

People's definitions of happiness are probably as varied as are people themselves. For some, happiness may be feeling calm, satisfied, and free of worries. For others, happiness may be feeling a great deal of excitement and joy in their lives. For others still, happiness may be more about pursuing the right kind of goals in life and being true to themselves.

Happiness is a subjective state, and therefore, any subjective definition of happiness is just as valid as any other.

# So What Actually Contributes to Our Sustained Happiness?

It turns out that part of the answer is luck. Research shows that our genes partially determine how happy we were. Put simply, some people are born with a more cheerful disposition than others.

If there ever was a secret to happiness, it is that happiness can be found in our daily choices, activities, and actions! Research now convincingly shows that happiness emerges not from the rare triumphant moments of life, but rather in the regular mundane activities of daily life.

This program is designed to do just that: You had the opportunity to practice and develop happiness skills that you can apply in your daily life.

Here is a preview of the topics we was cover in each week of this program:

- Week 2: Setting goals that are right for you
- Week 3: Utilizing your personal strengths
- Week 4: Becoming more mindful
- Week 5: Dealing with negative thoughts, experiences, and circumstances
- Week 6: Appreciating the people in your life
- Week 7: Contributing to the happiness of others
- Week 8: Integrating the happiness principles to move forward

# How Is This Program Organized?

In this program, you was learn, practice, and integrate 10 different happiness principles in your life. You was learn one happiness principle during each week of this intervention. At the end of the intervention, we was consider your personalized happiness profile and consider which happiness principles you would like to integrate more in your daily life.

Your exploration of each happiness principle is organized as follows:

# • Active Learning Module

- What: You was learn about each principle and how it works, and some scientific evidence for it..
- o When: During one of your classes each week.

# • Putting the Principle into Practice

- O What: In each learning module, you was receive instructions on how to apply the principle in your daily life through one or more activities. Practicing the happiness principles is a critical part of this program. You can think of each activity as an opportunity to explore how you can apply each happiness principle in your own life. You had seven days to practice these activities.
- When: Throughout the week until the next module is presented in class.

### • Activities on D2L

O What: Each week, you was also reflect and explore the happiness principle further in a reading provided on D2L. The material on D2L is designed to be supplemental and to substitute for the in-class activities if you miss a class. It was allow you to strengthen your understanding of each happiness principle.

# • Weekly Survey

- What: Each week, you were prompted to complete a single brief survey online.
   Your responses to these items was to compile your own personal fit with each happiness principle.
- When: At the end of each week.

# Weekly Reflection

- What: After practicing the happiness principle, you was reflect on how much you
  enjoyed the activities, what challenges you faced, and how you can modify the
  activities or your routine to fit this activity into your daily life.
- o When: during the in-class session.

#### Informed Consent

We were coming to your class for a short presentation each week as part of an experiment. We're interested in whether an educational program on happiness was affect your personal wellbeing in a positive way.

If you agree to be a participant in this study, you was fill out several assessments at the beginning and the end of the program (which took about an hour each time), plus be exposed to wellbeing presentations in class, as well as participate in weekly wellbeing exercises (which took as much time as you're wasing to invest). In return, you was learn how to increase happiness, and was receive extra credit in this class for participating (two research credits). In addition, if you fill out all assessments, you had the opportunity to register for a random drawing for one of two \$100 gift cards at the end of the study. Registration for the drawing is completely voluntary.

### Week 2: Goals

Think of all the things you want to accomplish. You might want to earn a promotion at work, to save money for a family vacation, strengthen your relationship with a friend, or lose a few pounds. We all have a number of these aspirations, and so this week we was focus on goals—how we can pursue the right ones for us and the best ways to achieve them—considering these are important for healthy psychological functioning.

What Are Goals and Why Are We Talking About Them?

Goals can be thought of at different levels of specificity. We are going to focus on goals that elucidate how someone characteristically aims to accomplish them, and the life purposes one hopes to fulfill. So, for instance, someone might set the goal of earning a college degree. Higher-level goals like this one can unite smaller goals around a common theme, like getting an A on a specific exam.

Pursuing the right goals in life is strongly linked to wellbeing. Much research shows that having and attaining personal goals that one values promotes happiness. Goal pursuit is also important for living a life that one finds meaningful.

Before we get started, list a few goals you have: things you want to accomplish. These should be broad goals that took a few months or years to accomplish and can encompass several smaller goals along the way.

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Striving Wisely: Selecting Goals That Are Right for You

A great deal of research has focused on *which* goals are the best for wellbeing. Generally, goals that are *intrinsically motivated*, *self-concordant*, and *approach oriented* are the most strongly related to wellbeing. We go over each of these concepts in much more detail on D2L.

### Intrinsic vs. Extrinsic Goals

Intrinsic goals are pursued because of motivation that comes from within. Extrinsic goals are motivated by external rewards.

An example to illustrate this: both Meg and Jill have the goal of being promoted at work; however, the reason behind this goal differs between them. Meg wants the promotion because it was allow her to step into a new role in which she could engage in work that she really enjoys and cares about. Jill, on the other hand, wants the promotion because it comes with a big pay raise, and she could then afford to buy a new car. Although they want the same thing (the promotion), their goals are very different. Meg, who is pursuing the goal for intrinsic reasons had her basic psychological needs satisfied and was experience more happiness from pursuing and achieving this goal than was Jill, who is pursing the promotion for extrinsic reasons.

Even if someone is *successful* in their pursuit of extrinsic goals, they are not likely to experience the same wellbeing benefits that come with achieving intrinsic goals. Which is why it is important to make sure we are setting goals for intrinsic reasons, not just to attain external rewards.

#### Self-Concordance

Another important aspect to consider when thinking about your goals is how well they fit with who you are. Researchers call this, *self-concordance*, which refers to the degree to which a goal is consistent with a person's developing interests and core values. Why are you pursuing each of your three goals?

- a. Because someone else wants you to or the situation seems to compel it
- b. Because you would feel ashamed, guilty, or anxious if you didn't
- c. Because you really believe that it is an important goal to have
- d. Because of the enjoyment or stimulation which that goal provides you

1.			
2.			
3.			

Self-concordant goals are pursued for option d—because you truly enjoy them. If you responded a or b for any of your goals, these was likely not bring you the same wellbeing benefits compared to those goals for which you responded c, and especially d—which are self-concordant goals.

One study found that progress towards goals that fit with who we are and what we truly want for ourselves, but not progress towards goals that do not fit with what we authentically want from life, was related to daily emotional wellbeing (Brunstein, Schultheiss, & Grassmann, 1998).

Approach vs. Avoidance Goals

Approach goals are those that are actively instrumental in working towards achieving something desirable. Avoidance goals are efforts that are focused on avoiding or moving away from something undesirable.

Consider the following example. Anna and Rachel both have the same goal—to lose weight. Anna sets the goal of "Running so I don't get fat"—an avoidance goal. Rachel sets the goal of "Running to get stronger and feel healthier"—an approach goal.

Research suggests that Rachel was likely experience more success in her running goal and was also feel happier and more satisfied than Anna. Working on daily goals that are avoidance-oriented is actually related to *lower* wellbeing. The most beneficial goals are those that move you toward a desired state, not away from a feared state.

# Making Goals Work

To reap the wellbeing benefits of goals, it is important not only to *have* goals, but also to be *making progress* towards them.

A great deal of research has examined ways to improve the odds of reaching one's goals. One of the best ways to do this is to set *implementation intentions*. Implementation intentions specify the when, where, and how of actions that was lead to goal attainment. These move beyond, "I intend to attain the goal X" and take the form of "I was initiate the goal-directed response Y when situation Z arises."

For instance, Gina set a goal to read a list of classic books. To form an implementation intention for this goal, she decides that she was read for 30 minutes every night before she goes to bed.

By specifying these intentions, research shows that goals stand a better chance of being attained. Furthermore, planning for the future in this way is related to higher wellbeing.

Let's set one implementation intention for each of your three goals.

1. I was	(goal directed action)
when	
(situation).	
2. I was	(goal directed action)
when	
(situation).	
3. I was	(goal directed action)
when	
(situation).	

Throughout the coming week and into the future, work towards your goals by using these implementation intentions. We was check back next week to reflect on the progress you've made towards your goals.

Putting the Lesson into Practice

First Activity of the Week:

Create 3 goals that fit with the content criteria that have been found to be associated with positive outcomes. Now, set one implementation intention for each of your three goals.

1.	I wasaction) when	(goal directed
2.	(situation). I was action) when	(goal directed
3.	(situation). I was action) when	(goal directed
	(situation).	

Throughout the coming week and into the future, work towards your goals by using these implementation intentions.

Next three Activities of the Week:

One important component in the pursuit of goals is envisioning where you want to be going.

Another task this week is to spend some time writing about your best possible self. Specifically, think about your life in the future. Imagine that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all of your life goals. Think of this as the realization of all of your life dreams. Now write about what you have imagined.

You should repeat this activity 3 times throughout this coming week, spending about 20 minutes on each writing session. You can either write about your best imagined life broadly each time, or focus on a specific aspect of your life (e.g., career, relationships, or health) each time.

## **Week 3: Personal Strengths**

In general, all people possess qualities of character that help them act in ways that are almost universally seen by others as good and lead to positive outcomes for that individual and those around them.

This week, we was focus on these qualities, your personal strengths. We was first learn about what strengths are and why they are important and then identify some universally valued character strengths. Then, we was focus on your own character strengths. After identifying what your top strengths are, you was plan ways to utilize these strengths in novel ways throughout the week.

# What Are Character Strengths?

A character strength is a disposition to act, desire, and feel that involves the exercise of judgment and leads to a recognizable human excellence or instance of human flourishing. Strengths arise naturally in a person and feel like authentic parts of one's personality.

### Identifying Your Own Character Strengths

Character strengths exist in degrees. That is, some people have more of certain strengths than other strengths. These strengths can be ranked to show how central they are to a person. Importantly, everyone has signature strengths regardless of where they stand compared to others.

Most people are thought to possess somewhere between three and seven "signature strengths." These are strengths that a person possesses and frequently exercises.

What are your top five?

## Creativity:

If Creativity is your top strength, thinking of new ways to do things is a crucial part of who you are. You are never content with doing something the conventional way if a better way is possible.

There are two essential components to Creativity- originality and adaptiveness. A creative individual generates ideas or behaviors that are novel or unusual and these make a positive contribution to the individual's life or the lives of others.

### Curiosity:

If Curiosity is your top strength, you are interested in learning more about anything and everything. You are always asking questions, and you find all subjects and topics fascinating. You like exploration and discovery.

There are two key components to curious individuals: They are interested in exploring new ideas, activities and experiences, and they also have a strong desire to increase their own personal knowledge.

## Judgment:

If Judgment is your top strength, thinking things through and examining them from all sides are important aspects of who you are. You do not jump to conclusions, and you rely only on solid evidence to make your decisions. You are able to change your mind.

The strength of judgment is a corrective strength in that it counteracts faulty thinking, such as favoring your current views or favoring ideas that are considered the dominant view, and therefore giving less attention to the less-dominant view. It is the wasingness to search actively for evidence against your favored beliefs, plans, or goals, and to weigh all of the evidence fairly when it is available.

# Love of Learning:

If Love of Learning is your top strength, you love learning new things, whether in a class or on your own. You have always loved school, reading, and museums-anywhere and everywhere there is an opportunity to learn.

Love of learning describes the way in which a person engages new information and skills. Love of learning is a strength that teachers would like to see in their students, parents want to encourage in their children, therapists support in their clients, and employers try to foster in their employees. It has important motivational consequences because it helps people persist through challenges, setbacks and negative feedback.

# Perspective:

If Perspective is your top strength, you have a way of looking at the world that makes sense to others and to yourself. Although you may not think of yourself as wise, your friends hold this view of you. They value your perspective on matters and turn to you for advice.

Perspective is distinct from intelligence but represents a high level of knowledge, the capacity to give advice and to recognize and weight multiple sides before making decisions. It allows the individual to address important questions about the conduct and meaning of life.

### Bravery:

If Bravery is your top strength, you are a courageous person who does not shrink from threat, challenge, difficulty, or pain. You speak up for what is right even if there is opposition. You act on your convictions.

There are three types of bravery (an individual may possess one of these or a combination):

- *Physical bravery (e.g., firefighters, police officers, soldiers)*
- Psychological bravery (e.g., facing painful aspects of oneself)
- Moral bravery (e.g., speaking up for what's right, even if it's an unfavorable opinion to a group)

Don't be afraid to befriend someone who is different but positive.

#### Perseverance:

If Perseverance is your top strength, you work hard to finish what you start. No matter the project, you "get it out the door" in timely fashion. You do not get distracted when you work, and you take satisfaction in completing tasks.

Perseverance involves the voluntary continuation of a goal-directed action despite the presence of challenges, difficulties, and discouragement. There are two vectors of perseverance. It requires both effort for a task and duration to keep the task up.

### Honesty:

If Honesty is your top strength, you are a straightforward person, not only by speaking the truth but by living your life in a genuine and authentic way. You are down to earth and without pretense; you are a "real" person.

This strength involves accurately representing your internal states, intentions, and commitments, both publicly and privately. The strength of honesty is often linked to self-concordance- the extent to which your goals accurately represent your implicit interests and values. Honesty allows people to take responsibility for their feelings and behaviors, owning them, and reaping benefits by doing so.

#### Zest:

If Zest is your top strength, you approach all experiences with excitement and energy. You never do anything halfway or halfheartedly. For you, life is an adventure.

Zest is a dynamic strength that is directly related to physical and psychological wellness. This strength has the strongest ties to overall life satisfaction and a life of engagement.

#### Love:

If Love is your top strength you value close relations with others, in particular those in which sharing and caring are reciprocated. The people to whom you feel most close are the same people who feel most close to you.

*There are four types of love, each with a biological and evolutionary base:* 

- Attachment love: parent for child; child for parent
- Compassionate/altruistic love: kindness
- *Companionate love: friendship*
- Romantic love: spouse/partner/boyfriend/girlfriend

#### Kindness:

If Kindness is your top strength you are kind and generous to others, and you are never too busy to do a favor. You enjoy doing good deeds for others, even if you do not know them well.

Kind individuals believe that others are worthy of attention and affirmation for their own sake as human beings, not out of s sense of duty or principle. There are three traits of altruistic personalities:

- Empathy/sympathy
- Moral reasoning
- Social responsibility

## Social Intelligence:

If Social Intelligence is your top strength, you are aware of the motives and feelings of other people. You know what to do to fit in to different social situations, and you know what to do to put others at ease. You are kind and generous to others, and you are never too busy to do a favor. You enjoy doing good deeds for others, even if you do not know them well.

Social intelligence involves two general components:

- Social awareness: what we sense about others
- Social facility: what we do with our awareness

## Teamwork:

If Teamwork is your top strength, you excel as a member of a group. You are a loyal and dedicated teammate, you always do your share, and you work hard for the success of your group.

*Teamwork is closely related to 3 other concepts:* 

- Citizenship: responsibility toward one's community
- Loyalty: unwavering trust for a group
- Patriotism: loyalty toward one's homeland/nation without hostility toward other nations.

#### Fairness:

If Fairness is your top strength, treating people fairly is one of your abiding principles. You do not let your personal feelings bias your decisions about other people. You give everyone a chance.

Fairness is a cognitive judgment capacity that involves reasoning and making judgments. It involves 2 types of reasoning:

- Justice reasoning which emphasizes logic and weighing principles to determine moral rights and responsibilities
- Care reasoning which includes empathy and compassion; the ability to put yourself in somebody else's shoes.

## Leadership:

If Leadership is your top strength, you excel at encouraging a group to get things done and preserving harmony within the group by making everyone feel included. You do a good job organizing activities and seeing that they happen.

Leadership is a social phenomenon that can be distinguished into two areas:

- Practice- defining, establishing, identifying or translating direction
- Personal quality- the motivation and capacity to seek out, attain and carry out leader roles.

## There are two types of leaders:

- Transactional leaders- this type of leader clarifies responsibilities, expectations, and the tasks to be accomplished.
- Transformational leaders- this leader motivates their followers to perform at an extremely high level, fostering a climate of trust and commitment to the organization and its goals.

# Forgiveness:

If Forgiveness is your top strength, you are good at forgiving those who have done you wrong. You always give people a second chance. You believe in mercy, and not revenge.

*It is important to distinguish forgiveness from:* 

- condoning (removes the offense)
- *forgetting (removes the awareness)*
- reconciliation (restores the relationship)

Instead forgiveness is a strength that we employ to protect ourselves from the feeling of hatred. It is a specialized form of mercy; a general concept of feeling kindness and compassion towards others.

### **Humility:**

If Humility is your top strength, you do not seek the spotlight, preferring to let your accomplishments speak for themselves. You do not regard yourself as special, and others recognize and value your modesty.

A common misconception is that humility involves having a low self-esteem, a sense of unworthiness, and/or a lack of self-focus. However, true humility involves an accurate self-assessment, recognition of limitations, keeping accomplishments in perspective, and forgetting of the self. Humble people do not distort information to defend or verify their own image, and they do not need to see-or present-themselves as being better than they actually are.

# Prudence:

If Prudence is your top strength, you are a careful person, and your choices are consistently prudent ones. You do not say or do things that you might later regret.

Prudence involves far-sighted planning as well as short-term, goal-directed planning. It is often referred to as cautious wisdom, practical wisdom, and practical reason.

### Self-Regulation:

If Self-Regulation is your top strength, you self-consciously regulate what you feel and what you do. You are a disciplined person. You are in control of your appetites and your emotions, not vice versa.

Self-regulation can be viewed as a resource that can be depleted and fatigued. A useful metaphor can be that self-regulation acts like a muscle, which can be exhausted through over-exertion or strengthened through regular practice.

# Appreciation of Beauty and Excellence:

If Appreciation of Beauty and Excellence is your top strength you notice and appreciate beauty, excellence, and/or skilled performance in all domains of life, from nature to art to mathematics to science to everyday experience.

There are three types of goodness for which individuals high in Appreciation of Beauty and Excellence are responsive to:

- Physical beauty. This may be visual, auditory, tactile, or abstract. This type of goodness produces awe and wonder in the individual experiencing it.
- Skill or talent (excellence). This is often energizing, and makes the individual want to pursue their own goals. It produces admiration.
- Virtue or moral goodness (moral beauty). Virtual goodness makes the individual want to be better, more loving, and produces feelings of elevation.

### Gratitude:

If Gratitude is your top strength you are aware of the good things that happen to you, and you never take them for granted. Your friends and family members know that you are a grateful person because you always take the time to express your thanks.

*There are two types of gratitude:* 

- Benefit-triggered gratitude= the state that follows when a desired benefit is received from a benefactor.
- Generalized gratitude= the state resulting from awareness and appreciation of what is valuable and meaningful to yourself.

*There are two stages of gratitude:* 

- Acknowledging the goodness in your life.
- Recognizing the source of this goodness is outside yourself.

## Hope:

If Hope is your top strength you expect the best in the future, and you work to achieve it. You believe that the future is something that you can control.

Optimism is closely linked with having a particular explanatory style (how we explain the causes of bad events). People using an optimistic explanatory style interpret events as external, unstable and specific. Those using a pessimistic explanatory style interpret events as internal, stable and global.

#### Humor:

If Humor is your top strength you like to laugh and tease. Bringing smiles to other people is important to you. You try to see the light side of all situations.

Humor involves the ability to make other people smile or laugh. It also means having a composed and cheerful view on adversity that allows an individual to see its light side and thereby sustain a good mood.

## Spirituality:

If Spirituality is your top strength you have strong and coherent beliefs about the higher purpose and meaning of the universe. You know where you fit in the larger scheme. Your beliefs shape your actions and are a source of comfort to you.

Spirituality is believed to describe both the private, intimate relationship between humans and the divine, and the range of virtues that result from the relationships. Spirituality is universal. Although the specific content of spiritual beliefs varies, all cultures have a concept of an ultimate, transcendent, sacred force.

### Why Is Applying Your Character Strengths Important?

Since all of these character strengths are highly valued, it doesn't matter much which strengths you possess, what matters is that you utilize these strengths often.

In general, using one's top strengths relates to many positive outcomes like lower stress, making more progress towards reaching important goals, better experiences at work, and better psychological wellbeing.

Let's think about the ways that you utilize your top 5 strengths. Putting the Lesson into Practice

#### Activity of the Week

Throughout the coming week, you should focus on your top strengths. Research has demonstrated benefits of using one's top strengths in new ways.

Specifically, your task is to **use your top strengths in a new way every day this week.** Be sure to vary which of your top five strengths you are using each day and how you use them.

Also, it is important to use them in *new* ways, rather than simply identifying ways that you already use your strengths.

One important aspect to consider as you try to increase the frequency with which you use your strengths is the allowances of your environment.

Utilizing one's strengths requires that:

- 1. you possess that strength
- 2. your environment allows for expression of that strength

There are situations that facilitate our ability to utilize our strengths more than other situations. It is important, then, to make sure we are spending time in settings that allow us to use our strengths.

#### Week 4: Mindfulness



This week you had the opportunity to learn what mindfulness is and how you can integrate it in your daily life.

#### What Is Mindfulness?

Mindfulness is our ability to be aware of what is happening in the present moment with openness and acceptance. When you are being mindful, you relate to your experience by being fully aware of those experiences without judging yourself for having them. You accept your experiences for what they are as a natural part of being human.

This open accepting nonjudgmental awareness of mindfulness stands in direct contrast to our habitual ways of responding to our experiences. When we feel bad or have negative thoughts, for example, we tend to respond in one of two ways. We suppress our bad thoughts and feelings, trying to run away from them. Or, we do exactly the opposite: We indulge in those bad thoughts and feelings, making ourselves feel even worse. Mindfulness is the balanced response between those two extremes: being aware of what we are experiencing without feeding it or pushing it away.

### **Example:** Let's illustrate with an example.

Imagine that somebody bumps into Jane on the street and does not apologize. Jane, very naturally, gets angry with the person. It is what happens next that really illustrates the power of mindfulness, and the costs of mindlessness. A mindless Jane lets her anger get stronger. She feeds the anger with thoughts about how she should have said something mean to the person. She adds further negativity to her experience by imagining bad things happening to the person. Because she mindlessly feeds her anger, Jane gets home angry and brings more negativity to her family—the people she loves most. All the while, the person who bumped into Jane is having dinner at home with his family, happily oblivious about the storm of fire that has reached full force in Jane's mind.

Now, consider how a mindful Jane would react. Mindful Jane also feels a spurt of anger when the passerby bumps into her. It is only human to react with anger when we have been

wronged. She brings awareness to her anger without trying to suppress it or push it away but also without indulging in it. She feels her chest contracting a little under the power of anger, she notices her breath get a little shorter. She observes as a few negative thoughts arise in her mind about the strangers and she accepts those thoughts as they are. But she breaks the cycle of negativity by letting those thoughts pass away as naturally as they have arisen.

#### How to Cultivate Mindfulness?

Mindfully accepting our experiences does not mean we resign ourselves to having them. Quite the opposite: We need to actively cultivate the nonjudgmental awareness of mindfulness rather than resigning ourselves to being controlled by our thoughts and emotions.

You already have the ability to be mindful. Everybody does. Just as we are able to run at least for a few feet at a time, we are able to become aware of the present moment without judgment at least for a few seconds at a time. But just as we can become better runners through physical training, we can become better at being mindful through mental training.

In your training today, you was learn two central techniques for cultivating mindfulness: bringing awareness to your breathing and labeling.

#### **Breath Awareness**

One of the most basic techniques for developing mindfulness is to practice awareness of your own breath. There is nothing special about the breath except that it is always there. We do not normally pay much attention it, but as long as you are alive, you can always become mindful of your breathing.

Cultivating awareness of your breathing is helpful in developing mindfulness in two ways. First, by practicing breath awareness, you learn how to direct your attention to your present experiences—a critical skill for cultivating mindfulness. Second, directing your attention to your breath can help you to slow down the constant chatter in your mind, thereby providing a simple backdrop from which you can notice sensations, feelings, and thoughts as they arise and pass away.

### The Wandering Mind and the Nonjudgmental Mind

As you were trying to focus on your breath, you probably noticed that your mind kept wandering to other things. This is normal. The mind wanders. Perhaps, you became aware that you had not assumed the most comfortable position and started shifting your body and wondering what you are doing wrong. Or maybe, you heard a sound and started thinking about where this sound is coming from.

Mindfulness is a moment-to-moment experience, not necessarily a purely uninterrupted state of awareness. One moment you were mindful of your breath, the next you were not. But note this: When your mind was wandering and you became aware of that, you were mindful. You were mindful that your mind was wandering. The trick here is to add the second component of mindfulness: acceptance and a nonjudgmental attitude. When you notice that your mind has

wandered, rather than judging yourself, be glad that you have just become mindful again. A few moments of mindfulness are better than none.

#### Mindfulness versus concentration

While practicing mindfulness of your breathing, you had to apply a certain dose of effort to concentrate on the present. But mindfulness is not the same as concentration! When you are concentrated on your breathing, you are also mindful of your breathing. But when your mind wanders away from your breathing, you are no longer concentrated, but you can still be mindful. You can be mindful of where your mind has wandered and you can mindfully—without judgment—anchor your attention back to your breath.

Your purpose is not to achieve concentration. Your purpose is to simply be aware of the way things are at the moment.

Sometimes, the mind is completely unconcentrated. That's OK. Just be mindful of that—accept that this is the case and be okay with it. And in the few moments of mindfulness you manage to get, observe the qualities of the unconcentrated mind—the constant switching of one mental object for another, wandering around your mental space like a lost chicken. Paradoxically, you can be mindful of your mindlessness.

All you really need for the practice of mindfulness then is not concentration, but patience: Patience to keep observing things as they are and patience to keep accepting things as they are. To help you develop this nonjudgmental awareness of mindfulness, we next explore another essential mindfulness technique—labeling.

#### Labeling

Being mindful is not about achieving some special state of consciousness, but simply about being aware—whenever we can—of our bodies, our sensations, feelings, thoughts, and actions.

Labeling what is going on in the present is one useful technique to cultivate such awareness. It's simple: You just use a word to label what you are experiencing in the moment. If your mind is wandering, simply note: "wandering, wandering". If you hear a sound, simply note "hearing, hearing." If you find yourself getting angry because somebody has taken your parking space, simply note: "anger, anger"; and so forth.

Objects of Mindfulness

You can be mindful of many different things. In fact, anything that you can perceive or conceive of can become the object for mindfulness.

When practicing the technique of labeling, consider the following common objects of mindfulness:

• You can be mindful of your body, such as the rise and fall of your chest and belly as you breathe.

- You can be mindful of your senses, such as touch, taste, smell, vision, and hearing.
- You can be mindful of mental objects, such as your desires, feelings, and thoughts as they arise and pass away.
- You can be mindful of your actions—from simple movements like washing the dishes or walking to more meaningful actions like how you say good morning to your partner when you wake up.

You can also be mindful of your habitual tendencies of relating to your own experience. Consider the following ways in which people often relate to their experiences:

- *Indulging:* You feel a strong negative emotion—sadness, anger, shame—and you feed it with more negative thoughts, making it stronger.
- *Suppressing:* You try to suppress or get rid of a certain thought or emotion that you do not want to have. Ironically, this makes the thought or emotion even stronger (see research blurb).
- *Clinging:* You have a positive experience and you want to hold on to it. This makes you unhappy when the conditions that caused this experience eventually change.

Putting the Lesson into Practice

### Activity of the Week

This week, you was practice mindfulness using three different techniques

- Mindfulness of the breath: You had the opportunity to further practice this basic technique. You was use your breath to train yourself to direct your attention to the present. You was first receive detailed instructions and then have the opportunity to practice in relative salience
- Mindfulness of the body: In this exercise, you was expand your awareness from your breath to your entire body. You was practice intentionally directing your attention to different parts of the body while cultivating acceptance and compassion for yourself.
- Mindfulness of thoughts and feelings: In the third exercise, you had the chance to more
  actively cultivate your ability to nonjudgmentally notice thoughts and emotions as they
  arise and pass away.

In each case, you may find it useful to follow these steps:

- 1. Find a quiet space where you can sit or lie down.
  - a. If you are sitting, find a comfortable position—relaxed but not slouched, upright but not tight.
  - b. If you are lying down, make sure you are in a well-lit room and you feel awake before beginning. You may want to avoid practicing while lying down if you are tired (e.g., in bed before going to sleep) as you may fall asleep. For best results, you should practice when your mind is sharp and awake rather than dull and sleepy.
- 2. Remember that your sensations, feelings, thoughts are not your enemies in developing mindfulness; they are your teachers on your path to understanding your mind.

3. After the exercise, complete a mindfulness log, reflecting on what you observed. Please now use the mindfulness log to schedule when you plan to do those exercises. The exercises are also provided D2L.

Mindfulness	When?	What feelings, thoughts, and	What insights about your human
Practice		sensations did you notice?	experience did you notice?
Mindfulness	Day		
of the breath			
	Time		
Mindfulness	Day		
of the body			
	Time		
Mindfulness	Day		
of thoughts			
and feelings	Time		

#### After This Week

As you practiced mindfulness last week, you may have begun to see some of the benefits of being able to observe rather than blindly react to external and mental events. The true benefits of mindfulness, however, can only accrue over time. It is only through continued effort to be mindful that you can reap those benefits for yourself.

# **Week 5: Dealing with the Negative**

Although much of this program is focused on maximizing the positive in your life, it is inevitable that not everything was go perfectly all of the time. Everyone encounters difficulties in life. In this session, you was learn skills to help deal with your negative experiences as they arise.

This week, you was build upon the mindfulness skills you developed last week to learn how to respond differently to negative experiences and automatic patterns of thinking. First, you was leverage your mindfulness skills to develop self-compassion. Then, you was learn how to identify and restructure harmful patterns of automatic negative thinking that you may sometimes fall prey to. Finally, shifting from the present moment to your past, you was engage in an exercise shown to help people deal with previous negative events through writing.

#### **Self-Compassion**

First, we was learn an important strategy for dealing with negative events in your life, developing self-compassion.

There are three central features of self-compassion:

- 1) Being kind and understanding toward oneself in times of pain or failure
- 2) Perceiving one's own suffering as part of a larger human experience
- 3) Being mindful of painful feelings and thoughts, rather than judging, suppressing, or indulging them.

First, self-kindness means extending forgiveness, empathy, sensitivity, warmth, and patience to *all aspects* of yourself. It involves affirming, even after failure, that you deserve love, happiness, and affection.

Second, common humanity entails recognizing your connection to others, particularly in your confusion, sorrows, imperfections, and weaknesses. It involves forgiving yourself for being fully human, even when this is imperfect.

Third, mindfulness (the very skill you learned last week) is being aware of, attentive to, and accepting of the present moment. In this context, this involves observing and labeling our negative thoughts and emotions rather than judging and reacting to them.

Self-compassion requires a balanced approach to one's negative experiences so that painful feelings are neither suppressed nor exaggerated. Developing your self-compassion is associated with a number of great outcomes. Self-compassionate people are happier, less anxious and depressed, more intrinsically motivated, and more connected to others around them.

Responding to the negative events in your life as well as your personal weaknesses by focusing on these three elements of the experience in this self-compassionate manner can be a very useful way to put things into perspective and to transform them.

### Challenging Automatic Negative Thoughts

Treating yourself with compassion when facing negative circumstances is an important way to successfully cope with difficulty. In addition to the occasional negative experience, we also often experience negativity in the automatic thoughts we have about ourselves. Importantly, some of these thoughts are not entirely rational, yet if we allow them to persist, they can lead to a negative pattern of thinking that can work against us.

Next we was learn to break negative thought cycles. By being aware of your negative thoughts, you were able to shape them into more realistic thoughts that was set you up for success.

Have you ever stopped to notice your "inner dialogue," or thoughts that you have throughout your day? You are typically talking to yourself constantly. Some of these thoughts are helpful, while others are harmful.

Self Talk

We talk to ourselves everyday—everyone does it. Our inner conversation is always going on, quietly shaping our decisions and behaviors. However, we may not realize how often we have negative thoughts or how these thoughts affect our efforts to make changes.

Our thoughts are very powerful—they directly affect our feelings and behaviors. If we have kind, realistic thoughts about ourselves as part of our self-talk, we'll have the confidence to make positive lifestyle changes. If we beat ourselves up with negative thoughts, we'll lack the confidence needed to make changes. We was call these *thought traps*. For example, a man who often thinks that he is not good enough to succeed in his endeavors may begin to feel depressed, giving up on his goals; this may further reinforce his negative self-talk.

# Thought Trap: Restructuring Negative Thoughts

Negative thoughts can result in a vicious cycle of self-defeat. However, we can use some strategies to replace these unrealistically negative thoughts with more productive ones.

Here are some examples of automatic negative thoughts that a person might have in life in general or towards their progress in this program specifically. In the right column, there are alternate responses that are more positive and productive.

All or Nothing	Work Toward Balance
I had a fight with a friend. Our relationship	I had a fight with a friend, how can I
is over.	smooth things over and show her I care?
I missed a day of the assigned exercise	I missed a day of the assigned exercise
yesterday. I failed at this week's mission.	yesterday. I was make sure to get back on
	track today.
Excuses	It's Worth a Try
I can't strike up a conversation with this	This person might be really interesting, it
person I see at the gym all the time, they'd	wouldn't hurt anything to say hello and ask
probably be annoyed.	about their day.
I can't do this happiness skills exercise	I can build time into my day to do these
because I don't have the time.	exercises because they matter to me.
Shoulds	It's My Choice
I should have finished that task yesterday.	I am going to really focus on that task
	today to finish it now.
These program exercises should come	I am engaging in these challenging
easier to me.	exercises because I want to be happier.
Not As Good As	Everyone's Different
Jill is so much better at yoga than I am.	Going to yoga class makes me feel
	reenergized and focused.
My friend is so much happier than I am	I'm taking steps to improve myself in ways
without having to do this program.	that was ultimately make me happier.
Give Up	One Step at a Time
I didn't get that promotion. I'm not going	I didn't get that promotion. I am going to
anywhere in life.	do my best work with this upcoming
	project so I were considered for the next
	one.

This program takes too much effort. I can't	This program takes a lot of effort. I was
do this.	keep working to implement these skills into
	my life because I think they're important.

### Dealing with Negative Events through Writing

Restructuring our negative thought patterns and being self-compassionate are two ways in which we can learn to react differently to negative self-talk as it happens. But the source of the negativity of our thoughts can often be found in our past experiences. Writing can help us to process past experiences and stem their negative influence on our present experience. Indeed, research has found that writing about a negative event in our past in a manner that highlights the potential benefits of this experience can be very helpful. Engaging in this sort of writing is related to reduced health problems, better adjustment, personal growth, and psychological wellbeing.

Putting the Lesson into Practice

### Activity of the Week

Your main activity for this week were writing about negative events and their potential benefits. On three occasions over next week, you was spend around 20 minutes writing about a negative past experience. Let's schedule your writing times now When was I complete this activity?

1.	Day of the week	; Time of day
2.	Day of the week	; Time of day
3.	Day of the week	; Time of day

For each of these days, please recall a negative or traumatic life event or some loss you have experienced in your life. Think about the experience for a few moments. Then, focus on the positive aspects of the experience. Please write about how you have changed or grown as a person as a result of the experience. Focus on the positive aspects and how the experience has benefited you as a person—how has the experience made you better able to meet the challenges of the future? As you write, do not worry about punctuation or grammar, just really let go and write as much as you can about the positive aspects of the experience.

On the 2<sup>nd</sup> and 3<sup>rd</sup> days, you can choose to write about the same experience or a new one each time.

#### After This Week

In moving forward, you was inevitably encounter negative events and continue to experience automatic negative thoughts that are not entirely realistic. Using the skills you developed last week, treating yourself with compassion and challenging automatic negative thoughts and replacing them with more productive and realistic ones, you can work towards a more positive way of life. Mindfully accepting that you aren't perfect and that bad things are bound to happen and then moving on can help you continue to move forward in a positive direction.

### **Week 6: Appreciating Others**

Last week, we focused on the importance of our close relationships. We was continue along those lines this week by considering one way to improve the quality of these relationships. Namely, we'll be discussing the importance of showing our appreciation for the kind and generous things people do for us in our lives.

Sometimes, especially in our closest relationships, the nice things that others do for us go unnoticed, or we don't bother to share with them how much we appreciate their actions—perhaps because we assume they already know. Even when we do say thank you, it is sometimes so casual or quick that it may feel meaningless.

This week, we are going to focus on identifying those actions by others that we truly appreciate and are grateful for and took steps to begin to make expressing this gratitude a habit.

You might recall that gratitude was among the personality strengths we discussed in Week 3. Perhaps this was one of your top strengths and you have already spent some time using this strength in new ways. That's great! This week was give you the chance to further develop this strength. If your previously identified top strengths were in other areas, this week was allow you to develop an additional valued quality. We can all benefit from recognizing and expressing gratitude!

#### What Is Gratitude?

Generally, a person can have a disposition towards noticing and appreciating the positive in the world. Everyone has circumstances in their lives that they can be thankful for. For instance, one might be grateful for waking up each day, for their health, or for the beautiful scenery around them. Such gratitude is often called appreciation and is wonderful in its own right! Yet, instead of focusing on this general form of gratitude, we are going to focus more specifically on feelings of gratitude towards specific people.

The experience of gratitude typically involves two stages. First, you must acknowledge something good in your life. Then, gratitude emerges when you recognize that its source lies, at least partially, outside yourself.

#### What Are Some Benefits of Gratitude?

Research touts the many personal benefits that are related to the expression of gratitude. Gratitude is good for you! It is related to:

- Greater happiness and wellbeing
- Lower envy, resentment, greed, and bitterness
- Improved coping and resilience in the face of stress
- Lower blood pressure, improved immune function, quicker recovery from illness, better overall physical health
- Lower aggression

- Engagement in more helpfulness, generosity, and cooperation
- Higher self-esteem
- Fewer depressive symptoms
- Reduced lifetime risk for depression, anxiety, and substance abuse disorders

Expressing gratitude also changes the way other people think of you. Grateful people are rated by others as:

- happier
- more pleasant to be around
- more helpful
- more outgoing
- more optimistic
- more trustworthy

Gratitude is good for society as a whole, too! Expressing gratitude promotes moral actions from both the grateful person and the person they express gratitude to. For instance, research has shown that when people are thanked, they are more wasing to give more and work harder for others compared to those who aren't thanked.

### Gratitude in Close Relationships

One area that is particularly important when thinking about gratitude is the quality of one's close relationships. Gratitude fuels a cycle of kind acts between people which builds social bonds.

Sara Algoe, a researcher at the University of North Carolina, and her colleagues study how gratitude strengthens relationships. Findings from Sara Algoe's laboratory include:

- Gratitude between people increases relationship connection and satisfaction for both parties.
- Expressing gratitude is related to feeling comfortable voicing relationship concerns and general positive perceptions of the partner.
- Expressing gratitude increases the degree of responsibility a person feels for their partner's welfare.

#### Putting the Lesson into Practice

#### Activity of the Week

Clearly, expressing gratitude is important for both personal wellbeing and relationship quality. Take a moment to think of three people who have been especially kind to you but you have never properly thanked.

1.	I am grateful to	for
2.	I am grateful to	for
3.	I am grateful to	for

Your task for this week is to write a letter of gratitude to someone you want to thank—perhaps one of the people listed above—and to share this letter with that person. This letter should be non-trivial. Specifically, you should avoid simply writing a "thank you note" for a material gift. Rather, be reflective and write expressively to convey your appreciation, and be specific about what he or she did that affected your life.

While writing this letter might be a powerful experience on its own, truly expressing your gratitude requires that you share this letter with the other person. Alternately, if you are able to meet with the person this week, you can also read the letter to them in person.

Let's pla	n how you was complete this tasl	k this week.	
<ul> <li>I am goir</li> </ul>	ng to write to	(person)	
	ng to write the letter on		
I am goir	ng to mail the letter on	(day of the week).	
OR			
I am goir of the we	ng to read the letter to this person eek).	when I see them on	(day
After This Week			
large-scale way your appreciatio appreciation for  For exam Although she rea rarely thanks hir	k you expressed gratitude to anot that you can show your gratitude, n a habitual part of your everyday the things people do for us that w apple, Maria's husband often make ally appreciates this, it's become n for the gesture, especially since are, she plans to make a point to the	but it is also important to make y life. We can all work on express we have often come to take for grades her a mug of coffee to bring to such a habit that she has come to the leaves for work before she pi	expressing sing our anted.  work. expect it and icks up the
you when she ge		mank inin for this kind act by text	ing iiiii thank
j our when she ge	00 00 00 00 00 00 00 00 00 00 00 00 00		
	some things others do for you re How can you show your appreci		our gratitude
1.	(person) often		
		(	action).
I can thank t	hem by		·
2	(person) often		
		(	action).
	hem by		
3	(person) often		
		(	· /
I can thank t	hem by		·

### **Week 7: Contributing to the Happiness of Others**

In the past nine weeks, we have explored the principles you can apply in your daily life to boost your own happiness and wellbeing. In this final week, we was shift the focus from your own happiness to the happiness of others. You might be surpsised to find out that a growing body of research has shown that focusing and promoting the wellbeing of others is one of the surest ways towards enhacing your own happiness.

What does it mean to contribute to the happiness of others?

Giving to charity, volunteering, helping friends in need, caring for our loved ones, buying presents for our friends and family—those are only some of the myriad of ways that people strive to be kind to one another. While we are often bombarded with bad news of war and violence, just think about the millions of little acts of kindness—people giving of their time, money, and skills to one another—that occurred in the world today!

Why do we contribute to the happiness of others?

From a very early age, most of us are taught the importance of being kind and generous to others. The values of kindness and generosity are all but universal in human societies across the globe. This is hardly surprising: being kind to each other is valuable in its own right. Giving a helping hand to somebody in need can not only enhance their happiness, but could also create a ripple effect and have downstream consequences for others and society more generally. In most societies, volunteering and charity play a critical role in the optimal functioning of the society and its members.

Kindness is good not only for the recipient, but also for the giver. In one recent study, toddlers no older than 2 years of age exhibited greater happiness (e.g., smiled more) when they shared treats with an animated puppet than when they simply received treats for themselves. In fact, these toddlers felt happiest when they gave some of their own treats to the puppet.

Kindness, therefore, seems to go to the very core of what it means to be human. According to the renowned Berkeley psychologist, Dacher Ketlner, we are simply born to be good.

Consider just a few other recent findings suggesting that when it comes to happiness, giving is often better than receiving:

- In both rich countries (e.g., US and Canada) and less rich countries (e.g., Uganda), people randomly assigned to spend money on others felt happier than people assigned to spend the same amount of money on themselves!
- People who were asked to perform acts of kindness each week for a period of 10 weeks—even minor acts of kindness—felt happier at the end of the intervention.

How can you contribute to the happiness of others?

Being kind and generous can take many forms. You can donate money to charity or buy a gift for a friend or family member. But money is only one resource that we can give away. We can also give the gift of our time and our skills. In past studies, people asked to engage in acts of kindness have done things ranging from washing someone else's dishes and buying medication for a friend in financial difficulty to donating blood, volunteering at a nursing home, and fixing someone else's computer.

Research has suggested that the amount of money, time, or other resources people give is not essential. What is important is that the kind acts you decide to do go above and beyond what you normally do. For example, although cooking a meal for your family is certainly kind, it may not boost your happiness if it is already your custom to cook the family dinner.

Making a measurable impact is another important factor in reaping the benefits of giving. Thus, although we have been emphasizing the benefits of giving for yourself, it is important to remember that giving is ultimately not about the benefits *you* reap, but rather the benefits *others* receive. If you decide to give to charity, for example, you are most likely to reap the benefits of giving if you know how your donation would impact the life of others in positive ways.

Finally, as cliché as it may sound, it is true that giving has to come from the heart. So, although we are asking you to engage in acts of kindness as part of this program, we are purposefully leaving it up to you to decide on the exact acts of kindness. Take this opportunity to select acts of kindness that feel meaningful and important to you!

Putting the Lesson into Practice

Activity of the Week

Let's start by thinking about some of the kind things that you could do for others over the next week. Some of those things can be small acts of kindness (e.g., putting some money in a parking meter that is about to expire), whereas others may be substantial (e.g., treating a friend to dinner for no particular reason).

You can select up to 5 kind acts that you can do over the next week. For example, you can select one substantial thing you want to do (e.g., spend a day volunteering at a charity) or 3 to 5 small acts of kindness (e.g., buying coffee for a friend, surprising a family member with a small present).

Remember, however, that whatever you decide to do, the kind acts you identify need to:

- Be things that go beyond the kind acts you already do.
- Be things that you want to do rather than things that you have to do.
- Be things that have a clear positive impact on others that you can easily identify.

Now, let's have you make a plan for the kind acts that you would like to do this week. For each kind act, make a specific plan, including deciding on:

• Who exactly were the recipient of your kind act (e.g., name of charity organization, name of family member or friend).

- What day of the week you was perform these acts of kindness.
- What actions you need to take to make it happen.

Remember that you can decide to do from 1 to 5 things this week. Just make sure that they go beyond what you normally do, but also that you do not take on too much so that you end up feeling stressed and overwhelmed.

up reening stres	ssed and overwhelmed.
Act of kindnes	s #1:
<ul><li>Who</li><li>When_</li><li>How:</li></ul>	1
Act of kindnes	s #2:
<ul><li>Who</li><li>When_</li><li>How:</li></ul>	1
0	3
Act of kindnes	s #3:
<ul><li>Who</li><li>When_</li></ul>	1
Act of kindnes	s #4:
<ul><li>Who</li><li>When_</li></ul>	

Act of kindness #5:

2 Wiles	
• What	
• Who	
• When	
• How	
After This Week	
daily life. Please think about some of thothers. Perhaps, you can commit to dor	t to continue to apply this principle of happiness in your he ways that you can make a habit out of being kind to nating money regularly to a charity that is doing work that nteer for an organization that is important to you.
Please now take some time to n life.	nake a plan of how you can make kindness part of your
Act of kindness #1:	
• What	
• Who	
• When	
• How	
o 1	
o 2	
o 3	
How often	
Act of kindness #2:	
• What	
• Who	
• When	
• How	
• 1	
0 2	
0 3	
• How often	
Act of kindness #3:	
• What	
• Who	
• When	
• How	
o 1	
<ul><li>2</li><li>3</li></ul>	
· · ·	<del></del>

	Who					
WhenHow	When					_
WhenHow	When	W	/ho_		 	
How	How					
	o 1 o 2					
	o 2					
$\circ$ 2.						
o 3 How often		H	ow o	tten_	 	

### Act of kindness #5:

•	What		
•			 _
•	When		 _
•			 _
	0		
•	0	1. 2.	_

• How often\_\_\_\_\_

### Week 8: Integration and Moving Forward

What Have You Done?

Let's take some time to review the topics we have covered throughout this program:

#### Week 2: Values

- You thought about your values.
- You reflected on the roles you play in life that you found to be the most central to who you are as a person.
- You intentionally spent time in activities that support your valued roles.

### Week 3: Goals

- You learned to identify which goals lead to greater happiness and fulfillment.
- You learned that the best goals are those that fit with your values and move towards something desired rather than away from something undesired; the pursuit of these goals is satisfying in and of itself (i.e., above and beyond the joy of achieving them).

- You set some goals for yourself that fit these criteria and outlined implementation intentions to help you move towards these goals.
- You wrote about your "best possible self"—what your life would look like if you achieve some of your most valued goals.

### Week 4: Personal Strengths

- You identified your top character strengths.
- You applied these strengths in new ways.

#### Week 5: Mindfulness

- You worked on being aware of what is happening around you and treating it with nonjudgmental openness and acceptance.
- You learned to label your thoughts and emotions and accept these.

### Week 6: Dealing with the Negative

- You learned how to approach negative situations with self-compassion.
- You worked on restructuring your automatic negative thoughts into more productive thoughts.
- You wrote about negative past experiences and what you might have gained from these
  events.

### Week 7: Savoring

- You reflected on good times you've had in the past and spent some time reliving and savoring these pleasures.
- You learned how to intentionally savor the little pleasures in your everyday life instead of letting them slip away mindlessly.

### Week 8: Close Relationships

- You worked on making your closest relationships healthier.
- You learned about the positivity ratio and took on the challenge of improving the number of positive interactions with your close others so that they outnumbered the negative interactions by at least 5:1.
- You engaged in capitalization strategies by making a point to share your good news with others.
- You took on an active-constructive approach to responding to the good news of others by being attentive and expressing enthusiasm.

### Week 9: Appreciating Others

- You continued to focus on your relationships by generating feelings of gratitude for valued others and expressing these feelings regularly.
- You wrote a gratitude letter to someone in your life and shared it with that person.
- You learned how to pay closer attention to the things others do for you to cultivate a chronic sense of gratitude.

#### Week 10: Social Interactions

- You learned about the value of social interactions, even with acquaintances and strangers.
- You made efforts to maximize your pleasant interactions with others.

# Week 11: Contributing to the Happiness of Others

- You focused on doing things to make the people around you happier.
- You engaged in multiple small acts of kindness throughout the week and reflected on these and other instances of kindness in your life.

Wow!! We've certainly come a long way!

### Moving Forward

An essential part of this program is your continued efforts to make these principles automatic parts of your daily life. It takes time to change your behavior and the way that you interpret the world around you. The goal is to develop some of these principles into habits.

Developing these habits took some time. If you keep practicing the principles of this program, eventually, they werecome integrated into your automatic thoughts and behaviors. But again, you must continue to put in the effort now to make these habits.

As we discussed in the goals session, outlining specific implementation intentions can be crucial for making progress towards your goals. The same goes for striving to improve on the principles discussed in this program.

#### **Intentions Sheet**

Greater happiness can only be sustained through daily effort. You was now have the opportunity to think about the specific ways in which you can apply these top five principles that you learned about and have identified here today. In each case, you was think about the following three points:

- Activities: How was you apply this principle?
- Cues: When can you apply this principle? What cues can you use (e.g., getting home from work, getting out of bed, going to bed) to remind you to do this activity?
- Challenges: What can get in the way of implementing your intentions? What can you do to overcome those challenges? How can you modify your environment to remove any expected challenges?

### Appendix B

#### Week 2

The State Hope Scale (Goals Scale)

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes *how you think about yourself right now* and put that number in the blank before each sentence. Please take a few moments to focus on yourself and what is going on in *your life at this moment*. Once you have this "here and now" set, go ahead and answer each item according to the following scale:

1	2	3	4	5	6	7	8
Definitely	Mostly	Somewhat	Slightly	Slightly	Somewhat	Mostly	Definitely
False	False	False	False	True	True	True	True

- 1. If I should find myself in a jam, I could think of many ways to get out of it.
- 2. At the present time, I am energetically pursuing my goals.
- 3. There are lots of ways around any problem that I am facing now.
- 4. Right now, I see myself as being pretty successful.
- 5. I can think of many ways to reach my current goals.
- 6. At this time, I am meeting the goals that I have set for myself.

### Strengths Use Scale

The following questions ask you about your strengths, that is, the things that you are able to do well or do best, respond using a 1 (strongly disagree) to 7 (strongly agree) scale

- 1. I am regularly able to do what I do best.
- 2. I always play to my strengths.
- 3. I always try to use my strengths.
- 4. I achieve what I want by using my strengths.
- 5. I use my strengths everyday.
- 6. I use my strengths to get what I want out of life.
- 7. My work gives me lots of opportunities to use my strengths.
- 8. My life presents me with lots of different ways to use my strengths.
- 9. Using my strengths comes naturally to me.
- 10. I find it easy to use my strengths in the things I do.
- 11. I am able to use my strengths in lots of different situations.
- 12. Most of my time is spent doing the things that I am good at doing.
- 13. Using my strengths is something I am familiar with.
- 14. I am able to use my strengths in lots of different ways.

The Cognitive and Affective Mindfulness Scale – Revised (CAMS-R)

Instructions: People have a variety of ways of relating to their thoughts and feelings. For each of the items below, rate how much each of these ways applies to you.

1. It is easy for me to concentrate on what I am doing.
2. I am preoccupied by the future. *
3. I can tolerate emotional pain.
4. I can accept things I cannot change
5. I can usually describe how I feel at the moment in considerable detail.
6. I am easily distracted *
7. I am preoccupied by the past. *
8. It's easy for me to keep track of my thoughts and feelings
9. I try to notice my thoughts without judging them.
10. I am able to accept the thoughts and feelings I have
11. I am able to focus on the present moment.
12. I am able to pay close attention to one thing for a long period of time.

## Self-Compassion Scale – Short Form

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

1	2	3	4	5
Almost Never				Almost Always

- 1. When I fail at something important to me I become consumed by feelings of inadequacy.
- 2. I try to be understanding and patient towards those aspects of my personality I don't like.
- 3. When something painful happens I try to take a balanced view of the situation.
- 4. When I'm feeling down, I tend to feel like most other people are probably happier than I am. \*
- 5. I try to see my failings as part of the human condition.
- 6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- 7. When something upsets me I try to keep my emotions in balance.
- 8. When I fail at something that's important to me, I tend to feel alone in my failure. \*
- 9. When I'm feeling down I tend to obsess and fixate on everything that's wrong. \*
- 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
- 11. I'm disapproving and judgmental about my own flaws and inadequacies. \*
- 12. I'm intolerant and impatient towards those aspects of my personality I don't like. \*

The Gratitude Questionnaire (GQ-6)

The Gratitude Questionnaire-Six Item Form (GQ-6) Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1	2	3	4	5	6	7
strongly	disagree	slightly	neutral	slightly	agree	strongly
disagree		disagree		agree		agree

- 1. I have so much in life to be thankful for.
- 2. If I had to list everything that I felt grateful for, it would be a very long list.
- 3. When I look at the world, I don't see much to be grateful for. \*
- 4. I am grateful to a wide variety of people.
- 5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.
- **6.** Long amounts of time can go by before I feel grateful to something or someone. \*

### Perceived Prosocial Impact

Instructions: focus on a **recent project** in which you collaborated with others to accomplish a task. The project could be a work project, school project (e.g., class project), family project (e.g., cleaning up the garage), community project (e.g., patrolling the neighborhood), or religious project (e.g., building a fence around the church). Now state what this project is in a few words below:

- 1. I am very conscious of the positive impact that my work has on others.
- 2. I am very aware of the ways in which my work is benefitting others.
- 3. I feel that I can have a positive impact on others through my work.

#### *Notes*:

• Response scale: 5-point Likert-type scale: from (1) "strongly disagree" to (5) "strongly agree"

# Appendix C

# Weeks 1, 8, and 10 (Pre, Post, and Follow-Up Assessment Measures)

De	mographics	
1.	Age:	
2.	Gender: 1= Male 2= Female 3= Transgender	
3.	Year in school: 1 = freshman 2 = sophomore 3 = junior	4 = senior 5 = other (please specify)
4.	Please indicate your ethnicity:  1 = Caucasian/White  2 = African American  3 = AsianAmerican  4 = Latino/a American  5 = Native American  6 = Multi-racial American  7 = International Student  8 = Other (Please specify)	
5.	Relationship Status: 1= single 2= in a dating relationship 3= married 4= divorced or separated 5= widowed	
6.	Last 4 Digits of your RU School Identification Nu	mber:
7.	Last 4 Digits of your phone number:	

#### CES-D

Center for Epidemiologic Studies - Depression Scale

Using the scale below, indicate the number which best describes how often you felt or behaved this way – DURING THE PAST WEEK.

- \*= reverse scored
- 0 =Rarely or none of the time (less than 1 day)
- 1 =Some or a little of the time (1-2 days)
- 2 = Occasionally or a moderate amount of time (3-4 days)
- 3 = Most or all of the time (5-7 days)

# **DURING THE PAST WEEK:**

- 1. I was bothered by things that usually don't bother me.
- 2. I had trouble keeping my mind on what I was doing.
- 3. I felt depressed.
- 4. I felt that everything I did was an effort.
- 5. I felt hopeful about the future. \*
- 6. I felt fearful.
- 7. My sleep was restless.
- 8. I was happy. \*
- 9. I felt lonely.
- 10. I could not get "going."

Sources: Andresen, Malmgren, Carter, & Patrick, 1994; Radloff, 1977; Irwin et al., 1999

DASS (Depression, Anxiety and Stress Subscales)

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement. The rating scale is as follows:

0= Did not apply to me at all

- 1= Applied to me to some degree, or some of the time
- 2= Applied to me to a considerable degree or a good part of time
- 3= Applied to me very much or most of the time
- 1 (s) I found it hard to wind down
- 2 (a) I was aware of dryness of my mouth
- 3 (a) I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)
- 4 (s) I tended to over-react to situations
- 5 (a) I experienced trembling (e.g. in the hands)
- 6 (s) I felt that I was using a lot of nervous energy
- 7 (a) I was worried about situations in which I might panic and make a fool of myself
- 8 (s) I found myself getting agitated
- 9 (s) I found it difficult to relax
- 10 (s) I was intolerant of anything that kept me from getting on with what I was doing
- 11 (a) I felt I was close to panic
- 12 (s) I felt that I was rather touchy
- 13 (a) I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)
- 14 (a) I felt scared without any good reason

Source: Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales*. (2<sup>nd</sup>. Ed.) Sydney: Psychology Foundation.

Basic Need Satisfaction in General (BNS)

### Feelings I Have

Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

1	2	3	4	5	6	7
Not at all			Somewhat			Very true
true			true			

<sup>\*=</sup> reverse scored

- 1. I feel like I am free to decide for myself how to live my life.
- 2. I really like the people I interact with.
- 3. Often, I do not feel very competent. \*
- 4. I feel pressured in my life. \*
- 5. People I know tell me I am good at what I do.
- 6. I get along with people I come into contact with.
- 7. I pretty much keep to myself and don't have a lot of social contacts. \*
- 8. I generally feel free to express my ideas and opinions.
- 9. I consider the people I regularly interact with to be my friends.
- 10. I have been able to learn interesting new skills recently.
- 11. In my daily life, I frequently have to do what I am told. \*
- 12. People in my life care about me.
- 13. Most days I feel a sense of accomplishment from what I do.
- 14. People I interact with on a daily basis tend to take my feelings into consideration.
- 15. In my life I do not get much of a chance to show how capable I am. \*
- 16. There are not many people that I am close to. \*
- 17. I feel like I can pretty much be myself in my daily situations.
- 18. The people I interact with regularly do not seem to like me much.
- 19. I often do not feel very capable.
- 20. There is not much opportunity for me to decide for myself how to do things in my daily life. \*
- 21. People are generally pretty friendly towards me.

Source: Deci & Ryan, 2000

### The Meaning in Life Questionnaire

Instruction. Please take a moment to think about what makes your life feel important to you. Please response to the following statement as truthfully and accurately as you can, and also please remember that there are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

1	2	3	4	5	6	7
Absolutely	Mostly	Somewhat	Can't Say	Somewhat	Mostly	Absolutely
Untrue	Untrue	Untrue	True or	True	True	True
			False			

<sup>\*=</sup> reverse scored

- 1. I understand my life's meaning.
- 2. I am looking for something that makes my life feel meaningful.
- 3. I am always looking to find my life's purpose.
- 4. My life has a clear sense of purpose.
- 5. I have a good sense of what makes my life meaningful.
- 6. I have discovered a satisfying life purpose.
- 7. I am always searching for something that makes my life feel significant.
- 8. I am seeking a purpose or mission for my life.
- 9. My life has no clear purpose. \*
- 10. I am searching for meaning in my life.

Source: Steger et al., 2006; Steger & Shin, 2010

### Satisfaction with Life Scale

Instructions. Below are five statements with which you may agree or disagree. Using the 1—7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is as follows:

1	2	3	4	5	6	7
Strongly	Disagree	Slightly	Neither agree	Slightly	Agree	Strongly
disagree		disagree	nor disagree	agree.		agree

- \_\_ 1. In most ways my life is close to my ideal.
- \_\_ 2. The conditions of my life are excellent.
- \_\_ 3. I am satisfied with my life.
- \_\_ 4. So far I have gotten the important things I want in life.
- \_\_ 5. If I could live my life over, I would change almost nothing.

Source: Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.

Measure of Positive and Negative Experience

Please think about what you have been doing and experiencing during the past 4 weeks. Then report how much you experienced each of the following feelings, using the scale below. For each item, select a number from 1 to 5, and indicate that number on your response sheet.

- 1 = very rarely or never
- 2 = rarely
- 3 =sometimes
- 4 = often
- 5 = very often or always
  - Positive
  - Negative
  - Good
  - Bad
  - Pleasant
  - Unpleasant
  - Happy
  - Sad
  - Afraid
  - Joyful
  - Angry
  - Contented

**Scoring**: The measure can be used to derive an overall affect balance score, but can also be divided into positive and negative feeling scales.

*Positive feelings (SPANE-P)*: Add the scores varying from 1 to 5, for the six items: positive, good, pleasant, happy, joyful, and contented. The score can vary from 6 (lowest possible) to 30 (highest possible).

*Negative feelings (SPANE-N):* Add the scores varying from 1 to 5, for the six items: negative, bad, unpleasant, sad, afraid, and angry. The score can vary from 6 (lowest possible) to 30 (highest possible).

Affect balance (SPANE-B): The negative feelings score is subtracted from the positive feelings score, and the resultant difference score can vary from -24 (unhappiness possible) to 24 (happiest possible).

**Source:** Adapted from Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New wellbeing measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, *97*, 143-156.

Qualitative Questions Specific to the Post-assessments
What was the most helpful about participating in this wellbeing project study? Please provide specific examples.
What was the least helpful about participating in this wellbeing project study? Please provide specific examples.
Please provide concrete feedback that were helpful to improve this study in the future.

Patient Health Questionnaire (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?

- (0) Not at all, (1) Several days, (2) More than half the days, (3) Nearly every day
- 1. Little interest or pleasure in doing things 0 1 2 3
- 2. Feeling down, depressed, or hopeless 0 1 2 3
- 3. Trouble falling or staying asleep, or sleeping too much 0 1 2 3
- 4. Feeling tired or having little energy 0 1 2 3
- 5. Poor appetite or overeating 0 1 2 3
- 6. Feeling bad about yourself or that you are a failure or have let yourself or your family down 0 1 2 3
- 7. Trouble concentrating on things, such as reading the newspaper or watching television 0 1 2 3
- 8. Moving or speaking so slowly that other people could have noticed? Or the opposite being so fidgety or restless that you have been moving around a lot more than usual 0 1 2 3
- 9. Thoughts that you would be better off dead or of hurting yourself in some way 0 1 2 3

EUD UEEICE	CODING 0 +	1	1	=Total Score:	
FUK UFFIL F	! ( .(.)  )   N(.T.(.) +	+	+	= Lotal Score:	

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all ... Somewhat difficult ... Very difficult ... Extremely difficult ...

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