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Effects of a Positive Psychological Intervention on Happiness in At-Risk Students

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Abstract

Researchers have suggested an increased focus on positive psychological interventions to enhance college students' happiness levels; however, few studies have addressed positive interventions on at-risk college students. Based on the theoretical framework of positive psychology and impact of positive exercises on happiness, this study addressed whether a positive intervention would increase happiness as evidenced by scores on the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Scale (PANAS). The experimental design included random group assignment and pre- and posttest surveys to collect data from 135 at-risk community college students in Southeast Texas. The experimental group participated in a 1-week intervention consisting of 2 gratitude exercises, and the control group completed early memory journaling. Results indicated significant differences in SWLS and PANAS scores between the two groups with an increase in life satisfaction and positive affect and a decrease in negative affect in the experimental group. Results may be used by institutions seeking positive interventions to increase at-risk college student success and retention.

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Chapter 1: Introduction to the Study

Background

The purpose of this quantitative experimental study was to determine whether a positive psychological intervention involving a combination of two exercises based on positive character strengths would positively alter levels of happiness in at-risk community college students. I used a convenience sample drawn from a preexisting group of students identified by the community college as underserved or at risk of dropping out of college prior to graduation due to a number of factors including individual background, internal characteristics, and environmental factors.

Fromm (1956) argued that a passive approach to encouraging happiness did not serve people well. Peterson (2006) observed that people plan for happiness but with the requirement of active participation to determine how they could more effectively bring happiness into their lives. This goal was explored by deliberately attempting to increase happiness through positive intervention (Layous & Lyubomirsky, 2014; Seligman, 2003). Promoting happiness through positive intervention focused on regulation of emotion (Quoidbach, Mikolajczak, & Gross, 2015), orientation to happiness through observation of individual differences and dispositional mindfulness (Giannopoulous & Vella-Brodrick, 2011; Seear & Vella-Brodrick, 2013), intentional positive activity and unique personality fit (Proyer, Wellenzohn, Gander, & Ruch, 2015; Schueller, 2012), and through a multicultural perspective (Van Zyl & Rothmann, 2012) offered insight into the growth that positive intervention has experienced.

As college students develop plans to achieve academic success, they set high expectations and may become anxious about their academic performance and ability to reach their desired goals (Heins, Fahey, & Leiden, 1984). They cope with issues through sustained performance, resilience through difficult circumstances, and maintaining a sense of well-being as they propel themselves toward their goals. College students must be capable of persisting through experiences of failure, succeeding at the tasks set before them, achieving a sense of well-being, and reaching academic goals.

College success has been shown to be of substantial concern to both institutions of higher learning as well as students attending these institutions (Norvilitis & Reid, 2012; Padilla, 2008; Schreiner, 2009). Institutions of higher learning depend on students' efforts toward academic success as well as the retention of students, specifically students considered to be at risk or underserved, as essential to their advancement as statistics reflect increasing numbers of this population enrolling but with evidence of associated high dropout rate (Achieving the Dream, 2005). Research provided by Fowler and Christakis (2008) supported the impact of students' life satisfaction on their extended social network either positively or negatively as well as the potential to enhance the positive impact on a greater number of lives. U.S. communities and businesses depend on institutions of higher learning to provide education that promotes good citizens and employees capable of adding to the existing value of the workforce through improved skill sets (Fields, 2002; Kuykendahl, 1991).

Lara and Pande (2001) considered the future needs of both the workforce and the economy as a greater supply of more educated human capital is understood to be crucial

for future growth and success. Given the evidence supporting college students' desire for academic success and institutions depending on these students to enter the workforce in support of economic growth, it is valuable to investigate the role of happiness in academic settings. Kuykendahl (1991) suggested that as the U.S. population increases in diversity, it is important to seek out new techniques that inspire and provide hope for minority populations to overcome hopeless attitudes. The U.S. educational system has the responsibility to encourage academic success as everyone is considered to be stakeholders, including minority students.

The basis for success programs developed to assist underserved or at-risk students has been historically a deficits model as evidenced through the inclusion of success strategies aimed at improving test-taking skills and increasing grades through study methods. Although this is considered a valuable effort, the focus has been on deficiencies rather than improving through strengths. Positive psychological intervention offers an alternative to the deficits approach, or what Maddux (2002) referred to as the disease model. Previous findings have supported positive psychological intervention in student populations (Seligman, Steen, Park, & Peterson, 2005). Life satisfaction and happiness in student populations were determined to predict student success and retention, and application of positive interventions targeting an increase in students' life satisfaction and happiness offered the potential for enhancement (Fowler & Christakis, 2008; Schreiner, 2009).

In this study, I examined the relationship between a positive psychological intervention and happiness levels in experimental and control groups of at-risk college students.

Statement of the Problem

I examined happiness levels in an at-risk student population through the use of a brief, 1-week positive psychological intervention that included a dual exercise or shotgun approach.

The relationship between happiness and positive psychological intervention was supported in the literature (Seligman et al., 2005). As the interest in positive psychology was voiced by Seligman and Csikszentmihalyi (2000) and the field grew, there was a call for research focused on further empirical evidence validating positive psychological interventions (Reivich & Shatte', 2002; Seligman et al., 2005). Response to the call included research pertinent to this study conducted on positive interventions promoting happiness within academic settings and differing student populations (Junko & Yasumasa, 2012; Kearney, Di Blasi, Murphy, & O'Sullivan, 2010; Parks & Biswas-Diener, 2013; Pather, 2013; Seligman, 2005; Seligman et al., 2005; Seligman, Rashid, & Parks, 2006). Bolier et al. (2013) conducted a meta-analysis of positive psychological interventions in 39 randomized controlled studies with more than 6100 participants and found that both subjective and psychological well-being intervention effects were both sustainable and significant. Bolier et al. suggested a continued focus on accumulating evidence for positive psychological interventions through high-quality peer-reviewed research.

Edwards, Mumford, and Serra-Roldan (2007) reported a body of research on children at-risk for academic failure, the use of the deficits approach to explain failure, and application of a strengths approach to identify an intervention that would inform research targeting an understanding of those college students considered to be at-risk for failure. Edwards et al. noted that a strengths-based approach was more effective than a deficits-approach. Schreiner and Anderson (2005) found that application of a strengths-based approach worked well with college students and their advisors in building a strong advising relationship.

Most studies have addressed the general college population. Empirical study of positive psychological interventions aimed at at-risk college students and underserved populations enrolled in college has not been conducted. Pather (2013) studied first-year at-risk South African students who were given a positive intervention and found positive results related to academic and social integration leading to higher retention rates for the targeted population. Given that fewer studies using positive psychological interventions have targeted at-risk college students, I endeavored to fill a gap in understanding the effect of positive intervention on this population.

Purpose of the Study

The purpose of this experimental study was to determine whether happiness levels of at-risk community college students were positively affected by a brief 1-week positive psychological intervention consisting of two exercises. Happiness levels were measured using the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Scale (PANAS). The study included pretests and posttests in control and experimental groups

to determine whether differences in happiness levels were observed following the intervention.

Significance of the Study

The potential to increase student happiness was considered to be a worthwhile endeavor (Shatte', Reivich, & Seligman, 2000), and students' academic success is important to students and institutions of higher learning (Norvilitis & Reid, 2012; Padilla, 2008; Schreiner, 2009). Minority or underserved populations have the potential for improved levels of happiness through application of positive intervention (Bolt, 2004; Keyes & Haidt, 2003; Pather, 2013; Seligman, Parks, & Steen, 2004). Turner and Berry (2000) found satisfaction with life and well-being to be a predictor of academic retention, and Frisch et al. (2005) suggested the need for research using life satisfaction and well-being intervention to further examine the reasons for college retention and dropout. In a study targeting a university student sample, Frisch et al. found the Quality of Life Inventory was able to "accurately predict academic retention both by itself and in conjunction with GPA one to three years in advance" (p. 73). Frisch et al. (2005) recommended counseling center use in assessment of quality of life in averting college failure.

Research indicates that intentional activities may positively impact up to 40% of an individual's subjective well-being or happiness (Lyubomirsky, Sheldon, & Schkade, 2005). Sheldon and Lyubomirsky (2006) found a longer-lasting impact achieved through intentional positive activities as opposed to positive changes in circumstances. Research has shown that happiness and satisfaction with life predicts academic success and

retention (Bolier et al., 2013; O'Leary & Dockray, 2015) and that at-risk student populations may benefit from a happiness intervention that may positively impact their academic success and retention (Pather, 2013). The significance of my study included adding to the literature by addressing the efficacy of a happiness intervention on an at-risk student population as a means of enhancing their academic success and retention.

Research Question and Hypotheses

This study included the following research questions (RQs) and hypotheses:

RQ: Will participation in a 1-week positive psychological intervention increase at-risk student happiness as measured by the Satisfaction With Life Scale (SWLS) and Positive And Negative Affect Scale (PANAS)?

$H_0$1: Participation in a 1-week positive psychological intervention does not result in an increase in life satisfaction scores in an experimental group when compared to a control group participating in a neutral activity.

$H_1$1: Participation in a 1-week positive psychological intervention results in an increase in life satisfaction scores in an experimental group when compared to a control group participating in a neutral activity.

$H_0$2: Participation in a 1-week positive psychological intervention does not result in an increase in positive affect or a decrease in negative affect in an experimental group when compared to a control group participating in a neutral activity.

$H_1$2: Participation in a 1-week positive psychological intervention results in an increase in positive affect and a decrease in negative affect in an experimental group when compared to a control group participating in a neutral activity.

Operational Definitions

Holth (2001) stressed the importance of providing operational definitions to ensure understanding of the researcher's intent. A list of operational definitions specific to the study has been included:

Affect: Positive affect refers to pleasurable emotions or moods whereas negative affect refers to disagreeable emotions or moods. Positive and negative affect are components of subjective well-being as a display of individual response to experiences indicating whether life is progressing in a pleasant or unpleasant manner (Watson, Clark, & Tellegen, 1988).

At-risk: . At-risk populations are those that have been proven to be underserved such as African American and Hispanic, who might be first generation college students or those from low-income families and viewed as at-risk of dropping out of college prior to degree completion. Quinnan (1997) described the term as evolving from a reference to race and class to encompass three criteria that would hinder student populations from achieving academic success. These included background characteristics, internal characteristics, and environmental factors and may apply exclusively or in combination. At-risk participants for this study were students enrolled in student success courses at the participating institution. They were required to enroll in the courses as well as chosen for participation in this study based on being at-risk for academic success and potential dropout due to previous academic performance, low GPA, or other academic concerns, as well as social and/or emotional factors as identified through testing, previous academic records, and academic advisement.

Gratitude: The sense of appreciation and thankfulness for the good that is experienced in life and is expressed in emotions, attitudes, and behavior (Peterson & Seligman, 2004).

Happiness: A combination of positive emotion, engagement, and meaning (Seligman et al., 2005). Diener (2000) defined happiness as a multidimensional model of subjective well-being made up of several related but separable factors: positive affect, low levels of negative affect, satisfaction with important domains, and life satisfaction.

Life satisfaction: Lasting or long-term satisfaction with an overall consideration of life (Veenhoven, 2004).

Persistence: Hardiness by conviction that bolsters one's resolve through the difficult circumstances in life (Esonis, 2007).

Positive psychology: The study of human strengths empowering individuals to flourish (Keyes & Haidt, 2003; Rashid, 2013).

Positive psychological intervention: A set of exercises designed to improve levels of happiness.

Retention: Student retention in an individual course and a student's completion of academic requirements for graduation.

Shotgun approach: The combination of two positive exercises (Seligman et al., 2005), also referred to as a dual component intervention (O'Leary & Dockray, 2015) with focus on the character strength of gratitude.

Strengths: Positive characteristics that met the criterion of being "instrumental or functional in both biological and sociocultural success" (Fernandez-Ballesteros, 2003, p.

647). A strengths model focuses on what is going right as opposed to a deficits model that focused on what is going wrong.

Subjective well-being: A multidimensional model made up of several related but separable factors: positive affect, low levels of negative affect, satisfaction with important domains, and life satisfaction (Diener, 2000); also referred to as happiness in this study.

Limitations, Delimitations, and Assumptions

A potential limitation to the study was a small sample size as participants would have a choice as to their voluntary participation. In addition, I used a convenience sample of students taking specific courses and involved in previously identified at-risk populations. Another limitation included the use of self-reported data from participants. Generalization to other populations might have been limited due to the student population used in this study. An additional limitation was my lack of control over student assignment to the at-risk groups as the participating institution had previously categorized students for assignment. The concern for social desirability effects was a limitation as participants might have recognized the targeted subject or hypotheses and they might have changed their behavior or presented themselves in the most positive light through their reported performance on testing.An initial delimitation was the time frame for the study as access to the population was determined by the participating institution. The choice of studying the at-risk student population rather than the general student population was a primary delimitation. A final delimitation was the dual component intervention and the lack of consideration for unique participant/activity fit (Layous &

Lyubomirsky, 2014; Proyer et al., 2015) based on the participating institution and time constraints with access to the population.

I assumed that the study of positive interventions would continue to be a matter of importance (Buschor, Proyer, & Ruch, 2013; Diener, 2003; Lyubomirsky & Layous, 2013; Proyer et al., 2015; Senf & Liaf, 2013) and that the positive impact on at-risk student populations would continue to be important (Clifton, Anderson, & Schreiner, 2006; Diener, 2003; Frisch et al., 2005; Pather, 2013). Additionally, I assumed that individuals undertaking intentional activities designed to enhance happiness as offered through this study would do the activities to determine whether enhancement had occurred and would complete the activities assigned to them (Sheldon & Lyubomirsky, 2006).

Social Change Implications

The goal of this study was to investigate the effects of a brief positive psychology intervention on the levels of happiness among at-risk college students. The social impact of the study was realized in several ways. Seligman et al. (2005) suggested an option for future research was a shotgun approach through a combination of positive exercises presented at once rather than separately; O'Leary and Dockray (2015) also recommended a dual component intervention. In this study, both positive activities targeted the strength of gratitude through a combination of exercises presented at once rather than separately. Evidence supported the application of a brief model that would increase levels of happiness in at-risk students. Findings may be used to promote success strategies within academic institutions assisting at-risk students to improve the quality of their lives.

This study may also broaden the body of literature regarding happiness and well-being through a strengths perspective with the goal of moving toward an improved understanding of human behavior and the ability to increase happiness through the application of evidence-based methods.

Summary

In Chapter 1, I provided an introduction and problem statement articulating the effects of a positive psychological intervention and the potential to change happiness levels in at-risk college students. The purpose and significance were presented as a foundation for the study. I included the research question and hypotheses as well as operational definitions and social change implications.

Chapter 2 includes a literature review addressing an emerging perspective based on positive interventions and a strengths-based model as an approach to increasing levels of happiness in at-risk or underserved student populations. I review the happiness research and development of the field of positive psychology. I examine the emergence of character strengths, at-risk populations, and the call for positive psychological interventions. The chapter concludes with implications of the study.

Chapter 2: Literature Review

The lack of focus on the positive side of psychology in favor of the negative side has resulted in gaps in the literature (Maslow, 1962; Seligman, 2002; Seligman & Csikszentmihalyi, 2000). The shift of interest toward a strengths perspective rather than a deficits model has become evident as the focus on the emerging field of positive psychology continues to gain momentum (Diener, 2009). In the literature review, I examine three main aspects of this study. First, I explore the field of positive psychology and applicable human strengths and happiness as components of interest specific to this study. Second, I examine student populations considered to be underserved or at risk of dropping out of college. Third, I examine positive psychological interventions including the rationale for further research (Seligman et al., 2005).

My research strategy involved numerous databases including PsycARTICLES, MEDLINE Complete, Psychology & Behavioral Sciences Collection, PsycINFO, ERIC, Academic Search Complete, and PsycEXTRA. Key search terms included *happiness*, *positive psychology*, *happiness and positive psychology*, *intervention*, *positive psychology and intervention*, *well-being*, *subjective well-being*, *satisfaction with life*, *affect*, *positive affect*, *negative affect*, *positive and negative affect*, *disease model and positive intervention*, *gratitude*, *happiness and intervention*, *happiness and success*, *character strengths*, *academic success strategies*, *academic success intervention*, *at-risk populations*, *college student and at-risk populations*, *at-risk students and community college*, *intervention and at-risk students*, *positive intervention and student success*,

character strengths and training, *character strengths and intervention*, and *positive intervention success*.

Positive Psychology

Peterson (2006) stated that positive psychology should be scientifically examined to determine what is going right throughout the entire lifetime. The study of positive psychology does not ignore the problems experienced in life, but rather declares that equal attention must be paid to the study of what is positive in life and what makes it worth living. Peterson (2006) asserted that positive psychology is as valid in addressing integrity and merit in the human spirit as addressing illness, chaos, and suffering. Seligman (1998) suggested that scholars had thoroughly investigated and provided detailed assessment and treatment strategies pertaining to the negative side of psychology, and attention should be shifted to unexplored areas. Seligman (2002) argued that researchers should explore the neglected elements of the human character. Eisenberg and Wang (2003) asserted that positive psychology is not new and is an endeavor to bring attention to areas formerly overlooked in favor of areas of deficiency or disease.

Fernandez-Rios and Cornes (2009) argued that the study of positive psychology is not new and offers no new contribution to the field of psychology.

The study of positive psychology has included many areas since its introduction by Seligman (1998), and researchers have conducted empirical studies of positive psychological interventions including positive emotion and activities that might increase well-being and happiness (Layous & Lyubomirsky, 2014; Seear & Vella-Brodrick, 2013). Researchers have also addressed differing character strengths-based observance of

intentional activities that might increase happiness (Proyer et al., 2015), individual set point and adaptation for happiness (Sheldon, Boehm, & Lyubomirsky, 2013; Tomyn, Weinberg, & Cummins, 2015), gratitude activities that increase happiness (O'Leary & Dockray, 2015), the association between happiness or subjective well-being and academic success (Ruppel, Liersch, & Walter, 2015), subjective well-being and life satisfaction as a predictor of student success and retention (Schreiner, 2009; Fowler and Christakis, 2008), and happiness intervention used with at-risk student populations targeting positive impact on student success and retention (Pather, 2013). These areas will be further explored in following sections.

The Disease Model

Maslow (1962) recognized a void in the field of psychology in observing sickness without consideration of the continuum of human experience. The disease model focused on what was missing and dysfunctional. Maslow's expressed interest in and movement toward a more positive psychology. Maslow targeted the establishment of a new domain focused on the authentic and evolved self and the belief that professionals in the field were in error regarding the definition of *normal*, which was instead "a psychopathology of the average" (Maslow, 1962, p. 21). Further, Maslow stated that without acknowledgment of exceptional events, moments of sheer bliss, and common moments of average contentment, the effort would be futileity as life is experienced with differing degrees of events located on both ends of the spectrum; and the field would be incomplete without consideration of the full range of human experience. Rogers (1961)

agreed with this view in the concept of the fully functioning person including experiences ranging from good to bad.

Shift to the Positive

Historical reflection of the existing body of work pertaining to optimal functioning and the ability to flourish was undertaken by Jorgensen and Nafstad (2004) who concluded that it was not only possible but worth pursuing. Peterson (2006) viewed the field of psychology as incomplete because the element of flourishing was missing and rated it as "being somewhere north of neutral" (p. 308). This was based on the perspective that an absence of psychopathology does not mean there is promotion of human potential, and without the study of what makes humans flourish the level of human potential has only reached a neutral level. Likewise, James (1979) argued that psychology as a field could not afford to exclude particular perspectives, but rather would be better served by adoption of an inclusive attitude with its roots continuously questioned. With a shift in focus toward strengths rather than weaknesses, the study of psychology moved from surviving to an elevated perspective of thriving. In the quest to continually analyze what brings about the best in humans as they strive to achieve a well-lived life, the scientific psychological landscape now includes the application of positive emotions and strengths (Lopez, 2009).

Peterson (2006) suggested that the development of positive psychology was not new field or without flaws, but the movement sought to add to the field through scientific means. Positive psychology is an emerging field of study that involves the observation of how individuals may enhance their lives. Peterson (2006) and Seligman (2009) agreed

that it was not a shift in paradigm, but rather a change in focus within the field of psychology. This effort was met with great enthusiasm and support (Lopez & Snyder, 2003; Seligman, 1998; Wright & Fletcher, 1982). Evidence of the shift away from the disease model toward a positive approach, which was pertinent to my study, can be seen in studies of the application of positive activity interventions (PAIs) in treating individuals with depression (Giannopoulous & Vella-Brodrick, 2011; Layous, Chancellor, Lyubomirsky, Wang, & Doraiswarmy, 2011).

The Good Life

Seligman and Csikszentmihalyi (2000) offered an explanation of the *good life* and the foundation of positive psychology using three related elements. First, positive subjective experiences include happiness, fulfillment, pleasure, and gratification (Seligman & Csikszentmihalyi, 2000). Second, positive individual traits include talents, values, strengths of character, and interests (Seligman & Csikszentmihalyi, 2000). Third, positive institutions include families, businesses, schools, communities, and societies (Seligman & Csikszentmihalyi, 2000).

Happiness and Well-Being

The concept of happiness has been considered by Greek philosophers (McMahon, 2005; Myers, 2002). Aristotle viewed happiness as encompassing both theoretical and practical wisdom or knowing what is good and right as well as its behavioral manifestation. This concept of *eudaemonia* or the good life differs from the current understanding of happiness and subjective well-being as consideration of societal ethics

and judgment of morality focusing on wisdom diverge from psychologist's perspective of the concepts (Myers, 2002).

The long-standing contemplation of happiness and associated constructs has been evidenced throughout the literature with an emerging perspective emphasizing a scientific approach that had not been previously considered (Peterson, 2006; Seligman, 2009).

Happiness and subjective well-being are used interchangeably in the literature (Myers, 2002). Subjective well-being is defined as a multidimensional model made up of several related but separable factors including positive affect, low levels of negative affect, satisfaction with important domains, and life satisfaction as determined through self-report (Diener, 2000; Diener, Suh, Lucas, & Smith, 1999). In a population of law students, optimistic expectations were found to predict positive affect but not negative affect (Segerstrom & Sephton, 2010). Life satisfaction was shown to be an indicator of well-being (Lyubomirsky, King, & Diener, 2005), and positive psychological intervention has been effectively used in the examination of subjective well-being (Giannopoulos & Vella-Brodrick, 2011).

The literature offered varied perspectives of happiness. Fredrickson (2009) viewed the pursuit of happiness in terms of an American right as granted to each individual by the Declaration of Independence. However, Fredrickson argued that individuals choosing to pursue the path of material possessions, better jobs, more money, and the like are misguided. A more favorable path is seeking happiness in the moment and through daily living "producing an upward spiral toward flourishing" (Fredrickson, 2009, p. 30).

Seligman and Csikszentmihalyi (2000) described happiness in terms of the subjective level of positive psychology as experienced in the present. Seligman and Csikszentmihalyi referred to happiness in terms of positive experiences listed in the category of human strengths as emotional, and happiness is accompanied in this category by the strengths of well-being and satisfaction.

Another perspective, the hedonic treadmill model or hedonic adaptation, involves the notion that people have a certain set point or level of happiness that they will naturally gravitate back to as either good or bad events take place (Diener, Lucas, & Scollon, 2006). This set point differs among people, who will return to a point of neutrality as continuous adaptation to changing circumstances occurs but the individual set point has been shown to be positively affected (Tomyn et al., 2015). Lyubomirsky et al. (2005) defined happiness as the genetic set point of homeostasis, asserting that no matter what good or bad events happen in people's lives, they will return to a genetically predetermined set point of subjective well-being; however, the set point accounts for approximately 50% of the variance in subjective well-being. Changing life's circumstances accounts for approximately 10% of variance, and a final variance in subjective well-being of 40% can be influenced through intentional activities. Although the genetic set point might be observed by some as a negative aspect based on the idea that 50% cannot be changed, an alternate perspective could be considered as people may choose to alter their subjective well-being (SWB) through the remaining potential of 40% of their happiness. The activities that they choose to intentionally participate in are the target for the change (Lyubomirsky et al., 2005). Sheldon and Lyubomirsky (2006) found

that SWB increased over a longer period following positive activity when compared with positive change in circumstances. I considered these findings when designing the current study involving at-risk community college students who took part in intentional activities targeting happiness. Sheldon et al. (2013) examined individuals' genetic predisposition and the hedonic treatmill by studying individuals' potential for achievement and sustaining happiness at higher levels and found that a variety of approaches yielded positive results.

Recent research findings have shown that culture influences the value placed on the level of desire to be happy and extreme value to achieve happiness can play a role in risk for depression (Ford et al., 2014). Cultural differences in emotional value placed on achieving happiness are a consideration for future research and intervention but will not be undertaken in this study.

Not only have there been differences in perspectives offered in the literature related to what happiness and subject well-being are but the importance of seeking it out has been debated as well. Happiness as a selfish pursuit and its reduced importance to a "feeling" rather than the larger concept of "well-being" has been proposed (Hudson, 1996; Wilson, 2008). Belliotti (2004) argued for the higher value of outstanding achievement in life even in the state of unhappiness as offering greater value than a happy but comparably less valuable life.

Positive Psychological Intervention

There is an identified gap in the literature that this study will attempt to address pertaining to positive psychological intervention aimed at increasing knowledge and

application of positive activities and the effect on academic success in at-risk community college student populations. Interventions no longer must rely solely on identification of pathology and problem correction but may shift focus to individuals' unique strengths and apply them to enable achievement of positive outcomes. As the relationship between positive psychology and intervention is examined, there is an apparent challenge. Peterson (personal communication, Feb. 17, 2009) called for the pursuit of the scientific approach to positive psychological interventions. Peterson proposed a lack of research utilizing interventions based on positive psychological application that provides cause to stimulate future research in support of the science. Quality of life or well-being interventions, as Diener (2003) referred to them interchangeably, can be used with groups that are considered to be at-risk.

Positive psychological interventions aimed at increasing happiness may require action perceived as out of the ordinary as an active goal for participants rather than waiting passively for it to simply show up. Fromm (1956) suggested that we are best served by consciously choosing happiness and taking action to achieve it versus a passive approach. Peterson (2006) carried the idea further by discussing happiness as occurring through a deliberate course of action and planning for its presence and Lyubomirsky et al., (2005) promoted the use of intentional activities in positive intervention to impact the 40% of subjective well-being that can be altered. This is the impetus for the current research as applied to the at-risk student population in determination of the level of efficacy that might be derived from a deliberate attempt to increase happiness and student success through positive intervention.

Seligman et al., (2005) discussed the need for further research focused on increasing individual happiness using positive intervention that would build the body of literature for empirical validation of positive psychological interventions. This is in agreement with commentary offered by Lopez and Gallagher (2009) encouraging the understanding of weakness and how we might treat this to assist in development of instruments that might assist in building strengths. These researchers additionally suggested that development of programs which are empirically based ensure positive interventions will utilize a scientific approach. This supports the goal of the research aimed at providing validation for a brief positive psychological intervention applying a dual component approach targeting gratitude that has already evidenced positive results following intervention (O'Leary & Dockray, 2015).

Lyubomirsky, King, and Diener (2005) offered a review of cross-sectional empirical literature concerning whether happy people were also successful. This was described in terms of success related to achieving one's culturally valued goals and whether people viewed as successful were better able to accomplish this. Work, social and health domains of life were examined and in all areas, happiness or subjective well-being, was related to positive outcomes and in many areas of life, "…happy people appear to be more successful than their less happy peers…" (p. 825). Outstanding performance and greater productivity were behaviors identified as success oriented and evidenced in happy people. In addition, the question has been posed regarding determination of which is present first, happiness or success? The researchers offered

findings that supported happiness as present initially which then led to success-oriented behaviors. The research underscores the importance of happiness to success.

Seligman, referred to as “father of positive psychology” and Ed Diener, referred to as “father of happiness research” endeavored to discover what factors contribute to individuals scoring at the lower and upper ends of happiness measures and to better understand the qualities possessed by those individuals at the upper end as contributing to their great happiness (Diener & Seligman, 2002). A meta-analysis investigating numerous characteristics of happy people was undertaken by Lyubomirsky, King, and Diener (2005) and support was provided for happy people living longer lives, having better health, experiencing greater workplace success, and achieving better social relationships.

Review of the literature provided empirical evidence for the application of positive interventions that increased well-being (Bolier et al., 2013; Lyubomirsky, 2011; O’Leary & Dockray, 2015; Tomyn, Weinberg, & Cummins, 2015); Sin & Lyubomirsky, 2009). In consideration of this study’s findings and potential future impact, Parks-Sheiner (2009, p. 62) proposed advancement of “cost-effective happiness-increasing interventions – coupled with accurate methods of assessing happiness at the national level - could change the face of public policy”. A final factor of significance was brought out in research undertaken by Layous and Lyubomirsky (2014) that considered not only the positive intervention itself and its ability to boost happiness over any period of time, as targeted by a study, but the additional potential for the participants to call upon the techniques they have learned in the intervention to assist them in increasing well-being

later in life as important and always at their disposal. Research conducted by Sheldon, Boehm, and Lyubomirsky (2013) found that observance of individual differences and consideration of a variety of positive psychological activities and plan for application can enhance promotion of happiness and its sustainability.

The literature has identified aspects of positive psychological intervention needing additional focus. Positive psychological interventions have been used with a variety of university college student populations as Kearney et al. (2010) worked with Irish students, Junko, and Yasumasa (2012) worked with Japanese students, and Duan, Ho, Tang, Li, and Zhang (2014) worked with Chinese students. Research undertaken by Lu and Gilmour (2014) found that a more culturally balanced approach to the concept of happiness and subjective well-being was needed. Van Zyl and Rothmann (2012) and brought attention to the need for development of happiness interventions. Additionally, while positive interventions have been successful in increasing well-being, there is potential for a better person-positive activity fit that might be identified and is a source for further research in enhancing positive intervention outcomes (Layous & Lyubomirsky, 2012; Schueller & Parks, 2014). Giannopoulos and Vella-Brodrick (2011) supported examination of individual differences impacting positive interventions. Sheldon, Boehm, and Lyubomirsky (2013) suggested further research targeting sustainable happiness and exploration of a model that would assist in prevention of hedonic adaptation in individuals.

Although Parks-Sheiner (2009) made the encouraging point that happiness interventions are easily adapted among a variety of situations and work well in many

populations, there are drawbacks to be considered. Happiness interventions must be more widely implemented and effectively communicated across all fields. People throughout all societies can gain understanding of how they can achieve their highest individual potential through happiness interventions.

Character Strengths

Peterson and Parks (2009, p. 25) discussed good character and the study of character strengths and positive traits as an essential aim of positive psychology as it illuminates "life worth living". Seligman and Csikszentmihalyi (2000) supported the study and further understanding of positive traits. To more fully address the identification of character strengths, The Values in Action Inventory of Strengths (VIA-IS) measure was developed to identify individuals' strengths of character in determination of unique signature strengths that may be built upon in achieving the good life (Peterson & Seligman, 2004). Some of the identified strengths measured by the VIA-IS, were humor, curiosity, kindness, fairness, hope, courage, loyalty, creativity, and specific to this study is gratitude, the focus of the two exercises that will be used in the shotgun intervention. Both the Gratitude Visit and Three Good Things in Life exercises target gratitude as the character strength used to potentially intervene and increase happiness as previously used in positive intervention research (Seligman et al., 2005).

A higher probability of happiness occurs as individuals are provided the daily opportunity to utilize their strengths (Buckingham & Clifton, 2001; Fredrickson, 2009). Seligman, Steen, Park, and Peterson (2005) found that participants in their research who discovered their individual or signature strengths and then practiced new ways to use

those strengths in their daily lives produced significant and long-lasting increases in positive emotions, including happiness or well-being.

Baltes and Freund (2003) posited that prior to the last century, not only was life expectancy significantly shorter than today but historically, the maturation process ended with reaching a stable state of adulthood. Maintenance of the status quo, as a goal in former generations, was no longer the expectation as contemporary life now demands adults to remain in "continual becoming" as constant adaptation is a necessity in modern times (Baltes & Freund, 2003).

Baltes and Freund (2003, p.26) suggested the requirement of "lifelong learning nonstop" in modern lives can be viewed from a negative perspective, yet from a positive perspective this provides opportunity for continuous personal growth throughout the entire lifetime; acquisition of skills, willingness to change, and development of human strengths that will affect the ability to succeed.

Scientific inquiry targeting development of identified human strengths has already been an avenue taken toward achievement of this goal and it is hoped that findings from this study will have lasting effects on students' academic and personal lives.

From a differing view Aspinwall and Staudinger (2003) gave caution as to the potential appeal of using human strengths in the name of scientific advancement in a manner deemed inappropriate for the emerging science. It is one thing to undertake scientific inquiry regarding human strengths and the potential benefit to our happiness yet it is quite another to advocate this as a system of values. An additional warning was

offered linked to the idea that everything positive is intrinsically good for all, in every situation.

Lopez and Snyder (2003, p. 465) discussed academic achievement programs in general and a strengths curriculum specifically, that was on the leading edge of positive psychological assessment in an academic setting at the time. The researchers discussed the "achievement gap" between ethnic minority students and white students. Reference to the "gap" and potential for positive psychological assessment using a strengths approach resulting in measureable positive outcomes associated with ethnic minority students are an important recognition related to the study.

The two positive intervention exercises to be used in the study's intervention were successfully used in prior research and focused on gratitude as the character strength that would increase happiness (Seligman et al. 2005). Gratitude will be discussed further in the upcoming section as the one character strength targeted for this research rather than a combination of character strengths.

Research undertaken using positive intervention and specifically, gratitude, targeted the potential for increased happiness and boosted well-being (Emmons & McCullough, 2003; O'Leary & Dockray, 2015). As a positive intervention, the two exercises to be used in the study focus on the character strength of gratitude. Gratitude targets the sense of appreciation and thankfulness for the good that is experienced in life and is expressed in emotions, attitudes, and behavior. Gratitude may address another person, organization, or a larger concept such as the universe or God.

There are a number of ways in which gratitude has been noted to influence happiness. Gratitude promotes happiness and offsets the effects of negative emotion (Roberts, 2004; Seligman et al., 2005). Offered in study findings are the increase in positive affect and decrease in negative affect and, as will be targeted in this study, an increase in satisfaction with life scores. Lyubomirsky (2008) offered findings consistent with prior research showing increase in happiness following a gratitude intervention of counting blessings in a gratitude journal over six weeks. Fostering growth of gratitude as a strength can assist as a coping tool or buffer in weathering adversity thereby increasing happiness. Research findings offer evidence for those study participants who were more grateful finding greater positive outcomes from their negative life events than those participants who were less grateful (Watkins, Grimm, & Kolts, 2004). Additionally, hedonic adaptation or simply put, getting use to an increase in happiness, may be effectively countered by gratitude through an awareness of not taking things for granted (Lyubomirsky, 2008; Lyubomirsky, 2011). Peterson and Seligman (2004) discussed the importance of developing interventions that would deliberately cultivate gratitude. Review of the literature found that positive intervention using gratitude activities were successful in increasing happiness (O'Leary & Dockray, 2015). Watkins, Woodward, Stone, and Kolts (2003) found that participants reporting an increased level of gratefulness additionally reported increased happiness levels.

Seligman et al. (2005) used the "three good things" exercise that entailed a recall of three things people might be grateful for in their lives; the exercise took place over a one week period just as in this study and resulted in an increase in happiness and decrease

in depressed symptoms. Review of the literature offered consensus regarding the exercise of counting one's blessings as consistently resulting in an increase in happiness (Emmons & McCullough, 2003; Lyubomirsky et al., 2005; Seligman et al., 2005).

A second exercise chosen as a part of the shotgun intervention is the Gratitude Visit that calls for writing a letter to someone and concretely expressing the reason for gratitude. A participant would be asked to then personally deliver the letter and have the recipient read it in their presence. The outcomes of this exercise have been an increase in happiness and decrease in depressive symptoms although this exercise has not provided the longer-lasting effects that the previous exercise provided (Peterson, 2006; Seligman et al., 2005). An alternative to the gratitude visit would be a gratitude diary that was successfully used in an intervention with Irish undergraduate students targeting increasing happiness (Kearney et al., 2010).

At-Risk Populations and Collegiate Success and Retention

The impact of life experienced in the academic arena is greater than just academic success alone. Fowler and Christakis (2008) found that happiness affects students as well as the quality of life for the social network tied to each student. Ray and Kafka (2014) based their research on the Gallup-Purdue Index, and data in a study that observed the relationship between supportive and engaging experiences in college and work life suggested that the life experienced by students while in college impacts the future lives of the graduates and their well-being (Ray & Kafka, 2014).

At-Risk Populations

Phinney and Haas (2003) studied coping in first-generation college freshmen, specifically, students of ethnic classification enrolled in a commuter university. They found that students in general considered success in academic pursuits to be the most significant goal, but students from minority environments have additional goals that vie for this level of significance that are not generally experienced by students from non-minority environments. Support was also offered for ethnic minority first-generation students as handicapped in their potential for college completion. In Zalaquett's (1999) research comparing students' academic achievement between students whose parents had attended college versus those whose parents had not, there was a greater number of minority students also classified as first-generation. This adds to the factors that may contribute to the potential downfall of ethnic minority students in pursuit of academic goals.

Sagor (1993, p. 3) viewed the term "at-risk" as an acknowledged term within the current educational vernacular and there are multiple definitions when referring to an identified subcategory of students. The definition applied in Sagor's text was adapted from an earlier work by Pearl (1972) and Sagor's (1993, p. 4) definition is: "Someone who is unlikely to graduate on schedule with both the skills and self-esteem necessary to exercise meaningful options in the areas of: work, leisure, culture, civic affairs, and inter/intra personal relationships."

Related to one of the largest participating community colleges in Houston, Achieving the Dream (2004) stated in its report on student success in the community

college system that more than 70% of students, were considered to have at least one or more variables that would impede their success and cause a reduction in the potential to complete academic programs. Additionally, there was a recognition that one of the community colleges' overall goals and strengths was to offer educational opportunities and enhancing life experiences to a substantial number of students considered to be at-risk in an effort to promote success and life improvement.

Hispanic and black populations are the two largest populations representing at-risk students. Harrell and Forney (2003) discussed both the enrollment and retention of Hispanics in higher education, concluding that as the most rapidly growing ethnic population, they are representative of the new minority majority in the United States as statistically supported by 2001 Census data. The question of equity as a goal in education was posed and a call for action to greatly improve both the overall academic enrollment and retention of students was made. The importance of diversity pertaining to the global society and contributing to competition as well as being valued as a national treasure were expressed. One aspect readily apparent as missing from the overall consideration was a focus on the strengths perspective in addressing the issues and instead focused on a deficits model.

It is apparent that in previous generations, college attendance may have been an option for the privileged in being afforded both the time and expense of attending but this is no longer the case. Now college attendance is recognized as a common goal as evidenced by 38% of young adults in the U.S. attaining their first college degree (UNESCO, 2010). The Chronicle of Higher Education (2009) reported that by 2018, U.S.

colleges will see a 38% increase in Hispanic students, a 26% increase in black students, and a 16% increase in the female student population.

In The Chronicle of Higher Education, Bok (2003) provided discussion and suggestions for action to be taken in response to a warning presented by Supreme Court Justice Sandra Day O'Connor on October 24, 2003 addressing the existing gap in minority academic achievement. Justice O'Connor posited that the gap for Hispanic and black students should be closed within a period of 25 years and this was perceived as a "major challenge" for academic institutions as the differences could not be based solely on the factor of race. In general, as the literature states, the cause(s) for the gap's remaining existence is not clear and the need for further investigation was encouraged. Bok (2003) suggested that steps be taken by academic institutions to assist identified populations' to increase the overall potential for success in college.

Collegiate Success and Retention

Academic achievement is an important goal among all parties affected by a student's success and academic failure is difficult to overcome; study findings favored academic expectations and achievement as directly related to psychological adjustment (Valås, 2001). Both students and the academic institutions in which they are enrolled, are stakeholders in academic success and efforts focused on improvement (Norvilitis and Reid, 2012; Padilla, 2008; Schreiner, 2009).

A lack of programs exist that have achieved success in addressing underperformance among at-risk student populations yet ironically there is an almost standard inclusion of focused commitment to all students in college catalogs to assist in

the realization of their full potential. Donaldson (2004) postulated that among non-profit organizations, educational institutions, assisting in individual development, targets the mission of increasing well-being and furthering efforts toward enhanced human functioning. Bok (2003) observed colleges' underperformance in lack of resolution of the academic achievement gap and inability to assist students in achieving their potential. This literature was representative of the focus on the deficits model of academic achievement and collegiate success. The author in turn, solicited the consideration of whether there are additional perspectives and questions to be asked in gaining full appreciation of the issue. The "wake-up call" that Bok (2003) referred to may be perceived differently if heard on a different frequency.

The theme is recurrent as Anderson spoke of his shift in thinking away from the deficits model toward a new model of strengths as he was confronted with research findings that concluded that students do not leave college as much because of the deficiency of aptitude or academic failure but rather, due to being disheartened, disappointed, or the loss of motivating factors and enthusiasm. "More students leave college because of disillusionment, discouragement, or reduced motivation than because of lack of ability or dismissal by school administration" (Clifton, Anderson, & Schreiner, 2006, p. xiv). Based upon prior assumption that students leave college due to a lack in abilities, skills, and/or knowledge, the prevalent method of deficits-based remediation in addressing college student success and retention was the accepted practice and Anderson realized that this model would fail to provide the results he was trying to achieve. Together with Don Clifton, the study of what was excellent in successful college students

was undertaken, which resulted in development of the Clifton SrengthsFinder, an instrument that assesses individual strengths, assisting people in exploitation of their strengths and management of weaknesses to achieve success. This was a step in a new and more positive direction to address the question of how to view an existing educational dilemma.

As a related issue, the deliberation of what success is considered to be is valid as Sternberg (2003) made the point that individuals' definition of success in comparison to various societies' definitions may be very different. In addition, individuals both affect and are affected by environments. Finally, "…people adapt, shape, and select most effectively when they capitalize on strengths and compensate for or correct weaknesses" (Sternberg, 2003, p. 319). Further, in discussing successful intelligence, Sternberg suggested that individuals gain the most benefit from development of their strengths by actively shaping their environment, thus, maximizing their chances of success, whatever their meaning of success may be.

Sternberg (2003) stated that students' inability to academically achieve at desirable levels may be due to several factors. The definition of intelligence and achievement is currently quite narrow and does not take into account creative and practical intelligence in addition to analytical intelligence. Through redefinition, using a strengths approach, academic achievement improves greatly as more students fall into the category of "intelligent". All three factors of discovering students' strengths, instruction geared toward inclusion of techniques that teach to those strengths, and assessment based on those strengths is necessary to allow all students to flourish. Without this redefinition

based upon strengths, many students will continue to be excluded from opportunities offered by the ever-changing local environments and there may be even greater impact when consideration is given to the loss of talent globally.

If approached from the perspective of developing human strengths and fostering individual and group performance, promoting optimal states and overall happiness, there may potentially be more positive outcome. Strengths based evidence provided support for positive psychological methodology in addressing these questions (Clifton, Anderson, & Schreiner, 2006).

A great deal of research has been reported in examination of children at-risk for academic failure and the deficits approach used in models explaining failure, but Edwards, Mumford, and Serra-Roldan (2007) reviewed a strengths-based approach in addressing the application of identification and intervention that might be possible and work might assist with understanding the needs of college students considered to be at-risk.

Chan (20010) found a strong correlation between the character strength of gratitude and subjective well-being just as Gradisek (2012) found between gratitude and life satisfaction. Character strengths have been shown to be connected to personal, social, and academic functioning (Denovan & Macaskill, 2013). Character strengths show positive correlation with both academic success of college students (Lounsbury, Fisher, Levy & Welsh, 2009) as well as subjective well-being (Park, Peterson, & Seligman, 2004). The association between subjective well-being and academic success has been the

focus of study (Ruppel, Liersch, & Walter, 2015) and will be further explained and connected to retention.

Collegiate success may be viewed as important to students, their families, academic institutions, and to the larger society that will ultimately be affected by collegiate efforts and experience. Norvilitis and Reid (2012) used measures of satisfaction with life and adjustment both socially and academically in determination of predictors of success and noting these are independent constructs, findings indicated that satisfaction with life was related to both academic and social adjustment. This research was consistent with additional research as Schreiner (2009) reported findings from an empirical study of nearly 28,000 students enrolled at 65 four-year academic institutions and found that satisfaction in students is directly tied to student persistence and college retention and that overall, "satisfaction indicator almost doubled the ability to predict retention beyond what demographic characteristics and institutional features could predict"(p. 3). Higher eduction tended to care about student satisfaction because of its potential impact on student motivation and retention. Research has shown that students need both encouragement to participate in the learning process, motivation to actively engage, (Daniels, 2010) as well as encouragement toward self-ownership of the learning process (Andersen, 2011).

Using a positive psychological approach to increase well-being / happiness may assist with closing the gap in both at-risk students' college success and retention. Expanding the importance of examining the effects of student happiness as a predictor of student success and retention, Fowler and Christakis (2008) found that happiness is not

only a transformational factor within a student's academic environment by enhancing engagement, academic performance, and retention, but it boosts the quality of life for the social network to which the individual student is connected and the effects of happiness may be further reaching than previously considered.

The prior considerations are all encompassing and too broad to be addressed in this current study. As a result, a more narrow focus of research has been undertaken. Specifically, a study exploring the potential to increase levels of happiness through positive psychological intervention was targeted. It is hoped that future research would be undertaken to apply findings from this study in further examination of whether differing levels of happiness play a role in academic achievement and overall student success. The current research as well as suggested future research would be worthwhile in investigating a potential happiness intervention that could increase life satisfaction and well-being as review of the literature has evidenced life satisfaction and well-being to positively affect academic success and student retention.

Conclusion

Chapter 2 offered the research strategy employed and a review of literature focused on positive psychology and positive psychological interventions as a proposed method of studying happiness in at-risk student populations

In examination of the literature, the growth of the positive side of psychology has been fueled by investigation balancing the former concentration on deficiency in human character or use of the "disease model" with an investigative shift in examination of the "good life", human strengths, and the promotion of human potential.

Within the larger field of Psychology, positive psychology, the examination of happiness or subjective well-being, reflected opposing perspectives as to the importance of its study as a selfish pursuit or the highest priority in life. Literature review found differing perspectives targeting how happiness might be enhanced and to what degree as evidenced by the hedonic adaptation theory and subjective well-being homeostatsis theory in consideration of each individual's genetic set point of happiness and adaptation to changes in life. Additionally, the literature supported happiness as a predictor of academic success. Relevant to the application of research findings targeting happiness and to the current study, were positive psychological interventions aimed at promoting well-being and consideration of factors that included human character strengths, specifically, gratitude, that were shown to increase happiness. Review of research consisted of a variety of positive activities including both of the activities that comprise the dual component intervention or shotgun approach utilized in this study. The final components explored in the literature reviewed characteristics of at-risk populations as well as collegiate success and how positive psychological intervention might positively influence academic success and retention. A gap in the literature was noted with lesser focus of research using positive psychological interventions targeting at-risk college student populations and use of a dual component of positive activities in the promotion of happiness and impact on academic success and retention. This supported the reasoning for this study.

Chapter 3 will introduce the research methodology, discuss the study's design, setting and sample to be used, and the treatment. Discussion will include the elements of

data collection and analysis, ethical consideration of participants and will conclude with a summary.

Chapter 3: Research Methodology

The purpose of this quantitative study was to determine the effects of a positive psychological intervention on at-risk college students' happiness. In this chapter, I describe the research design, setting, study sample, treatment, data collection and analysis, and ethical considerations.

Research Design

I used a pre- and posttest design with a 1 week time lapse in observing the effects of a positive psychological intervention on participants' happiness levels in an experimental group and a placebo intervention in a control group. Happiness was defined as satisfaction with life with evidence of positive affect and a low level of negative affect. Happiness and satisfaction with life were used interchangeably in this study. Using the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Schedule (PANAS), I measured the happiness levels in both groups and compared the results.

I drew from prior research by Seligman et al. (2005) who used a pre- and posttest design including random assignment and placebo-controlled testing. This design was used to measure participants' happiness levels following an intervention consisting of two positive psychological exercises. This choice was viewed as significant based on Seligman's (2003) suggestion that an essential element in studying positive psychology was using interventions that had been determined to be valid.

Seligman et al. (2005) employed individual exercises whereas my study combined two of the most effective exercises identified from the prior study. These positive exercises (The Gratitude Visit and Three Good Things in Life) were used in a dual

component or shotgun approach. O'Leary and Dockray (2015) used two dual component interventions of positive activities consisting of gratitude and mindfulness demonstrated through a gratitude journal and gratitude reflection that increased happiness.

The two instruments chosen for this study were the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Schedule (PANAS). According to Howell, Rodzon, Kurai, and Sanchez (2010), these instruments are two of the most employed assessment scales of happiness, affect and emotion, and life satisfaction. The SWLS is a brief 5-item instrument used to measure overall satisfaction with life focusing on the respondents' life experiences, and can be used as a cross-cultural index of life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). The SWLS was developed with the inclusion of items as "global rather than specific in nature, allowing respondents to weight domains of their lives in terms of their own values, in arriving at a global judgment of life satisfaction" (Pavot & Diener, 1993, p. 164). The instrument was developed at a reading level of 6th to 10th grades, and normative data are available for diverse populations including college students. A coefficient alpha of .87 and a 2-month test-retest correlation of .82 demonstrated internal consistency and temporal stability.

The PANAS is a brief measure of positive and negative affect through the use of two 10-item mood scales. The PANAS has been established valid and reliable in measuring the separate dimensions of affectivity. Cronbach's alpha coefficient for positive and negative affect was .88 and .87 respectively, and the 8-week test-retest correlation was.68 for positive affect stability and.71 for negative affect. Large sample sizes of college students were used in each of the seven time frames, which offered

appropriate norms for the current study drawing from a college student population (Watson, Clark, & Tellegen, 1988). Permission to use both instruments appears as Appendix B and Appendix D.

Setting and Sample

Undergraduate students participating in the two-year college retention and academic achievement program were participants in this study. Using a power of .80, an alpha of .05, and a population ES of approximately .30, I determined that approximately 64 participants were needed for this study (Cohen, 1992). I recruited 100+ students to offset the potential for error due to students dropping out of the study. I targeted students from one community college and received assurance that 100-140 students would be provided. All participants were enrolled in a student success course, all were the traditional college age of 18 to 23 years, and all were classified as freshmen. I did not offer credit for participation.

Participants were randomly assigned to experimental or control groups. All face-to-face sessions were held in a classroom at the participating institution's northwest campus.

The two-year college located in South Central Texas that agreed to provide access for this study had predetermined the portion of its student population identified as at risk or underserved. Increasing student retention rates, including retention of at-risk students, was one of this institution's stated goals, and the organization had expressed a proactive approach to identifying trends and outbound retention campaigns (Lone Star College System, 2009). The institution had proven that it was willing to fund and support

interventions that would lead to success for students identified as underprepared and in need of college readiness assistance (National Center for Postsecondary Research [NCPR], 2009).

The institution taking part in this study participates in a national multiyear initiative designed to assist community college students in their academic and life success. There was concern for students prematurely ending their education prior to achieving a degree or certificate, which may negatively impact their future opportunities. Achieving the Dream (2005) expressed concern for students who had historically encountered considerable impediments to achievement.

Description of Intervention

This study was modeled after research by Seligman et al. (2005). I conducted a recruitment visit to success courses followed 1 week later by an initial meeting with participants in which I explained the study's requirements and exercises, participation consent, pretesting, and random group assignment. The second meeting with participants included posttesting and debriefing.

After receiving approval from the participating institution, I contacted each instructor in success courses and set up times to visit each class. A flyer was offered to all potential participants in the courses, including initial information about the study, request for voluntary participation, requirements for participation, and the option to opt out of participation without consequences. At the start of the initial meeting, participants had already been given the freedom to choose any seat within the room. I provided a thorough explanation of their rights, asked them to read and sign a consent form, and provided a

brief explanation of the instruments. I explained that any participant choosing to decline participation or opt out at a later time and could do so without consequence. I handed out the instruments, answer sheets, and pencils and asked participants to provide the information that verified their completion of exercises and provision of consent. The expectation was that participants would complete the SWLS in 5 minutes and the PANAS in 10 minutes.

Following completion of the instruments, participants were randomly assigned to control and experimental groups. Starting from the left side of the room, each participant was instructed to count off verbally by 1 or 2; all those identified by 1 were assigned to the control group, and those identified by 2 were assigned to the experimental group. All participants were provided with the corresponding explanation of what their assigned exercises would be for the next week and were asked to fill out a form that verified the completion of assigned exercises each day, as shown in Appendix G. Participants in both groups were asked to write down their group number on their exercise completion form as well as answer a descriptive question related to gender and fill in the last four digits of their student identification. The last four digits of participants' student identification were additionally asked for on the consent form.

The control group's neutral exercise of early memories journal writing and the experimental group's exercises are shown in Appendix E. Participants in the control group were asked to recall early memories, to write down as many details as possible including feelings and activities, to note any patterns or similarities in these memories, and to fill out the verification of completed exercises form.

The experimental group participants were asked to carry out the assigned exercises over the next week and were provided with instructions regarding the two positive psychological exercises that served as the positive intervention.

The gratitude visit exercise asked participants to write a letter of gratitude, meet with the person to whom it was addressed, read the letter to the person, watch for his or her reaction, and reflect on what this exercise meant to him or her (Seligman et al., 2005).

The three good things exercise asked participants to reflect on three good things that went well during the day, write them down, and record the reason why things went well. This was to be completed each night before going to bed (Seligman et al., 2005). The experimental group participants were also asked to verify completion of exercises for the entire week.

All participants were asked to return after 1 week for the second meeting to retake the SWLS and PANAS and to submit the forms verifying completion of exercises. At the posttest session, participants were debriefed as to the full nature of the study and were provided an opportunity to ask questions. When data analysis was complete, I visited the success classes to review the study's findings with the participants as permitted by the participating institution.

Although 36 participants were able to complete the entire intervention through the face-to-face or manual posttesting, a crisis occurred that shut down the participating institution's facilities for several days, thereby impeding the completion of the posttest data collection with the remaining participants. As a result, I altered the manner in which the posttest data were gathered by using an online survey after obtaining permission from

the participating institution and Walden University. On the posttest survey, participants were asked to identify how many times they had completed specific exercises; this allowed me to verify both the assigned group each participant had listed based on the difference in assigned exercise(s) and that exercise(s) had been completed by the participants. I provided instructions to the participating institution regarding access to the online survey through a web link, including dates of available access and general information. There were 99 participants who successfully completed the entire study. Following data collection and analysis, I provided debriefing information to the participants, who were reminded of means to contact me and associated institutional staff if any questions arose. Due to the timing of this event at the end of the semester, there were no requests for me to further explain the findings.

Data collected from pretest and posttest sessions were analyzed, and mean differences between the groups were compared.

Data Collection and Analysis

The independent variable identified in this study was the intervention or exercise(s) corresponding to the experimental and control groups and the dependent variable was defined as the level of happiness as measured by the SWLS and PANAS. The control group was used for comparison of pretest data between the two groups and provided validity of the experimental group's representativeness. Descriptive statistics was provided as well as hypotheses tested by means of inferential statistical analysis. Although the statistical design originally included paired t tests, when attempted, the assumption of normality failed. A non-parametric test for significance (the Wilcoxon

Signed-Ranks Test) was chosen to compare the mean differences between the control and experimental groups and effectiveness of the intervention on the two scores from the PANAS and SWLS separately. A statistically significant difference in affect, as determined by the PANAS and in satisfaction with life, as determined by the SWLS, was achieved by comparison of pretest and posttest scores. The basis for data collection and analysis was reflected in the study carried out by Seligman et al (2005).

Sample recruitment was achieved through student enrollment in the identified course as all students participating in the course were previously determined by the participating institution as at-risk for college success. All participants were students enrolled in a success course and asked to volunteer their participation in the study if they were 18 years of age or older. The opportunity to decline participation was explained as one of the initial statements and anyone who declined was asked to remain in the room during until the end of the session, but to observe rather than to actively take part in the study. Informed consent procedures following APA guidelines were followed. Random assignment of participants to both groups will be achieved through counting off "1" or "2" from unassigned seating as a part of the study and confidentiality was achieved as the researcher maintained sole possession of collected data, consent forms, and verification of completion of assigned exercise(s) forms.

I alone, carried out the study in its entirety. Materials needed to carry out the research included copies of the SWLS and PANAS, instrument scoring sheets, pencils, and exercise instructions in addition to Consent Forms, general instructions, and Participant Verification –Completion of Exercises forms as seen as an Appendix G.

Seligman et al. (2005) concluded their study's findings with recommendations for future positive interventions that would further the growth of Positive Psychology as a field through empirical validation; this study's research design included validation of findings though randomized controlled trials versus alternative methods in support of the prior study's recommendation. Suggestion of a shotgun approach by the authors combining exercises rather than having participants work through only one exercise was undertaken in this research and two of the exercises with most positive results were chosen as the treatment for the experimental group. Further recommendations included the research results being distributed to all educational centers within the participating community college and potential for discussion of findings would be offered in the effort to effect institutional change. Potentially, inclusion of this approach could be considered in the existing success strategy programs currently offered at the participating institution.

Ethical Considerations

Approval from the participating academic institution to carry out the experimental study was noted as associated with IRB # 03-11-16-0012948 prior to its implementation. All participants received a consent form that fully explained details of the study at the start of the initial meeting and must be completed at that time. This was accompanied by a statement of all ethical considerations pertaining to participants' rights that included a statement of confidentiality, nature of the study, voluntary participation, sharing of final results, and researcher contact information.

Summary

This study examined levels of happiness prior to and following a positive psychological intervention using the following instruments: SWLS and PANAS. Following data collection and analysis, results will be reviewed in chapter 4 and chapter 5 will review conclusions and implications.

Chapter 4: Results

The purpose of this quantitative study was to determine whether happiness levels (dependent variable) of at-risk community college students in an experimental group would be impacted by a brief 1-week positive psychological intervention (independent variable) consisting of two exercises as measured by the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Scale (PANAS). Results from the experimental group were compared to a control group receiving a neutral activity (independent variable).

Research Question: Will participation in a 1-week positive psychological intervention increase at-risk student happiness as measured by the Satisfaction with Life Scale (SWLS) and Positive and Negative Affect Scale (PANAS)?

$H_0$1: Participation in a 1-week positive psychological intervention does not result in an increase in life satisfaction scores in an experimental group when compared to a control group participating in a neutral activity.

$H_1$1: Participation in a 1-week positive psychological intervention results in an increase in life satisfaction scores in an experimental group when compared to a control group participating in a neutral activity.

$H_0$2: Participation in a 1-week positive psychological intervention does not result in an increase in positive affect or a decrease in negative affect in an experimental group when compared to a control group participating in a neutral activity.

$H_1$2: Participation in a 1-week positive psychological intervention results in an increase in positive affect and a decrease in negative affect in an experimental group when compared to a control group participating in a neutral activity.

Statistical analysis will address how the data relates to the study's theoretical framework and the hypotheses.

Data Collection and Analyses

The time frame for data collection was 1 week including the pretest, intervention, and posttest. Recruitment resulted in 148 participants for the pretest, but only 135 participants took the posttest; this sample size met the minimum requirements for total participants and for each group. The posttest group comprised 67 participants in the control group and 68 in the experimental group; 36 participants took the post test on paper, and 99 participants completed the posttest via an online survey.

Data collection was altered from the original format presented in Chapter 3 due to a crisis that caused the closure of the community partner's facilities for several days, preventing the participants from completing the posttest on site. The alteration of delivery of posttest data was proposed to both the Walden IRB and the community partner's IRB, and approval was given to create an online survey for the posttest. The survey was made available to the community partner, who notified participants and provided access.

The community partner identified the sample population as an at-risk student population. The study included a control group, and the PANAS and SWLS instruments were administered to both the experimental and control groups. Random sampling was used, and 128 participants were required for generalizability, with 64 participants in the

control and experimental groups . These conditions and required participant numbers were met, so external validity was enhanced. The study sample would be representative of an at-risk student population in a community college setting, and the results would be generalizable to the larger at-risk student population.

The independent variable was the intervention condition: whether participants received the positive psychological exercises or a neutral exercise. The dependent variable was happiness level. Pretest happiness scores included SWLS and PANAS scores. I examined participants' initial happiness scores and assessed whether happiness scores were changed through comparison of pretest and posttest scores in control and experimental groups. A confounding variable was the manner in which participants took the posttest (via online survey or on site), which may have affected the scores. The on-site posttest scores reflected a greater increase in positive affect and a greater decrease in negative affect than the online survey posttest scores, which might reflect the influence of demand characteristics and social desirability.

The on-site pretest and participant self-administered treatment were carried out as planned.

I originally proposed paired *t* tests for the SWLS pretest/posttest comparison and for both positive and negative affect pretest/posttest comparisons with the PANAS. However, when attempted the paired *t* tests, the assumption of normality failed (Shapiro-Wilkes, p value $< .05$), and a nonparametric test for significance (the Wilcoxon signed ranks test) was chosen for the analysis.

I assumed the dependent variable was continuous rather than discreet. Additionally, I assumed the independent variable that consisted of the pretest/posttest scores of the control/experimental groups, constituted two related groups.

Intervention Fidelity

The on-site pretest and participant self-administered treatment were implemented as planned. I collected posttest data for 36 participants, and 99 participants responded to the posttest via an online survey. A minimum of 128 participants was required for the sample population, and 135 completed the study.

Study Results

Hypothesis 1

The SWLS was administered to both the control and experimental groups as a pretest measure and again as a posttest measure following the 1-week intervention. Null Hypothesis 1 stated that there would be no increase in life satisfaction in the experimental group following a 1-week positive intervention when compared with a control group. According to results from the Wilcoxon signed ranks test for the control group, the null hypothesis was rejected for the SWLS scores; the median paired differences were significantly different (p value = .011). This demonstrated that the intervention resulted in an increase in happiness level. Similarly, the null hypothesis was rejected for the SWLS scores for the experimental group; the median paired differences were also significantly different (p value = .000). This demonstrated that the intervention resulted in an increase in happiness level.

Hypothesis 2

The PANAS was administered to both the control and experimental groups as a pretest measure and again as a posttest measure following the 1-week intervention. Null Hypothesis 2 stated that there would not be an increase in positive affect or a decrease in negative affect in the experimental group compared to the control group.

According to results from the Wilcoxon signed ranks test for the control group, the null hypothesis was accepted for the PANAS positive affect scores; the median paired differences were not significantly different (*p* value = .413). However, the null hypothesis was rejected for control group's PANAS negative affect scores; the median paired differences were significantly different (*p* value = .037). For the experimental group, the null hypothesis was rejected for the both the positive and negative affect scores of the PANAS; the median paired differences were significantly different (*p* value = .000).

A confounding variable was the method by which participants took the posttest. I used an independent two sample *t* test to compare the SWLS scores for participants completing the survey online versus on site. Results showed no significant differences in the mean scores (*p* value = .950). The *t* test comparing positive affect mean scores resulted in significant differences (*p* value = .041). Positive affect scores for on-site respondents were significantly higher than those responding online. I used the Mann-Whitney U test to compare negative affect mean scores for respondents who completed the posttest online versus on site; this nonparametric test was chosen because the assumption of normality was not met (Shapiro-Wilkes *p* value < .05). The Mann-Whitney U test resulted in significant differences in the distribution of negative affect scores

between online and on-site respondents (p value = .005); negative affect scores for on-site respondents were significantly lower than for online respondents.

I used a Wilcoxon signed ranks test to determine whether there was a difference in the SWLS pretest and posttest scores for the control group. Findings indicated that there was a significant difference (z = -2.55, p < .05). The mean of the ranks in favor of the posttest was 29.83, while the mean of the ranks in favor of the pretest was 27.13.

I then used a Wilcoxon ranks signed test to determine whether there was a difference in the SWLS pretest and posttest scores for the experimental group. Findings indicated that there was a significant difference (z = -6.29, p < .05). The mean of the ranks in favor of the posttest was 14.50, while the mean of the ranks in favor of the pretest was 32.47.

Next, I used a Wilcoxon signed ranks test to determine whether there was a difference in the PANAS pretest and posttest scores for the control group. For positive affect, findings indicated no significant difference (z = -.82, p > .05). The mean of the ranks in favor of the posttest was 32.04, while the mean of the ranks in favor of the pretest was 24.96.

I then used a Wilcoxon signed ranks test to determine whether there was a difference in the PANAS pretest and posttest scores for the control group. For negative affect, findings indicated that there was a significant difference (z = -2.08, p < .037). The mean of the ranks in favor of the posttest was 28.84, while the mean of the ranks in favor of the pretest was 25.23.

Next, I used a Wilcoxon signed ranks test to determine whether there was a difference in the PANAS pretest and posttest scores for the experimental group. For positive affect, findings indicated that there was a significant difference ($z = -6.92$, $p < .05$). The mean of the ranks in favor of the posttest was 10.50, while the mean of the ranks in favor of the pretest was 35.10.

I then used a Wilcoxon signed ranks test to determine whether there was a difference in the SWLS pretest and posttest scores for the experimental group. For negative affect, findings indicated that there was a significant difference ($z = -6.92$, $p < .05$). The mean of the ranks in favor of the posttest was 32.48, while the mean of the ranks in favor of the pretest was 33.25.

Results for the Wilcoxon signed ranks test for pre- and posttests in control and experimental groups for SWLS and PANAS measures appear in Appendix H. The results indicated that the application of positive psychological exercises in a 1-week intervention may increase happiness in an at-risk student population. At-risk students can be encouraged to practice positive psychological exercises that will result in an increase in their happiness level.

All participants in the study were enrolled in a student success course, were traditional college age ranging from 18 to 23 years, and were classified as freshmen. Of the 135 participants, 75 identified as female, 56 identified as male, and four did not answer the gender question.

The study provided an unexpected finding as respondents to the on-site posttest survey reported greater positive affect scores and lower negative affect scores than respondents taking the online posttest survey.

Summary

In Chapter 4, results regarding the potential to increase happiness through practice of positive psychological exercises over a 1-week period were presented, and data analysis indicated that the null hypotheses were rejected based on the increase in happiness level following student practice of positive psychological exercises. In Chapter 5, I interpret the findings, describe the implications, and provide a conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

As the U.S. population grows and diversity within the population increases, the need to examine new techniques designed to inspire and offer hope for at-risk populations to overcome hopeless attitudes intensifies (Kuykendahl, 1991). With the U.S. educational system's potential to encourage academic success, all students may be viewed as stakeholders, and the increasing role that minority students play speaks to the importance of supporting their ability to help shape the nation's future. Historically, a deficits model has been used with at-risk student populations, and the positive psychological application model is challenging the deficits approach (Maddux, 2002). Previous studies provided support for a positive psychological intervention in student populations, which informed this study involving a strengths-based approach (Seligman et al., 2005). Life satisfaction and happiness in student populations was determined to predict student success and retention; therefore, studying application of positive interventions designed to increase at-risk students' life satisfaction and happiness was a worthwhile endeavor (Christakis, 2008; Schreiner, 2009).

The purpose of the study was to determine whether happiness levels of at-risk community college students were positively impacted by a brief 1-week positive psychological intervention consisting of two exercises. Happiness levels were measured using the Satisfaction with Life Scale (Pavot & Diener, 1993) and the Positive and Negative Affect Scale (Watson et al., 1988).

Seligman et al. (2005) called for further study of positive interventions targeting happiness and future recommendations, including a combined exercise approach as well

as study of different populations. This study added to the existing knowledge base for efficacy of happiness interventions by addressing a brief intervention with an at-risk population as a means of enhancing student success, college retention, and student well-being.

The study's primary research question addressing whether the positive psychological intervention would increase happiness was answered positively by rejection of the null hypotheses. This rejection was based on significant changes in the SWLS and the PANAS affect scores due to increased happiness as a result of participation in the 1-week positive intervention. An additional finding resulted from the manner in which participants took the posttest. Respondents taking the on-site posttest reported greater positive affect scores and lower negative affect scores than respondents taking the online posttest.

This chapter includes an interpretation of the study's findings, discussion of limitations, recommendations for future research, implications, and a concluding statement.

Interpretation of Findings

I examined the potential to enhance happiness levels in an at-risk student population through the employment of a brief 1-week positive psychological intervention that included a dual exercise or shotgun approach and a pretest/posttest design with a control group. The study added to the existing knowledge base regarding effectiveness of happiness interventions, specifically with at-risk populations as a means of enhancing student success, college retention, and student well-being.+

Findings indicated support for the hypothesis that well-being or happiness consisting of positive and negative affect and life satisfaction could be impacted through positive intervention (Seligman et al., 2005). Subjective well-being, also referred to as happiness in the study, was defined as a multidimensional model made up of several related but separable factors including positive affect, low levels of negative affect, satisfaction with important domains, and life satisfaction as determined through self-report (Diener, 2000; Diener et al., 1999).

Findings from previous studies were used to frame the current study. The intervention consisted of a combination of positive exercises as the independent variable to determine whether student happiness could be affected.

Previous studies provided empirical evidence for the application of positive interventions to increase well-being (Bolier et al., 2013; Lybomirsky, 2011; O'Leary & Dockray, 2015; Sin & Lyubomirsky, 2009; Tomyn et al., 2015). Happiness or subjective well-being has been associated with academic success (Ruppel et al., 2015), subjective well-being and life satisfaction have been shown to be predictors of student success and retention (Fowler & Christakis, 2008; Schreiner, 2009), and happiness interventions used with at-risk student populations have been shown to positively impact student success and retention (Pather, 2013). Based on these findings, , happiness appears to be a predictor of student success and retention.

Limitations of the Study

The possible limitation of having a brief amount of time with participants and the potential for the study to be rushed was unrealized. The time factor was a noted benefit of

this study. The brevity of pretesting and posttesting as well as the intervention exercises requiring a short amount of time encouraged participation. Acknowledgement of this brevity was offered by representatives of the participating institution as well as by participants.

Another possible limitation of the study included the potential for a smaller sample size than anticipated due to the allowance for student voluntary withdrawal. This was handled by a request to the participating institution resulting in access to a larger sample that included 140-160 participants to allow for a higher percentage of participant voluntary withdrawal. There was a related issue of a crisis occurring at the time of posttest data collection that prevented on-site posttest data collection from several participants. Walden University IRB and the participating community partner IRB agreed to allow me to collect posttest data in an online survey. This resulted in achieving more than the minimum required participants for the control and experimental groups.

A convenience sample with self-reported data was considered to be a limitation. This was addressed by requesting participants from success courses to be invited to participate; all participants had been identified by the participating institution as at risk for college success and retention. The cost of carrying out this study was minimal. Generalization to other populations may be limited due to the focus on at-risk college students; however, at-risk student populations exist in most collegiate institutions, which may allow for generalization among academic institutions.

Researcher bias was mitigated through use of a script outlining requirements that reduced the possibity of the researcher's personality or additional information influencing participants' responses.

Social desirability effects and the good-participant role were considered to be possible limitations of the study as participants might have recognized the targeted subject or hypotheses and might have changed their behavior or presented themselves in a more positive light during testing. This appears to have been the case as there was a difference in results according to the manner in which participants took the posttest. Posttest scores from the on-site survey indicated a greater increase in positive affect and a greater decrease in negative affect compared to posttest scores from the online survey.

Recommendations

As diversity in U.S. academic institutions increases and students continue to be identified as at-risk for academic success, the need to better understand how these students might be positively impacted and supported to achieve their goals through intentional positive intervention was an area of importance (Diener, 2003; Frisch et al., 2005; Fowler & Christakis, 2008; Schreiner, 2009). Academic success or failure of diverse populations impacts not only the well-being of individual students but also institutions of higher education (Parks-Sheiner, 2009).

The study's findings indicated that a student population deemed by the academic institution to be at risk for academic success may benefit from a brief 1-week positive

intervention designed to increase happiness. Happiness may be increased using gratitude as the chosen intervention and application of a shotgun approach with two exercises.

Future studies might address the impact of unique fit and choice of gratitude exercises on students' happiness levels (Giannopoulos & Vella-Brodrick, 2011). Studies targeting cultural balance and effects on happiness intervention could offer further insight into effective approaches with different populations (Lu & Gilmour, 2014). Future studies addressing differing at-risk student populations in higher education are needed. Additionally, studies including a combination of gratitude and other character strengths would further the knowledge base regarding positive interventions (Emmons & McCullough, 2003; O'Leary & Dockray, 2015; Seligman et al., 2005). Knowledge gained in these areas would enhance the understanding of how to increase happiness in at-risk student populations.

Implications

The shift from deficits-based interventions to strengths-based or positive interventions provided impetus for this study (Giannopoulous, & Vella-Brodrick, 2011; Layous et al., 2011) to assist the growing population of at-risk college students in achieving academic success (Bok, 2003; Harrell & Forney, 2003).

Findings from previous studies support the efficacy of positive interventions to increase happiness (Seligman et al., 2005). Findings also show that happiness interventions using gratitude could positively impact college success and retention (Kearney et al., 2010), and that positive intervention can increase happiness in student populations (Tomyn et al., 2015). The need for better understanding of positive

interventions that might increase happiness in at-risk community college students was the focal point of this study.

Parks-Sheiner (2009) proposed advancement of "cost-effective happiness-increasing interventions – coupled with accurate methods of assessing happiness at the national level - could change the face of public policy" (p. 62).

I found that happiness levels in an at-risk community college students could be increased through a 1-week, dual exercise positive intervention. Social change implications include supporting academic institutions seeking positive interventions to promote student success.

Conclusion

This quantitative study addressed the potential to increase happiness in an at-risk student population through a brief 1-week positive intervention using a combination of gratitude exercises. Previous research findings showed the positive impact that increasing student happiness can have on student success, college retention, and student well-being. Examination of a student population that was identified as at-risk for academic success was a valuable endeavor and offered new insight into understanding whether positive intervention using a dual exercise, strengths-based approach might enhance students' academic outcomes. This study's findings indicated that a brief 1-week positive intervention increased happiness in an at-risk student population, which provided new insight into the use of positive interventions in higher education. Application of positive interventions in academic institutions could bolster students' well-being and increase their academic success and retention.

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Appendix A: Satisfaction with Life Scale

Satisfaction with Life Scale

The SWLS is a short, 5-item instrument designed to measure global cognitive judgments of one's lives. The scale usually requires only about one minute of respondent time. The scale is not copyrighted, and can be used without charge and without permission by all professionals (researchers and practitioners). The scale takes about one minute to complete, and is in the public domain. A description of psychometric properties of the scale can be found in Pavot and Diener, 1993 Psychological Assessment.

Survey Form

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below indicates your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

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

____ In most ways my life is close to my ideal.

____ The conditions of my life are excellent.

____ I am satisfied with my life.

____ So far I have gotten the important things I want in life.

____ If I could live my life over, I would change almost nothing.

- 35 - 31 Extremely satisfied
- 26 - 30 Satisfied
- 21 - 25 Slightly satisfied
- 20 Neutral
- 15 - 19 Slightly dissatisfied

- 10 - 14 Dissatisfied
- 5 - 9 Extremely dissatisfied

Appendix B: Permission Letter From Dr. Ed Diener

Ed Diener, Ph.D.

Psychology Department
University of Illinois
603 E. Daniel St.
Champaign, IL 61820
217-333-4804 *ediener@s.psych.uiuc.edu*

Dear Requester:

Thank you for requesting the Satisfaction with Life Scale. As you may know, there is an article in the 1985, Volume 45, issue of Journal of Personality Assessment, which reports on the validity and reliability of the scale. In addition, we currently have another article titled, "Review of the Satisfaction With Life Scale" in Psychological Assessment*. The results reported in this second article are extremely encouraging. The SWLS correlates substantially with reports by family and friends of the target person's life satisfaction, with number of memories of satisfying experiences, and with other life satisfaction scales. The SWLS was examined in both a college student and elderly population. In both populations the scale was valid and reliable (internally consistent and stable).

The SWLS is in the public domain (not copyrighted) and therefore you are free to use it without permission or charge. You will, however, have to type or reproduce your own copies.

Best wishes,

Ed Diener, Ph.D.
Professor

*Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment*, 5, 164-172.

Appendix C: Positive And Negative Affect Scale (PANAS)

Positive and Negative Affect Scale (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers:

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

___ interested	___ irritable
___ distressed	___ alert
___ excited	___ ashamed
___ upset	___ inspired
___ strong	___ nervous
___ guilty	___ determined
___ scared	___ attentive
___ hostile	___ jittery
___ enthusiastic	___ active
___ proud	___ afraid

Appendix D: Permission Letter from Dr. David Watson

Hi Pamela,

I appreciate your interest in the Positive and Negative Affect Schedule (PANAS), and I am pleased to grant you permission to use the PANAS in your dissertation research. Please note that to use the PANAS, you need both our permission and the permission of the American Psychological Association (APA), which is the official copyright holder of the instrument. Because I am copying this email to APA, however, you do not have to request permission separately from APA; this single e-mail constitutes official approval from both parties.

We make the PANAS available without charge for non-commercial research purposes. We do require that all printed versions of the PANAS include a full citation and copyright information. Thus, any printed copies should state:

"From "Development and validation of brief measures of positive and negative affect: The PANAS scales," by D. Watson, L. A. Clark, and A. Tellegen, 1988, Journal of Personality and Social Psychology, 54, 1063-1070. Copyright © 1988 by the American Psychological Association. Reproduced with permission."

Please note that this permission does not include administering the PANAS online. If you are conducting a Web-based study, you should contact Karen Thomas at kthomas@apa.org.

Finally, Dr. Clark and I have relocated to the University of Notre Dame. Please direct any future correspondence to our new email addresses there (la.clark@nd.edu; db.watson@nd.edu).

Good luck with your research.

Cordially,

David Watson

David Watson, Ph.D.
Andrew J. McKenna Family Professor
Department of Psychology
118 Haggar Hall
University of Notre Dame
Notre Dame IN 46556

Appendix E: Intervention Exercises

The best source for using these clinically is
www.reflectivehappiness.com

Text of Exercises:

1. **Early Memories (placebo control)**
2. **Gratitude Visit**
3. **Three Good Things in Life**

1. Early Memories (placebo control):

Consider for a moment your earliest memories. Out of all the experiences of a lifetime, we only hold onto a few in the form of early memories. A careful consideration of our earliest memories may help us better understand who we are today.

Your assignment is as follows:

Every night for one week, set aside 10 minutes before you go to bed. Use that time to think of an early memory and write it down in as much detail as possible. Try to remember what you were doing, what you were feeling, and the other people who were with you. (If you cannot remember some of these details, that is OK. Just write down what you can remember.) You may use a journal or your computer to write about the events, but please make sure you actually write (or type) your memories.

After seven nights of doing this exercise, look back over your collection of memories. Notice any similarities or patterns across the memories.

To review, here are the steps of this exercise:

1) Every night for one week, write down an early memory in as much detail as possible.
2) On the seventh night, look for similarities or patterns in your memories.
3) After doing this exercise for one week, we will meet again to take the follow up questionnaire.

I look forward to working with you!

2. Gratitude Visit:

Gratitude can make your life happier and more satisfying. When we feel gratitude, we benefit from the pleasant memory of a positive event in our life. Also, when we express our gratitude to others, we strengthen our relationship with them.

Most everyone enjoys receiving thanks for a job well done or a favor done for a friend, and most of us remember to say "thank you" to others. But sometimes our thank-you is said so casually or quickly that it is nearly meaningless. Perhaps this is because our society does not encourage a deeper expression of thanks. People may learn to feel embarrassed if someone goes "on and on" about how grateful he or she is. But when no one says "thank you" in a meaningful way, no one receives the very positive benefits of gratitude.

In this exercise, you will have the opportunity to experience what it is like to express your gratitude in a thoughtful, purposeful manner. Think of the people – parents, friends, teachers, coaches, teammates, employers, and so on-who have been especially kind to you but whom you have never properly thanked. Choose someone you could meet for a face-to-face meeting in the next week. Your task is to write a gratitude letter to this individual and deliver it in person. The letter should be concrete: be specific about what he or she did for you and how it affected your life. Let the person know what you are doing now, and mention how you often remember their efforts. Make it sing! It is important that you arrange a face-to-face meeting so that you can read the letter in the presence of the person whom you appreciate. Call the person in advance to schedule a time to get together this week. Try to be vague about the purpose of the meeting – This exercise is much more fun when it is a surprise to the recipient! Please keep in mind when scheduling your meeting that you will be meeting once again with us to one week from the date you receive this assignment to report your progress to us. Do not delay!

When you meet with your recipient, take your time reading your letter of gratitude. Notice the reactions of the other person and yourself. If the other person tries to interrupt you as you read (to thank you, etc.), say that you really want him or her to listen until you are done. After you have read the letter (every word!), discuss the content of the letter and your feelings for each other.

When you return home after your meeting, take a moment to think about each of the following questions:

1) How did you feel as you wrote your letter?
2) How did the other person react to your expression of gratitude? And how were you affected by their reaction?
3) Would you like to express your gratitude to someone else in a similar way? Who?

To review, here are the steps of this exercise:

1) Write a letter of gratitude.
2) Arrange to meet the person you wish to thank (but do not give away the surprise).
3) Read the letter in person. Enjoy the moment!
4) Think back on your experience writing the letter and reading it in person. What was it like for you and for the other person? Would you like to do something like this again?
5) After doing this exercise during the one week period, we will meet again to take the follow up questionnaire.

We look forward to hearing back from you soon!

3. Three Good Things in Life:

We think too much about what goes wrong and not enough about what goes right in our lives. Of course, sometimes it makes sense for us to analyze bad events so that we can learn from them and avoid them in the future. However, people tend to spend more time thinking about what is bad in life than is helpful. Worse, this tendency to focus on bad events sets us up for anxiety and depression. One way to keep this from happening is to develop our ability to think about the good in life. Most of us are not nearly as good at analyzing good events as we are at analyzing bad events, so this is a skill that needs practice. As you become better at focusing on the good in your life, you will likely become more grateful for what you have and more hopeful about the future. So let's get started.

Your assignment is as follows:

Every night for one week, set aside 10 minutes before you go to bed. Use that time to write down three things that went really well on that day and why they went well. You may use a journal or your computer to write about the events, but it is important that you have a physical record of what you wrote. It is not enough to do this exercise in your head. The three things you list can be relatively small in importance ("My husband picked up my favorite ice cream for dessert on the way home from work today") or relatively large in importance ("My sister just gave birth to a healthy baby boy"). Next to each positive event in your list, answer the question, "Why did this good thing happen?" For example, someone might write that her husband picked up ice cream "because my husband is really thoughtful sometimes" or "because I remembered to call him from work and remind him to stop by the grocery store." When asked why her sister had given birth to a healthy baby boy, someone might write that "God was looking out for her" or "She did everything right during her pregnancy."

Writing about "why" the positive events in your life happened may seem awkward at first, but please stick with it for one week. It will get easier. After seven nights of doing this exercise, we will be meeting again so that we can learn how this exercise affected you.

To review, here are the steps of this exercise:

1) Every night before bed for one week, think about three good things that went well that day.
2) Write down the three things that went well.
3) Then write down why each thing went well.
4) After doing this exercise for one week, we will meet again to take the follow up questionnaire.

I look forward to working with you!

Appendix F: Participant Verification Completion of Writing Exercise(s)

Happiness and Positive Psychological Study

Please circle: GROUP # 1 or 2

Please provide the last four digits of your Student ID # _____

Please circle your gender: Female Male

Please check the "Yes" box on the day(s) you have completed the writing exercise(s) or the "No" box if you have not completed the writing exercise(s).

	Yes	No
Day 1	☐	☐
Day 2	☐	☐
Day 3	☐	☐
Day 4	☐	☐
Day 5	☐	☐
Day 6	☐	☐
Day 7	☐	☐

Appendix G: Wilcoxon Signed-Ranks Test Results

2 Related Samples – SWLS Pre/Post
Group = Control
Wilcoxon Signed Ranks Test

Ho: The median of the paired differences = 0

Ha: The median of the paired differences is not equal to 0

Table H1

Ranks[a]

		N	Mean Rank	Sum of Ranks
SWLS_Score_Post SWLS_Score_Pre	Negative Ranks	38[b]	29.93	1137.50
	Positive Ranks	19[c]	27.13	515.50
	Ties	10[d]		
	Total	67		

a. group_pre = Control

b. SWLS_Score_Post < SWLS_Score_Pre

c. SWLS_Score_Post > SWLS_Score_Pre

d. SWLS_Score_Post = SWLS_Score_Pre

Table H2

Test Statistics[a,b]

	SWLS_Score_Post SWLS_Score_Pre
Z	-2.554[c]
Asymp. Sig. (2-tailed)	.011

a. group_pre = Control

b. Wilcoxon Signed Ranks Test

c. Based on positive ranks.

For the Control Group, The null hypothesis is rejected for the SWLS scores, thus the median paired differences are significantly different (p-value =.011).

2 Related Samples – SWLS Pre/Post
Group = Experimental
Wilcoxon Signed Ranks Test

Ho: The median of the paired differences = 0

Ha: The median of the paired differences is not equal to 0

Table H3

Ranks[a]

		N	Mean Rank	Sum of Ranks
SWLS_Score_Post - SWLS_Score_Pre	Negative Ranks	5[b]	14.50	72.50
	Positive Ranks	56[c]	32.47	1818.50
	Ties	7[d]		
	Total	68		

a. group_pre = Experimental

b. SWLS_Score_Post < SWLS_Score_Pre

c. SWLS_Score_Post > SWLS_Score_Pre

d. SWLS_Score_Post = SWLS_Score_Pre

Table H4

Test Statistics[a,b]

	SWLS_Score_Post - SWLS_Score_Pre
Z	-6.291[c]
Asymp. Sig. (2-tailed)	.000

a. group_pre = Experimental

b. Wilcoxon Signed Ranks Test

c. Based on negative ranks.

For the Experimental Group, The null hypothesis is rejected for the SWLS scores, thus the median paired differences are significantly different (p-value =.000).

2 Related Samples – Positive and Negative Affect Pre/Post
Group = Control
Wilcoxon Signed Ranks Test

Ho: The median of the paired differences = 0

Ha: The median of the paired differences is not equal to 0

Table H5

Ranks[a]

		N	Mean Rank	Sum of Ranks
PANAS_Pscore_Post	Negative Ranks	28[b]	32.04	897.00
PANAS_Pscore_Pre	Positive Ranks	28[c]	24.96	699.00
	Ties	11[d]		
	Total	67		
PANAS_Nscore_Post	Negative Ranks	34[e]	28.84	980.50
PANAS_Nscore_Pre	Positive Ranks	20[f]	25.23	504.50
	Ties	13[g]		
	Total	67		

a. group_pre = Control

b. PANAS_Pscore_Post < PANAS_Pscore_Pre

c. PANAS_Pscore_Post > PANAS_Pscore_Pre

d. PANAS_Pscore_Post = PANAS_Pscore_Pre

e. PANAS_Nscore_Post < PANAS_Nscore_Pre

f. PANAS_Nscore_Post > PANAS_Nscore_Pre

g. PANAS_Nscore_Post = PANAS_Nscore_Pre

Table H6

Test Statistics[a,b]

	PANAS_Pscore_Post PANAS_Pscore_Pre	PANAS_Nscore_Post PANAS_Nscore_Pre
Z	-.818[c]	-2.084[c]
Asymp. Sig. (2-tailed)	.413	.037

a. group_pre = Control

b. Wilcoxon Signed Ranks Test

c. Based on positive ranks.

For the Control Group, The null hypothesis is accepted for the PANAS Positive scores, thus the median paired differences are not significantly different (p-value =.413). However, for the PANAS Negative scores, the median paired differences are significantly different (p-value =0.037).

2 Related Samples – Positive and Negative Affect Pre/Post
Group = Experimental
Wilcoxon Signed Ranks Test

Ho: The median of the paired differences = 0

Ha: The median of the paired differences is not equal to 0

Table H7

Ranks[a]

		N	Mean Rank	Sum of Ranks
PANAS_Pscore_Post	Negative Ranks	3[b]	10.50	31.50
PANAS_Pscore_Pre	Positive Ranks	64[c]	35.10	2246.50
	Ties	1[d]		
	Total	68		
PANAS_Nscore_Post	Negative Ranks	62[e]	32.48	2013.50
PANAS_Nscore_Pre	Positive Ranks	2[f]	33.25	66.50
	Ties	4[g]		
	Total	68		

a. group_pre = Experimental

b. PANAS_Pscore_Post < PANAS_Pscore_Pre

c. PANAS_Pscore_Post > PANAS_Pscore_Pre

d. PANAS_Pscore_Post = PANAS_Pscore_Pre

e. PANAS_Nscore_Post < PANAS_Nscore_Pre

f. PANAS_Nscore_Post > PANAS_Nscore_Pre

g. PANAS_Nscore_Post = PANAS_Nscore_Pre

Table H8

Test Statistics[a,b]

	PANAS_Pscore_Post PANAS_Pscore_Pre	PANAS_Nscore_Post PANAS_Nscore_Pre
Z	-6.927[c]	-6.521[d]
Asymp. Sig. (2-tailed)	.000	.000

a. group_pre = Experimental

b. Wilcoxon Signed Ranks Test

c. Based on negative ranks.

d. Based on positive ranks.

For the Experimental Group, The null hypothesis is rejected for the PANAS Positive and Negative scores, thus the median paired differences are significantly different (p-value =0.000).