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THESIS TITLE: The Effects of Personal Goals on Well-Being

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The purpose of Positive Psychology is to acquire a scientific understanding of the strengths and virtues that people need in order to thrive, and to use that information to develop effective interventions for positive change. A large part of Positive Psychology research is centered around an individual's sense of well-being. The present study focuses on the theory that setting intrinsic and autonomous goals (internally motivated goals) increases overall subjective well-being (SWB). In order to fully understand this relationship, we conducted a four-week experiment examining which part of the goal setting process actually influences SWB.

We randomly assigned 163 participants from CSUSM to three conditions (Internally Motivated, Externally Motivated, and a control group) to examine the effect of goal setting on subjective well-being (SWB). Specifically, we wanted to examine the relationship between daily progress toward a goal and SWB, the relationship between level of achievement of a goal and SWB, and examine differences in SWB scores for participants in the three conditions.

We did not find any significant differences in SWB between the three groups. As predicted, results showed a significant relationship between daily effort toward a goal and SWB, but not between level of achievement and SWB.

Keywords: Goals, Well-being, Positive Psychology, Happiness
Introduction

Negative aspects of life have traditionally received the most attention from health and human service professionals. There has been a great deal of focus on the deleterious effects of negative emotions on physical and mental health, and much effort to reduce the rates of crime, suicide, violence, and drug use, with little success (Carruthers & Hood, 2004). Positive Psychology proposes that in order to make an effective change it is equally important to focus on positive aspects of mental and emotional well-being. It would be beneficial to understand those individuals who experience deep happiness, social, physical, and psychological well-being, in order to help those who are not achieving the same level of well-being. Conducting research in the area of positive psychology will help people lead more productive, satisfying lives, and to achieve their highest potential. The purpose of Positive Psychology is to acquire a scientific understanding of the strengths and virtues that people need in order to thrive, and to use that information to develop effective interventions for positive change (Seligman & Csikszentmihalyi, 2000). A very important element of positive psychology is an individual’s sense of well-being.

Psychological Well-being

Psychological well-being is defined in terms of personal growth, self-acceptance, environmental mastery, positive relationships, self-determination, and a sense of purpose in life. It has also been identified as one of the main goals of
psychotherapy (Carruthers & Hood, 2004). Developing overall well-being has many social, physical, and emotional benefits, and it is an important topic that needs to be studied in order to improve overall quality of life. Lyubomirsky, King, and Diener (2005) reviewed the literature on benefits of positive well-being and found that happier people report higher levels of physical and psychological functioning. They found that people with higher levels of happiness are less likely to smoke, eat unhealthily, and/or abuse drugs. These factors might explain part of the reason why well-being has been associated with physical benefits such as enhanced immune and cardiovascular function, disease prevention, and optimal psychological functioning (Carruthers & Hood, 2004). Psychological benefits of well-being include lower rates of depression, hypochondriases, schizophrenia, and suicide, as well as an increased ability to deal with stress. Lyubomirsky et al. (2005) reported that when faced with negative life events happier people maintain a more positive outlook than unhappier people. The benefits of well-being are also abundant in the work place, where people with a higher level of positive affect are usually more satisfied with their job and have more favorable evaluations from their supervisors in regards to quality of work, productivity, and dependability. They also missed fewer days of work due to illness than less happy employees (Lyubomirsky et al., 2005). The concept of subjective well-being (SWB) has generally been used in research in order to scientifically study and measure psychological well-being and the factors that are associated with it. It is this term I will now turn my attention to.
Subjective Well-being

Carruthers and Hood (2004) describe subjective happiness as having the presence of positive mood, the absence of negative mood, satisfaction with various domains of life (e.g., work, leisure), and global life satisfaction. This definition is similar to the general definition of subjective well-being (SWB), which is a person’s evaluative reaction to his or her life in regards to life satisfaction and affect (ongoing emotional reactions; Diener, 2000; Diener & Diener, 1995; Diener, Diener, & Diener, 1995; Diener, Emmons, Larsen & Griffin, 1985; Emmons, 1986; Kim-Prieto, Diener, Oishi, & Lucas, 2005; Myers & Diener, 1995). To elaborate more on the dimensions of subjective well being, I will explain specifically what is meant by life satisfaction and explain the difference between positive and negative affect. Life satisfaction is a cognitive evaluation of overall satisfaction of a person's life (Deiner, Emmons, Larsen, & Griffin, 1985). Affect is an ongoing emotional reaction, consisting of positive affect and negative affect. Positive affect is the extent to which a person feels enthusiastic, active, and alert. High positive affect would be a state of high energy, full concentration, and pleasurable engagement. Low positive affect would be characterized by lethargy and sadness. Negative affect is a general dimension of subjective distress and nonpleasurable engagement. High negative affect would be a state of anger, contempt, disgust, fear, guilt, and nervousness. Low negative affect would be a state of calmness and serenity (Watson, Clark, & Tellegen, 1998).
Measuring Subjective Well-being

Subjective well-being is an important concept to study for numerous reasons, but it is also rather challenging, since as the name implies, it is a subjective concept, and therefore difficult to measure. There are a number of ways to measure subjective well-being but the most common form is the collection of self-reports (Pavot & Diener, 1993). Sandvik, Diener, and Seidtitz (1993) tested the validity of self-report measures by comparing a number of self-report measures of subjective well-being with non-self report measures of subjective well-being. The researchers found that self report measures of subjective well-being and life satisfaction were significantly correlated with family and friends reports (non-self reports) of well-being and life satisfaction and concluded that all of the standard self-report well-being scales were valid and reliable ways to measure the subjective well-being construct.

As stated earlier, subjective well-being is a person's evaluative reaction to his or her life in regards to life satisfaction and affect. Therefore, I will focus on the measurement of those two constructs. The Satisfaction with Life Scale (SWLS) is used to measure overall life satisfaction (Diener, et al., 1985). The SWLS is a commonly used 5-item scale which measures life satisfaction as a cognitive-judgmental process. It is narrowly focused to assess global life satisfaction and does not assess constructs such as affect or loneliness. Research has shown that the SWLS has high internal consistency and high temporal reliability. The scores on the SWLS also correlate moderately to highly with
other measures of SWB and is suited for use with various age groups (Diener et al., 1985). The Positive and Negative Affect Schedule (PANAS scale) is used to measure positive affect (PA) and negative affect (NA). The PANAS is a 10-item mood scale that has been shown to be a reliable, valid, and efficient way to measure positive and negative affect (Watson, et al., 1988). By using these measures we should be able to learn more about what factors affect Subjective Well-being.

Factors that Predict Subjective Well-being

In the past, research to try to understand who is happy has focused on factors such as marital status, demographics, and personality traits (Diener, Oishi, & Lucas, 2003). Recent research has shown that the people in the United States who are the happiest have high self-esteem, a sense of personal control, are optimistic, and extraverted (Myers & Diener, 1995; Suh, 2002). Being un-self-consciously absorbed, being engaged in meaningful or engaging work, having goals, making progress toward goals, and freedom from conflict among one’s goals have all been shown to be related to subjective well-being (Myers & Diener, 1995). Cross-cultural research examined the relationships between factors such as income, individualism, human rights, and societal equality across nations and subjective well-being and has found that these factors influence a person’s subjective well-being only if they affect their ability to meet innate and universal needs and/or their ability to achieve their goals (Diener, 2000; Diener et al., 1995; Diener et al., 2003; Myers & Diener, 1995). In fact, a large body of literature
focuses on the relationship between goals and subjective well-being (Carruthers & Hood, 2004; Diener, 2000; Diener et al., 1995; Diener et al., 2003; Emmons, 1986; King, Richards, & Stemmerich, 1998; Myers & Diener, 1995; Oishi & Diener, 2001; Sheldon & Kasser, 2001). It is that relationship to which I will now turn my attention to.

**Personal Goals**

Assessing personal goals can be challenging, but it is possible. Typically researchers begin by asking participants to list 5 to 15 goals that they intend to pursue. Even though the goals will be diverse and unique, rigorous measurement and hypothesis testing are possible. Participants' goals can then be rated on conceptual dimensions of interest (such as how internally motivated or externally motivated the goal is), and they can be coded and counted (Sheldon & Kasser, 2001).

Personal strivings represent what individuals characteristically aim to accomplish through their behavior or the purpose that a person is trying to carry out (Emmons, 1986). Much of the research on goal setting has examined different reasons that people choose to set goals and how their motivation for setting goals affects how the goal is carried out. Research on this topic seems to agree that the motivational source of goals can affect a person's well-being (Deci & Ryan, 2000), as well as their goal progress, goal conflict, and goal achievement (Downie, Koestner, Horberg, & Haga, 2006).

Researchers have identified four different reasons for pursuing a goal.
The first is extrinsic (i.e., "because somebody else wants you to, or because you'll get something from somebody if you do"). This occurs when people's actions are controlled by certain external contingencies, such as attaining a desired consequence or avoiding negative punishment. A second reason is referred to as introjected or controlled reasons for pursuing a goal (i.e., "because you would feel ashamed, guilty, or anxious if you didn't-you feel you ought to strive for this"). These controlled behaviors involve orienting towards controls and directives as to how one should behave. The third reason is an identified or autonomous reason (i.e., "because you really believe that it is an important goal to have - you endorse it freely and wholeheartedly"). These autonomously oriented behaviors involve regulating one's behavior on the basis of interests and self-endorsed values. The last reason for setting a goal is for intrinsic reasons (i.e., "because of the fun and enjoyment which the goal will provide you - the primary reason is simply your interest in the experience itself"). This type of motivation concerns active engagement with tasks people find interesting and would do in the absence of any consequences (Deci & Ryan; Downie, et al., 2006).

*Goal Setting and Subjective Well-being*

Research has shown that goals with extrinsic content (ultimately gauging one's sense of self-worth on others opinions and approval), such as attaining wealth, popularity, image, and attractiveness were not related to SWB, while goals with intrinsic content, such as self-acceptance, affiliation, personal growth, and community contribution are positively associated with SWB (Deci & Ryan,
Goals and Well-being

2000; Sheldon & Kasser, 2001). One of the reasons why these goal-directed behaviors are related to positive outcomes and subjective well-being is that these behaviors are autonomous rather than controlled. Autonomous oriented behaviors involve regulating one’s behavior on the basis of interests and self-endorsed values. Control-oriented behaviors involve orienting toward controls and directives concerning how one should behave (Deci & Ryan, 2000). Research has shown that the autonomous regulation of goal pursuit is more positively associated with well-being than controlled regulation of goal pursuits (Deci & Ryan, 2000; Sheldon & Kasser, 1998). Sheldon and Kasser (1998) examined reasons for pursuing goals among college students and found that students who worked toward goals for autonomous reasons were more personally dedicated and more likely to attain those goals than students who had controlled reasons for goal-striving. They also found that students whose behavior was autonomous reported an increase in well-being following goal attainment while those whose behavior was controlled did not.

Although most of the research has not examined cultural influences on goal setting and subjective well-being, it is important to consider the similarities and differences across cultures. Oishi and Diener (2001) examined differences between European American, Asian American, and Japanese college students’ goal pursuits and how they relate to subjective well-being. Specifically they looked at interdependent goal pursuits versus independent goal pursuits and their relationship to subjective well-being across cultures. Interdependent goal pursuits
were described as pursuing a goal to make parents and friends happy (which they compare to goals with extrinsic content) and independent goals as pursuing a goal for the enjoyment and fun that it provides to the individual (which they compare to goals with intrinsic content). The authors found a significant negative correlation between interdependent goal pursuits and subjective well-being with the European-American participants and positive interaction between interdependent goal pursuits and subjective well-being with Asian-American participants, showing that while interdependent goal pursuit may be harmful to European Americans, it actually may be beneficial for the well-being of Asian Americans. The authors decided to take their study a step further and tested this theory in Japan as well. They found that in Japan, independent goal pursuit was correlated with interdependent goal pursuit. In other words, Japanese participants' idea of fun and enjoyment is to make parents and friends happy and to meet the expectations of others. Therefore, extrinsic motives were shown to have a more positive effect on the Japanese participants than those participants who did not have those motives (Oishi & Diener, 2001).

**Directions for Future Research**

Although we can see that for most people in the U.S. setting meaningful life goals and progressing toward meaningful life goals are positively related to subjective well-being, the next question is which part of the goal-pursuit process most affects subjective well-being? Is it merely setting the goal that increases a person's subjective well-being? Is it the daily effort put towards achieving a goal
that affects subjective well-being? Or is it the ultimate accomplishment or failure to accomplish a goal that affects subjective well-being? Unfortunately, there is a large gap in the literature regarding this topic. One study that examined a similar question had students generate a list of 15 personal strivings, rate each of them along a number of dimensions, and compare and rate each striving with every other striving. To assess subjective well-being, the participants completed mood forms four times a day for three weeks to assess positive and negative affect. Positive affect (PA) was associated with striving value, importance, and past fulfillment, but not with probability of success. Negative affect (NA) was correlated with ambivalence of the goal, low perceived probability of success, and striving conflict (low instrumentality). Life satisfaction was positively associated with strivings that the person perceived as important, valued, not likely to produce conflict, and that had a high probability of success. Interestingly, they also found that the mere presence of a personally important goal, independent of their past goal attainment was positively associated with life satisfaction (Emmons, 1986). This research is a step in the right direction, but further research can help to more fully understand this relationship. It seems clear from the literature that goals that are intrinsically motivated and autonomously controlled (Internal goals) have the biggest impact on SWB. The current study was designed to examine which part of the goal-setting process directly affects SWB and looking at the differences between internally motivated goals and externally motivated goals. In the current study we also examined the extent to which the striving process, or actually
working toward a goal, influenced subjective well-being, rather than the actual achievement of the goal. We hypothesized that striving toward a personally meaningful goal would be rewarding, personally satisfying, and would give the person a sense of fulfillment that would lead to an increase in SWB. It was predicted that increased amount of active engagement in target behaviors would be positively correlated with SWB in the two experimental groups. We also predicted that there would be no relationship between achievement of the goal and SWB in the two experimental groups. It was also predicted that participants in the internally motivated condition would have higher scores on the SWB scales than either the externally motivated condition or the control condition.

Method

Participants

Participants were recruited through the Psychology Department Subject Pool at CSUSM. Participants received course credit after all of the surveys had been collected approximately one month following the initial session. Only those who were able to complete all of the forms and questionnaires on time participated in this study.

The population for this study consists of college students at CSUSM. The majority range in age from approximately 18-24 years. Both male and female college students participated. Based on enrollment records from CSUSM in 2007 there are more females enrolled (63.5%) than males (36.5%). We expected this to
be the case in our introductory psychology classes as well. Because previous research has shown that there are no differences between genders in regards to the effects of goal setting on SWB (Gollwitzer & Brandstatter, 1997; Sheldon & Elliot, 1999), and because of confidentiality issues, we did not collect any demographic information from participants.

Enrollment records for CSUSM in 2007 show that the majority of the population is Caucasian (51.3%) followed by Latinos (19.9%), Asian/Pacific Islander (9.9%), NA (8.7%), other (6.1%), African American (3.1%) and Native American (.9%). We expected that our sample had the same ethnic diversity. Although previous research has supported differences between independent goal pursuit and interdependent goal pursuits of Asian Americans and European Americans (Oishi & Diener, 2001), we believe that our descriptions of internal motivation and external motivation and the opportunity that each participant has to personalize their goals should alleviate any cultural differences found in previous studies.

*Design and Procedure*

The current experiment used a pretest-posttest control group design. California State University San Marcos students who were recruited through the Psychology Department Subject Pool were assigned to one of three conditions where their task was either to work on accomplishing an internally motivated goal, an externally motivated goal, or they were assigned to a control condition.
The study was described as a month long study about happiness and well-being. Participants were told they would receive 3 points toward their undergraduate psychology courses for completing the study. Participants then signed up for an initial 30 minute meeting online, where they chose one of the nine time slots available. After approximately 180 participants signed up, random assignment was used to assign each time slot into one of the three groups, so that there were approximately 60 participants in each group. The initial sessions were small group sessions attended by approximately 20 participants of the same experimental group, where the tasks for each of the three groups were explained in detail. Participants were told that they would be observing and recording their own behavior and that they have a very important role in this study. The researcher explained that each participant’s contribution to this study will be crucial in helping researchers learn more about overall well-being and happiness.

Researchers stressed the importance of accurate and consistent observation and recording of the participant’s reports. After consent forms were read and signed, the questionnaires were administered to participants and their goals were chosen. Specifically, participants in condition one were asked to identify one internally motivated goal they could potentially accomplish during a four-week time period as well as to list four behaviors to implement daily in order to assist them in completing the goal (see table one for a summary of the internally motivated goals that were chosen in this study). An internally motivated goal is defined in this study as a goal that you set because of the fun and enjoyment that the goal
will provide you - the primary reason is simply your interest in the experience itself. *(The opposite of this would be setting a goal because somebody else wants you to, or because you’ll get something from somebody if you do.)* An internally motivated goal is also set because you really believe that this is an important goal to have. *(The opposite of this would be setting a goal because you would feel ashamed, guilty, or anxious if you didn’t, or because you feel you "ought" to strive for this.)* (See appendix C for verbatim instructions). Participants in condition two were asked to identify one externally motivated goal to work on during the four-week time period as well as to list four behaviors they could try to implement daily in order to assist them in completing their target goal (see table two for a summary of the externally motivated goals that were chosen in this study). The definition used to describe externally motivated goals is goals that are set because somebody else wants to you to or because you’ll get something from somebody if you do. *(The opposite of this would be setting a goal because of the fun and enjoyment that the goal will provide you, where the primary reason is simply your interest in the experience itself.)* Reasons for pursuing an externally motivated goal would be because you would feel ashamed, guilty, or anxious if you didn’t – you feel you “ought” to strive for this goal. *(The opposite would be pursuing the goal because you really believe that it is an important goal to have and because you endorse it freely and wholeheartedly.)* (See appendix D for complete instructions). The third condition was a control condition where the participants were not given any instructions regarding goals or behaviors to implement daily.
In addition to choosing their goals and the initial SWB measures, all participants were asked to choose one day out of the week where at some point during that day they would have the opportunity to complete a five minute survey online. Researchers emailed the participants the surveys and they were asked to complete it before midnight that day.

**Measurements/Instruments**

Subjective Well-Being was assessed in all three conditions every week using SWLS and the PANAS. Daily Effort of the experimental conditions was also assessed every week by asking each participant to rate the amount of effort he/she had put into completing each previously identified target behavior by using a 1 - 5 Likert-type scale (See appendix E for example of the daily effort questionnaire). The level of achievement of each goal was assessed during the last week using a 1 - 5 Likert-type scale where each participant was asked to rate the extent to which he/she had achieved the target goal (See appendix F for example of the achievement questionnaire). Finally, the likelihood that a participant would answer in a socially desirable manner was assessed during the initial session using the Crowne-Marlowe Social Desirability Scale, which is a 33 item true/false questionnaire that has been shown to be a valid and reliable measure of social desirability (Crowne & Marlowe, 1960).

**Statistical Analysis**
In order to obtain information about the power of the proposed study, we used Cohen’s $d$ as a measure of effect size (ES) that indicates the magnitude of differences between treatment means, expressed in standard deviation units (Cohen, 1969). There are no previous studies that have examined the effects of working daily towards a goal and SWB. Similar to that idea, we found that the effect size for an implementation group versus a control group on how quickly participants achieved their goals to be $d = .92$ (Gollwitzer & Brandstatter, 1997). Another study found an ES of goal success between an implementation condition and a control condition was $d = .41$ and that the ES of the amount of implementation for independent goals versus independent goals was $d = .45$ (Downie, Koestner, Horberg, & Haga, 2006).

There were also no studies examining ES of internally motivated goals on SWB. A methodologically similar study did find an ES of $d = .4$ on the interaction between goal progress and independent goal pursuit (Oishi & Diener, 2001). Another study found an ES of $d = .4$ on the effect of having autonomous goals on concurrent SWB and an ES of $d = .3$ on the effect of autonomous goals on long-term SWB (Sheldon & Elliot, 1999). Therefore, the average ES is $d = .48$. Using Cohen’s (1969) power table with alpha = .05 (two-tailed), $d = .48$ and $n = 70$ (the predicted sample size per condition for the proposed study), the best available estimate of power for the proposed study would be between .80 and .85.

**Results**
A mixed model ANOVA was conducted to analyze the within subject effect of time on well-being (PA, NA, & SWL) and the between subject effect of condition on well-being. Because the assumption of independence was violated by conducting random assignment by groups rather than individuals, we assessed this “clustering effect” by calculating the intraclass correlation coefficient (ICC). Results showed a very small clustering effect between groups for PA (ICC = .27). There were no significant clustering effects between groups for NA (ICC = .02), SWL (ICC = .02), implementation (ICC = .01) or achievement (ICC = .01). The K-S Test revealed that the assumption of normality was not violated (p > .05). Mauchly’s Test of Sphericity showed homogeneity of variance was violated (p <.05). Because sphericity was violated, we used the Greenhouse-Geisser results to correct for the violation. The Levene’s test showed that homogeneity of variance is assumed (p > .05).

The within subjects ANOVA revealed no significant main effect for time on PA $F(3.45, 640) = .20, p = .92$. The mixed model ANOVA revealed no significant interaction between time and condition $F(6.91,640) = .65, p = .72$. The between subjects ANOVA also revealed no significant effect for condition on PA $F(2,160) = 1.67, p = .19$ (see table three and figure one for a summary of these results).

The within subjects ANOVA did reveal a significant main effect for time on NA $F(2.64, 640) = 3.78, p < .05$. Follow-up paired sample t-tests showed that
NA scores during week 1 ($M= 21.80$, $SD= 7.13$, $N= 163$) were significantly higher than week 5 ($M= 19.48$, $SD= 7.47$, $N= 163$) $t(1,162) = 3.31, p < .05$. The mixed model ANOVA revealed that there was no significant interaction between time and condition on NA $F(5.29, 640) = 1.25, p = .28$. The between subjects ANOVA revealed no significant effect for condition on NA $F(2,160) = .97, p = .38$ (see table four and figure 2 for a summary of these results).

For SWL, the within subjects ANOVA showed no significant main effect for time $F(2.11,640) = .76, p = .48$. The mixed model ANOVA showed no significant interaction between time and condition for SWL $F(4.21, 640) = 1.38, p = .24$. The between subjects ANOVA also revealed no significant effect for condition on SWL $F(2,160) = 1.73, p = .18$ (see table five and figure 3 for a summary of these results).

To examine the relationship between level of achievement and well-being, we calculated correlation coefficients between level of achievement scores and the differences of Positive Affect, Negative Affect, and Satisfaction with Life scores from week 1 to week 5. The correlations for all three were not significant ($r=.10$, $N= 103$, $p = .32$; $r=.17$, $N= 103$, $p = .09$; $r=.15$, $N=103$, $p = .13$).

To examine the relationship between goal implementation and well-being, we also calculated correlation coefficients between goal implementation scores and PA, NA, and SWL scores across the last four weeks. The correlation coefficient for PA was significant and positive ($r = .26$, $N = 416$, $p = .01$). For
SWL the correlation coefficient was also significant and positive \( (r = .13, N = 416, p = .01) \). The correlation coefficient for NA was negative \( (r = -.06, N = 416, p = .21) \) and although it was not significant it was in the predicted direction.

After the initial results were calculated, we decided to analyze the relationship between behavior implementation and SWB even further. First, we examined the relationship between behavior implementation scores and PA during week one and week two. The correlation coefficient for PA at week one was significant and positive \( (r = .23, N = 163, p = .02) \). The correlation for PA at week two was also significant and positive \( (r = .24, N = 163, p = .01) \). We then decided to analyze the relationship between behavior implementation at week two and PA at week two, controlling for baseline PA (week one). A partial correlation was run between week two PA scores and week two behavior implementation scores, controlling for baseline (week one) PA scores. The partial correlation analysis revealed that PA scores at week two were not significantly correlated with Behavior Implementation scores at week two when controlling for baseline PA scores \( (r_{partial} = .16, N = 104, p = .11) \).

To examine the relationship between social desirability and well-being, we conducted correlation coefficients for PA, NA, and SWL for all 5 weeks. The correlation coefficient for PA was significant and positive during week 1 \( (r = .18, N = 163, p = .02) \) and week 2 \( (r = .21, N = 163, p = .01) \), but was not significant for weeks 3, 4, and 5 \( (r = .13, N = 163, p > .10; r = .02, N = 163, p = .76; r = .08, \)
The correlation coefficients for NA were not significant across all time periods ($r = -.13, N = 163, p = .10; r = .09, N = 163, p = .28; r = -.04, N = 163, p = .65; r = .05, N = 163, p = .55; r = -.02, N = 163, p = .84$). The correlation coefficient for SWL was only significant at week 2 ($r = .22, N = 163, p = .01$). The correlations for weeks 1, 3, 4, and 5 were not significant for SWL ($r = .09, N = 163, p = .25; r = .14, N = 163, p = .07; r = .03, N = 163, p = .68; r = .09, N = 163, p = .28$).

**Discussion**

The purpose of this study was to replicate previous findings that setting intrinsic and autonomous goals (internally motivated goals) is related to SWB. We also set out to find which part of the goal setting process actually influences SWB (setting the goal, working toward the goal, or the ultimate achievement or failure to achieve the goal). Our results were mixed in regards to our hypotheses. We found no significant differences in SWB between any of the experimental groups throughout the 5 week period. Our results did show support for the second hypothesis that increased amount of active engagement in target behaviors was positively correlated with SWB in the two experimental groups, and that the level of achievement had no significant correlation with any of the well-being measures. Although the idea that setting internally motivated goals increases SWB was not supported, there is support for the idea that merely setting a goal does not increase well-being, nor does actual achievement of a goal; instead our
results suggest that behavior implementation is related to an increase in well-being. Although, we originally tested the hypothesis that goal implementation is related to an increase in SWB, from our results we are not able to tell the direction of that effect unless we control for baseline SWB scores. After the initial analyses had been completed, we decided to do further analysis to try to come up with more conclusive results. We found that our results were inconclusive. When we controlled for baseline PA, we were unable to find significant correlations between PA and behavior implementation, suggesting that participants who had higher initial PA scores were more likely to implement their target behaviors.

**Limitations**

In conclusion it is important to point out that our results suggest one of two things; 1. The original hypothesis that setting an internally motivated goal increases SWB overtime, significantly more than setting an externally motivated goal was incorrect, or 2. The limitations of the current study prevented us from getting the expected results. There are a number of limitations that may explain why we did not obtain all of the expected results. First, there is the possibility that the manipulation used for experimental groups was not sufficiently powerful. The manipulation we used in this study has never been used before to study this theory. In fact, there has never been a study using an experimental design in previous literature to study differences in SWB between internal and external
goals. It may be the case that randomly assigning participants to choose an internally motivated goal takes away the positive effects that internally motivated goals usually have. A researcher assigning participants to set these types of goals is somewhat contradictory to the original definition of an internally motivated goal, and may unintentionally have made the goal externally motivated, which would explain why there were no differences between the two groups.

Another possibility is that participants did not have pressure-free time to choose their goals. After the study was explained in detail, most participants used approximately 20 minutes to choose a goal and their behaviors. The lack of time participants had to choose their goals may have reduced the level of personal significance and commitment to their goals. If they had more time to choose, they may have come up with goals that were more personally meaningful to them, and may have made more of an effort to work on them during the study.

Another possible limitation is the lack of full experimental control over participants' behavior in our study. Results may have been different if the setting was more controlled and participants would have completed the measures in a controlled lab setting, rather than online. There is also a strong possibility that the timing of the study may have unintentionally affected the well-being of our participants. The study began during the last few weeks before spring break, which can be a stressful time for college students because of mid-term papers and exams due before their vacation time. It was also the case that the last week of
the study landed on the week of Spring Break for the students, and this may have 
affected their overall mood and well-being as well. We also had an increase in 
attrition during this last week because there were a number of participants who 
were unable to access the internet over the break who had to be dropped from the 
study. If the timing of the study occurred during a more constant time, the results 
may have been different.

Besides the previously listed limitations there is always the possibility 
that the sample size was too small to get an effect, or that the time frame of the 
project was insufficient to achieve an effect, and as was mentioned earlier, 
attrition due to the demands of the study should be included in this list as well. In 
any case, it is important to point out that an experimental design has never been 
used before to study this effect, and although we did not get all of the expected 
results, we still were able to expand on the theory by showing that the 
implementation of the goal-related behaviors was directly correlated with SWB, 
and that level of achievement was not.

Potential Impact/Significance

It is important to understand which factors contribute to mental and 
emotional well-being. Developing overall well-being has social, emotional, and 
physical benefits that are essential in improving the quality of our everyday lives 
(Lyubomirsky, et al., 2005). The present study expands on an important theory in 
Positive Psychology, the relationship between goal setting and positive
psychology. This study is unique because it takes into account the various components of goal setting and separates them in order to distinguish which part(s) contribute to SWB. It also examines the motivational reasons for setting goals and their relationship to SWB, which would have potentially replicated previous studies that have found that internally motivated goals affect SWB while externally motivated goals do not. Methodologically, it is unique because of the experimental design with participants randomly assigned to condition. It is also unique because long-term effects (over four weeks) of goal implementation on SWB were assessed.

Finally, this study was based on an already solid theoretical foundation. Therefore, the knowledge gained from this study will hopefully help advance the current study and contribute to the application of this theory. It will also be applicable to all people interested in developing effective interventions for positive change. Although we were not able to replicate previous results showing that setting internally motivated goals increases well-being, our results suggest that in the goal setting process, it is the journey and not the destination that is related to changes in our well-being.

Future research on this topic should consider the strengths and limitations of the current study in order to determine if the results can be replicated. Possible changes include improving the experimental manipulation of the groups by having the participants' list goals they are already working on instead of assigning
them to work on specific types of goals, and having them rate on a scale the level to which they are internal or external. It would also be beneficial to gain more experimental control over the timing of the study so that SWB would be more constant over time. It might also help to have participants complete the measures in a controlled lab setting, instead of online. It would also be beneficial to increase sample size in order to increase the power of the study, as well as to increase the time frame of the study. Increasing the time frame of the study (past 5 weeks) might give participants more of a chance to grow a certain amount of passion toward their goals, and might make the goals more personal to them, which in turn, may cause a change in well-being over time. Although some of our results were unexpected, there are plenty of opportunities for future researchers to expand on these findings using what we have learned.
References


Appendix A

The 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 have felt this way during the past week. Use the following scale to record your answers.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very slightly</td>
<td>a little</td>
<td>moderately</td>
<td>quite a bit</td>
<td>extremely</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>interested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>distressed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>excited</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>upset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>strong</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>guilty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>scared</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hostile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>enthusiastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

The Satisfaction with Life Scale

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

1 = strongly agree
2 = disagree
3 = I am satisfied with my life
4 = neither agree nor disagree
5 = slightly agree
6 = agree
7 = strongly agree

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

Name ____________________________________________________

Student ID ______________________________________________

Email Address -------------------------------------------

Please choose one day of the week that you will be able to fill out the 5 minute questionnaire on mood and daily effort and write the day of the week below.

Externally Motivated Goals: Goals that you set because somebody else wants to you to, or because you’ll get something from somebody if you do. (The opposite of this would be setting a goal because of the fun and enjoyment that the goal will provide you, where the primary reason is simply your interest in the experience itself.) Reasons for pursuing an externally motivated goal would be because you would feel ashamed, guilty, or anxious if you didn’t – you feel you “ought” to strive for this goal. (The opposite would be pursuing the goal because you really believe that it is an important goal to have and because you endorse it freely and wholeheartedly.)

1.) According to the definition above, please list one externally motivated goal that you could potentially complete in a four week period.

________________________________________________________________________

2.) Looking at the goal you have just listed, please identify four specific behaviors/activities that you could do on a daily basis in order to help you achieve this goal in four weeks.

1. ____________________________________________________________

2. ____________________________________________________________

3. ____________________________________________________________

4. ____________________________________________________________
Appendix D

Name ____________________________________________________

Student ID ____________________________________________________________________

Email Address ________________________________________________________________

Please choose one day of the week that you will be able to fill out the 5 minute questionnaire on mood and daily effort, and write the day of the week below.

______________________________________________

Internally Motivated Goals: Goals that you set because of the fun and enjoyment that the goal will provide you - the primary reason is simply your interest in the experience itself. *The opposite of this would be setting a goal because somebody else wants you to, or because you'll get something from somebody if you do.* An Internally motivated goal is also set because you really believe that this is an important goal to have. *The opposite would be setting a goal because you would feel ashamed, guilty, or anxious if you didn't, or because you feel you "ought" to strive for this.*

1.) According to the definition above, please list one internally motivated goal that you could potentially complete in a four week period.

__________________________________________________________________________

2.) Looking at the goal you have just listed, please identify four specific behaviors/activities that you could do on a daily basis in order to help you achieve this goal in four weeks.

1. __________________________________________________

2. __________________________________________________

3. __________________________________________________

4. __________________________________________________
Appendix E

Please separately rank the extent to which you completed *each* of the target behaviors over the last week using our 1–5 scale.

- **5** = I successfully completed this behavior everyday this week.
- **4** = I completed this behavior on most days this week.
- **3** = I completed this behavior some days but not others.
- **2** = I attempted to complete this behavior but didn’t complete it on *most* days this week.
- **1** = I did not complete this behavior this week.

<table>
<thead>
<tr>
<th>Target Behaviors</th>
<th>Rank (1-5)</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix F

Please rank the extent to which you achieved your target goal using our 1 – 5 scale.

5 = I fully achieved my target goal.
4 = I came very close to achieving my goal, but didn’t quite achieve it.
3 = I partially achieved my goal.
2 = I made slight progress on my goal.
1 = I didn’t make any progress on my goal.

<table>
<thead>
<tr>
<th>Target Goal</th>
<th>Rank (1-5)</th>
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</thead>
<tbody>
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Table 1

*Summary of the Content of Internally Motivated Goals*

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<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health/Weight</td>
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</tr>
<tr>
<td>School/Grades</td>
<td>10</td>
</tr>
<tr>
<td>Family/Friends</td>
<td>6</td>
</tr>
<tr>
<td>Job/Money</td>
<td>1</td>
</tr>
<tr>
<td>Athletics/Sports</td>
<td>6</td>
</tr>
<tr>
<td>Other/Personal</td>
<td>13</td>
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Table 2

*Summary of the Content of Externally Motivated Goals*

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Health/Weight</td>
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</tr>
<tr>
<td>School/Grades</td>
<td>27</td>
</tr>
<tr>
<td>Family/Friends</td>
<td>7</td>
</tr>
<tr>
<td>Job/Money</td>
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<tr>
<td>Athletics/Sports</td>
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<tr>
<td>Other/Personal</td>
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</table>
Table 3

*Means of Positive Affect Scores over time and across conditions.*

<table>
<thead>
<tr>
<th></th>
<th>Internal</th>
<th></th>
<th>External</th>
<th></th>
<th>Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Week 1</td>
<td>31.86</td>
<td>7.24</td>
<td>51</td>
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<td>6.72</td>
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<td>51</td>
<td>31.89</td>
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<tr>
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<td>51</td>
<td>32.72</td>
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<tr>
<td>Week 4</td>
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<td>51</td>
<td>33.70</td>
<td>7.71</td>
<td>53</td>
</tr>
<tr>
<td>Week 5</td>
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<td>7.99</td>
<td>51</td>
<td>32.94</td>
<td>8.67</td>
<td>53</td>
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</tbody>
</table>

Table 4

*Means of Negative Affect Scores Over Time and Across Conditions*

<table>
<thead>
<tr>
<th></th>
<th>Internal</th>
<th></th>
<th>External</th>
<th></th>
<th>Control</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Week 1</td>
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<td>8.06</td>
<td>51</td>
<td>22.60</td>
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<td>21.70</td>
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<td>23.36</td>
<td>21.90</td>
<td>53</td>
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<td>6.24</td>
<td>51</td>
<td>20.13</td>
<td>5.96</td>
<td>53</td>
</tr>
<tr>
<td>Week 5</td>
<td>17.78</td>
<td>6.44</td>
<td>51</td>
<td>20.72</td>
<td>7.32</td>
<td>53</td>
</tr>
</tbody>
</table>
### Table 5

**Means of Satisfaction with Life Scale Scores Over Time and Across Conditions**

<table>
<thead>
<tr>
<th></th>
<th>Internal</th>
<th>External</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Week 1</td>
<td>23.51</td>
<td>4.84</td>
<td>51</td>
</tr>
<tr>
<td>Week 2</td>
<td>23.67</td>
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<td>51</td>
</tr>
<tr>
<td>Week 5</td>
<td>24.88</td>
<td>5.56</td>
<td>51</td>
</tr>
</tbody>
</table>
Figure Captions

*Figure 1.* Means of Positive Affect for each condition over 5 weeks.
Figure 2. Means of Negative Affect for each condition over 5 weeks.
Figure 3. Means of Satisfaction with Life for each condition over 5 weeks.