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An Examination of an Optimism Training intervention on Optimism Levels of NCAA Division I Athletes: A Single Subject Design

Anya Marie Salzgeber
Georgia Southern University

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AN EXAMINATION OF AN OPTIMISM TRAINING INTERVENTION ON OPTIMISM

LEVELS OF NCAA DIVISION I ATHLETES:

A SINGLE SUBJECT DESIGN

by

ANYA SALZGEBER

(Under the direction of Daniel Czech)

ABSTRACT

Optimism has been shown to provide many benefits, such as better health, increased satisfaction, confidence, motivation, and higher athletic performance. Research has also suggested the ability to increase the frequency of experiencing those benefits through the use of certain cognitive behavior therapy techniques. While the research shows the ability to increase optimism in a random sample of individuals, there is a lack of research on increasing optimism in athletes. Therefore, the purpose of this study was to examine the effectiveness of an optimism training intervention on state optimism levels of NCAA Division 1 athletes. It was hypothesized the intervention will increase optimism levels in participants. Results displayed an increase in optimism scores during the intervention phase for all participants. After the intervention, two participants dropped in optimism levels while the other two stayed relatively the same. These results suggest optimism training may increase optimism levels. Further research examining varying sports, length of intervention, and timing the intervention closer to in-season is suggested.

INDEX WORDS: Optimism, Optimism intervention, Cognitive behavior therapy

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ANYA SALZGEBER

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ANYA SALZGEBER

Major Professor: Daniel R. Czech

Committee: Daniel R. Czech
Brandonn Harris
Trey Burdette

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Introduction

Positive psychology is a means to aid individuals to live decent lives and help them be the best version of themselves (Lopez & Snyder, 2009). This developing field uses multiple approaches to increase life-satisfaction, spirit, and optimism. The use of positive psychology has been shown to reduce fear in children, increase resilience in college students, and foster optimism in individuals. For example, in a study by Muris, Huijding, Mayer, van As, and van Alem (2011), the prime treatment for verbally acquired fear was with providing positive information about the item inducing fear. By reducing fear, individuals were able to overcome obstacles, persist in the face of distress, and in turn become more confident. Moreover, research has shown a positive relationship between trait resilience and physical and psychological health (Klohn, 1996; Mak, Ng, & Wong, 2011) as well as a negative relationship with depression (Edward, 2005). The findings suggest that those with more resiliencies tend to have more self-esteem and confidence, and more hope for the future. In addition to resilience, optimism researchers have shown that positive expectations of the future can influence people's actions and perseverance (Carver & Scheier, 1990; Carver, Scheier & Segerstrom, 2010).

Optimism can be defined as the expectation that good things will happen (Carver, Scheier & Segerstrom, 2010). In addition, more optimistic people tend to hold generally promising expectations for the future. Contrastingly, pessimists expect bad things to happen more frequently than good. A primary difference between the behavior of optimists and pessimists is the way in which they approach certain life events and cope with adversity. Optimistic individuals cope with stressful events, such as surgery, illness, and other medical procedures better than pessimists (Scheier & Carver, 1985). When faced with challenges and adversity, individuals with higher optimism confront it with more belief, confidence, and persistence

(Scheier & Carver, 1992). Pessimists, on the other hand, would hesitate, have more doubt, and try to avoid such adversity. Even after failure, optimists tend to continue trying to strive for improvement where pessimists typically disengage and cease putting forth the effort towards achieving a goal (Scheier & Carver, 1985; Carver, Scheier & Segerstrom, 2010). Based on results from a study by Seligman, Nolen-Hoeksema, Thornton, and Thornton (1990), swimmers with an optimistic explanatory style performed the same or better after defeat where individuals with a pessimistic explanatory style's performance deteriorated. Because optimists expect a more favorable outcome, they are more likely to continue working toward attaining their goals. According to research, optimism and mental toughness, defined by authors as control, confidence, and coping skills, are highly correlated (Nicholls, Polman, Levy & Backhouse, 2008). This suggests that by possibly increasing optimism, mental toughness can also be increased, leading to higher achievement by athletes. Gould, Dieffenbach, and Moffett (2002) found that one of a few characteristics common to many Olympic-level athletes is optimism. Based on these findings, athletes who hope to compete at an elite level would benefit from being more optimistic and expecting more positive results.

Numerous studies over the past few decades have shown the many benefits of optimism. The benefits include elevated mood and satisfaction, increased motivation, and greater achievement in various settings such as work, school, and sports. Further, research conducted by Riskind, Sarampote, and Mercier (1996) examined the possibility of increasing optimism and positive cognitions through a series of systematic optimistic training interventions. Given this research and those which have previously linked optimism to the aforementioned advantages, it has been shown that optimism can be increased through the use of Cognitive-Behavioral Therapy.

Cognitive-Behavioral Therapy caters behavior-change methods and approaches used to restructure one's thoughts. The concept of cognitive-behavioral therapy is that the reorganization of self-statements will result in a reorganization of behavior (Corey, 2009). According to Meichenbaum, (1977, p. 218), "behavior change occurs through a sequence of mediating processes involving the interaction of inner speech, cognitive structures, and behaviors and their resultant outcomes." While earlier cognitive-behavioral therapists treated using shorter sessions spread out over a longer period of time, most modern therapists have moved to massed practice; longer sessions in a shorter time period, due to evidence demonstrating that method's advantage (Marshall & Turnbull, 1996). Most recommend six to ten sessions for therapy to be successful.

The basic path of any cognitive training is to first identify self-defeating beliefs. Often individuals are unaware of such thoughts. An important part of this step is recognizing what events trigger those negative beliefs. This can be anything from giving a presentation, to taking a test, to asking for a raise. For athletes, examples of these events might include making an error in a game, striking out, missing a free throw, etc. Once these beliefs and trigger events have been identified, the next step is to determine the accuracy of these self-defeating beliefs. Most often, these beliefs are simply bad habits from the past, meaning that with the right training, they can be adjusted (Corey, 2009; Schulman, 1999). The method of increasing optimism could work in a similar manner. For example, by identifying an individual's pessimistic thoughts and actions, along with the events that trigger them, the individual could be able to examine the accuracy of those thoughts. However, rather than simply focusing on negative thoughts, adjustment of the individual to take a more optimistic standpoint is vital. In order for the client to be able to fully change their thoughts and behaviors, they need to bring the new habits they learn in therapy into their everyday lives. A major component of cognitive-behavioral therapy is the implementation

of homework between sessions. The aim of homework is two-fold. It not only teaches clients new skills but allows the client to apply the learned skills to situations in their daily life outside of therapy. Homework is tailored to the individual issue and enables the client to enhance the therapeutic process (Corey, 2009). By using homework, clients will apply the skills towards optimism in a setting outside of therapy sessions. This concept is the foundation of optimism training.

Some of the techniques used by Riskind, Sarampote, and Mercier (1996) demonstrate effective ways to help increase a person's level of optimism. Positive visualization can be a tool to help individuals imagine and change one's vision of the future. By offering the option for a more desirable future, individuals can become more energized and motivated to reach that visualized outcome (Riskind et al., 1996). These visualizations can target specific areas of a person's life, a particular problem or behavior that person is trying to overcome, or general personal improvement. One could visualize being a better employee, prevailing over procrastination on a project, or becoming an overall effective person who can persist in the face of adversity.

Cognitive priming, another technique that can be used to increase optimism, operates by increasing one's ability to conceptualize optimistic events and create easier accessibility to the memory of optimistic mental categories. The more frequently these categories are accessed, the more readily available they are on a regular basis. By having the cognitive groups be more prevalent in one's mind, an individual is more likely to apply those categories to any event that might occur. If an individual reads a particularly optimistic article or story in the morning, they may be more likely to see things optimistically throughout the day. This serves to keep the

individual thinking in a more positive manner and approach situations from an optimistic perspective.

The aforementioned research ascertains that optimism can provide numerous benefits, including better health, greater motivation, higher resilience and confidence, and higher athletic achievement. Research also revealed that these benefits can be experienced more consistently through the use of techniques based on cognitive behavior therapy. Although this is the case, there is a lack of research on increasing optimism specifically in athletes. Therefore, the purpose of this study is to examine the effectiveness of an optimism training intervention on optimism levels of NCAA Division 1 athletes.

Methods

Participants

Participants consisted of four NCAA Division I male football players from a southeastern university. Participants were between the ages of 19 and 21 and were between the grade levels of freshman and junior. Participant ethnicities included African-American, Asian-American, and Caucasian. All participants were selected from a collection of athletes available based on their original Life-Orientation Test-Revised (LOT-R) dispositional optimism results. From the 63 athletes who completed the LOT-R, the mean and standard deviation were calculated. Of the 12 individuals within the lowest quarter of a standard deviation, these four agreed to participate. Before participation, all individuals signed an informed consent form. All participants have played at least one season of their sport at the NCAA Division I college level. It is important to note that a fifth participant was selected but terminated participation after the first baseline.

Participant Number	Age	Gender	Ethnicity	Grade Level	Sport
1	19	Male	Asian-American	Sophomore	Football
2	21	Male	Caucasian	Junior	Football
3	19	Male	Caucasian	Freshman	Football
4	20	Male	African American	Sophomore	Football

Instrumentation

Optimism was measured using the Life Orientation Test-Revised (Scheier, Carver, & Bridges, 1994). The LOT-R is comprised of 10 statements designed to generate an optimism score. There are 4 filler items that are not used in the scoring, 3 items set in a positive direction, and 3 items set in a negative direction. Individuals are asked to rate each item based on the extent

to which they agree with the statement using the following format: 0=strongly disagree, 1=disagree, 2=neutral, 3=agree, and 4=strongly agree. For scoring, the number is reversed for the negatively-keyed items then the scores for the 6 real items are added together for an optimism score with a possible high of 30. Authors report the LOT-R as a consistent and reliable measure of optimism with high internal consistency and test-retest reliability. Scheier and colleagues (1994) found a test-retest reliability of .79 and an internal consistency of .78, suggesting that the LOT-R is fairly stable across time.

Procedures

Coaches from teams that were not in season were contacted to conscript participants. Through the coaches, a meeting was set up to ask athletes to partake in the study. Athletes from different teams were given the Life-Orientation Test to complete. Scores were collected and recorded by number to ensure confidentiality of participants. Values were totaled and the individuals within the lower quarter of a standard deviation of optimism scores were asked to participate in the study.

Once the participants had been selected, they signed an informed consent form and completed the LOT-R again to determine a baseline of their initial level of optimism. The study was designed in an ABA format to establish a baseline, complete the intervention, and re-establish a baseline. This allowed for a more accurate reading of what the intervention might cause. To follow this format, participants filled out the LOT-R every day for one week to determine the baseline. Once baseline was established, participants started a two-week optimism training intervention. Each participant experienced a half-hour individual session three days per week for the two-week duration, accompanied by four homework activities assigned during the sessions to be completed on the days participants did not meet with the researcher. Participants

were continuously testing, completing the LOT-R at the conclusions of each session and with each homework assignment. The intervention sessions were conducted during a scheduled time slot in the university's Sport Psychology Laboratory.

Optimism Intervention.

Each intervention session included a positive visualization element accompanied by a cognitive priming video and the completion of the LOT-R. Several sessions also incorporated homework for participants. Homework assignments contained an exercise from the realm of positive psychology (O'Hanlon & Bertolino, 2012). Upon invitation to participate, those that agreed informed the researcher of their favorite athlete, a motivational quote, a favorite song, and specific words or phrases they enjoyed to be compiled for a personalized cognitive priming video. During the first session, participants were asked to visualize the end of a competition where their performance would have a direct impact on the outcome of the competition and describe what came to mind. Based on the participant's response, the individual was prompted to either increase the positive elements or change the negative outcome to a positive one. A new visualization script was then be prepared for the following sessions with the more optimistic outcome. The subsequent sessions included going through the same positive visualization script. The cognitive priming portion of the sessions involved a presentation that includes tools such as optimistic videos, stories, and words or phrases. The same presentation was shown at the conclusion of each session. The homework for session one was for participants to complete the In the Moment activity from O'Hanlon and Bertolino (2012, p. 86). The activity asks the participant to identify songs or music that brings out positive emotions and list those emotions next to the song. It instructs participants to then plan to listen to the songs throughout each day.

As part of the homework, participants were also be asked to complete the LOT-R at the same time each evening.

Session two was comprised of going through the revised positive visualization script, discussing the homework, viewing the cognitive priming presentation and completing the LOT-R. Homework for session two was to complete the LOT-R and the Personal Benchmarking activity (O'Hanlon & Bertolino, 2012, p. 64). This activity walks the individual through identifying what they do well and identifies skills the participant possesses but which they may not be fully aware of.

Following the positive visualization script in session three and going over the homework from the previous session, participants were presented with the cognitive priming video and the LOT-R was be completed during the session and again as the homework.

In session four, participants experienced the positive visualization script and the cognitive priming presentation. The LOT-R was completed and the homework of the Writing Ritual (O'Hanlon & Bertolini, 2012, p. 80) and the LOT-R were assigned. The Writing Ritual activity asks participants to write about a tough situation or experience they have been through with some guidelines on how the writing should be approached.

Session five consisted of a review of the homework, the positive visualization, and cognitive priming presentation. The homework for session five was another letter-writing activity. A Letter from Your Best Day to Your Bad Days (O'Hanlon & Bertolini, 2012, p. 82) asks participants to, at a time they are feeling particularly healthy and powerful, write a letter to read on their bad days. With a more optimistic view, individuals can write advice and encouragement to help them through any moments at which they feel down or pessimistic. The LOT-R was also completed with the homework.

The final session included discussion of homework, the positive visualization script, the cognitive priming presentation, and completion of the LOT-R. As this was the last session, there was no homework for the participant to complete.

Once a participant completed the two weeks of intervention; comprised of six sessions and four homework assignments, they continued to fill out the LOT-R every day for one week around the same times as they did during the intervention weeks.

Data Analysis

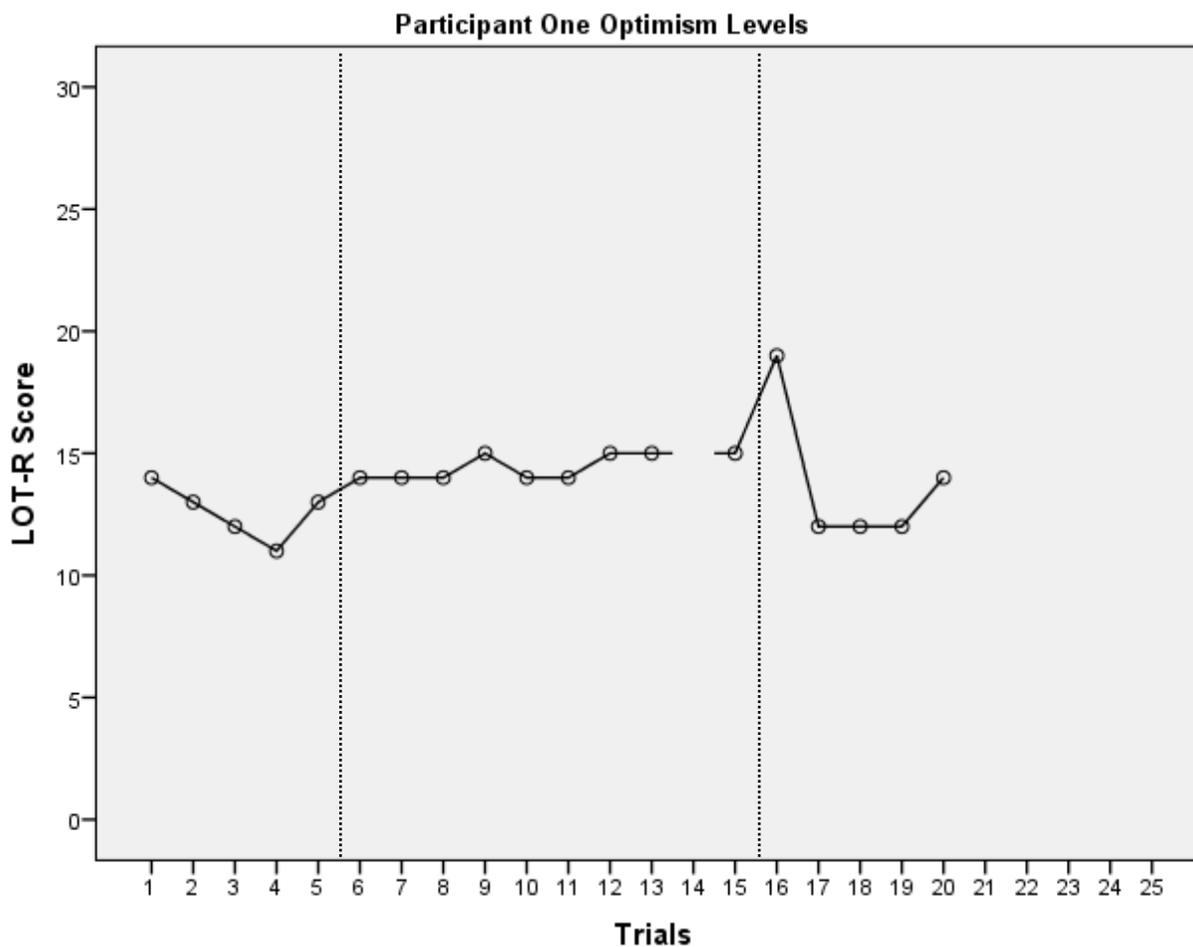
Data was graphically represented for each individual and reviewed for practical differences in levels of optimism. Visual inspection was used to review graphs by a group of trained researchers to determine actual changes in optimism, and control for researcher's bias and expectancy. Researchers observed both magnitude and rate of changes in the data by examining changes in mean, changes in level, changes in trend, and the latency of the change. The change in mean refers to the average rate of performance while the change in level deals with a difference in performance from the end of one phase (i.e. baseline or intervention) to the beginning of the next. A change in trend is made evident by a systematic increase or decrease over time. The latency of the change refers to how quickly a change occurs after the end of a phase. The less time it takes for a change to occur after the conditions are altered, the more evident the effectiveness of the intervention (Kazdin, 1982).

Results

Data collected in this study was evaluated using ocular statistics. Visual inspection depends on the magnitude and rate of change characteristics of the data. To determine changes in magnitude, changes in mean and level are observed. Trend and latency of the change decide the rate of change. Changes in mean refer to alterations in the average rate of scores across phases. A change in level denotes a shift of scores from the end of one phase to the beginning of the next phase. This can help show if there is an important shift once the phase was altered. Change in trend indicates a tendency for the data to systematically increase or decrease over time. A change in the trend may indicate whether the direction of behavior changes within a phase or across the phases. The latency of the change refers to the period between the beginning or end of a condition and changes in scores. The more closely in time that the change occurs after conditions have been altered, the more likely the change is due to the current phase or conditions (Kazdin, 1982).

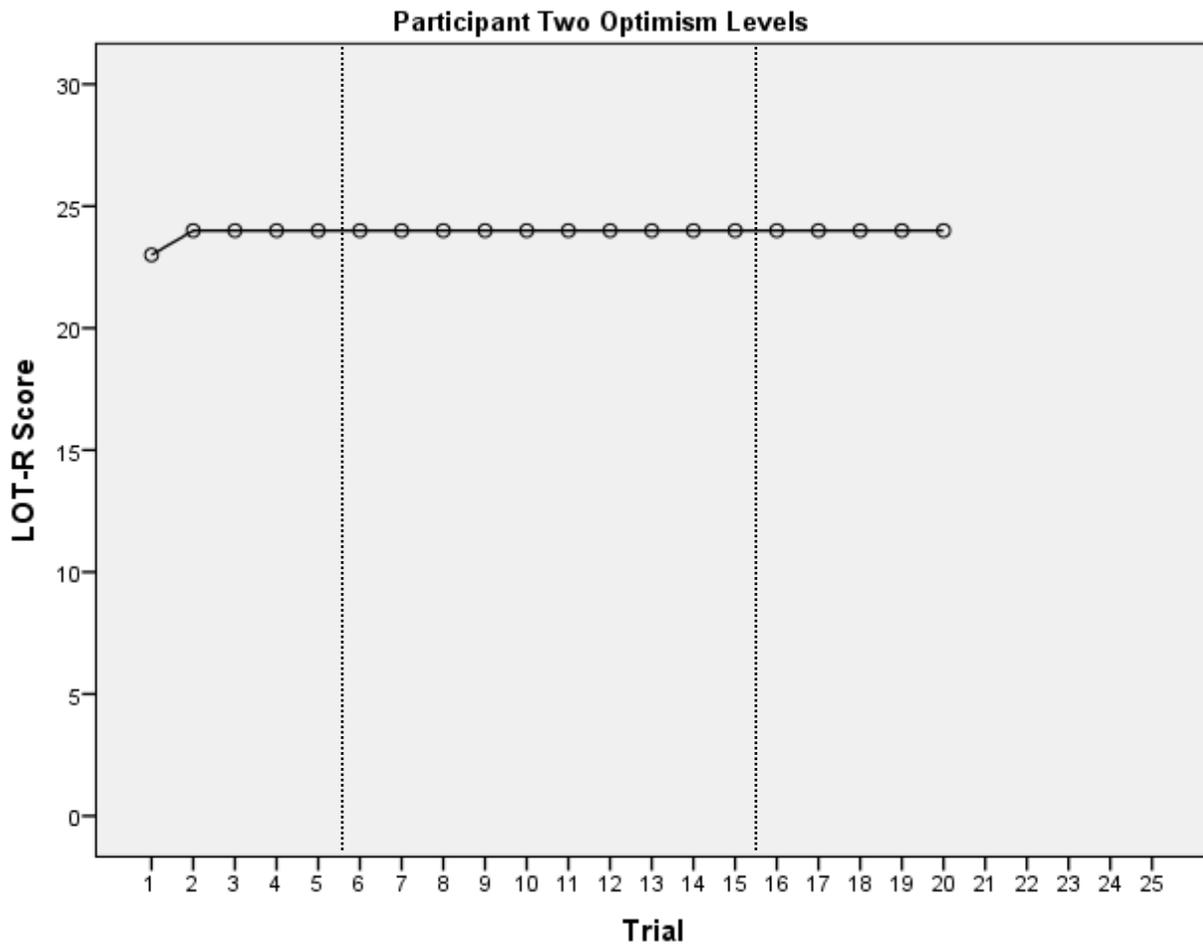
Participant One

Participant one showed a small increase in mean during the intervention. The average score for baseline one was 12.6 while the mean during the intervention was 14.4. After the intervention phase, the mean score during baseline two was 13.8. There was one drastic change in level after the intervention phase ended. For the final LOT-R of the intervention, participant one scored a 15 and the first LOT-R of the baseline two had a score of 19. There were no evident changes in trend. The latency of change is apparent in baseline two when the second LOT-R score after intervention had ended was drastically lower than the first and lower than all of the scores in the intervention phase.



Participant Two

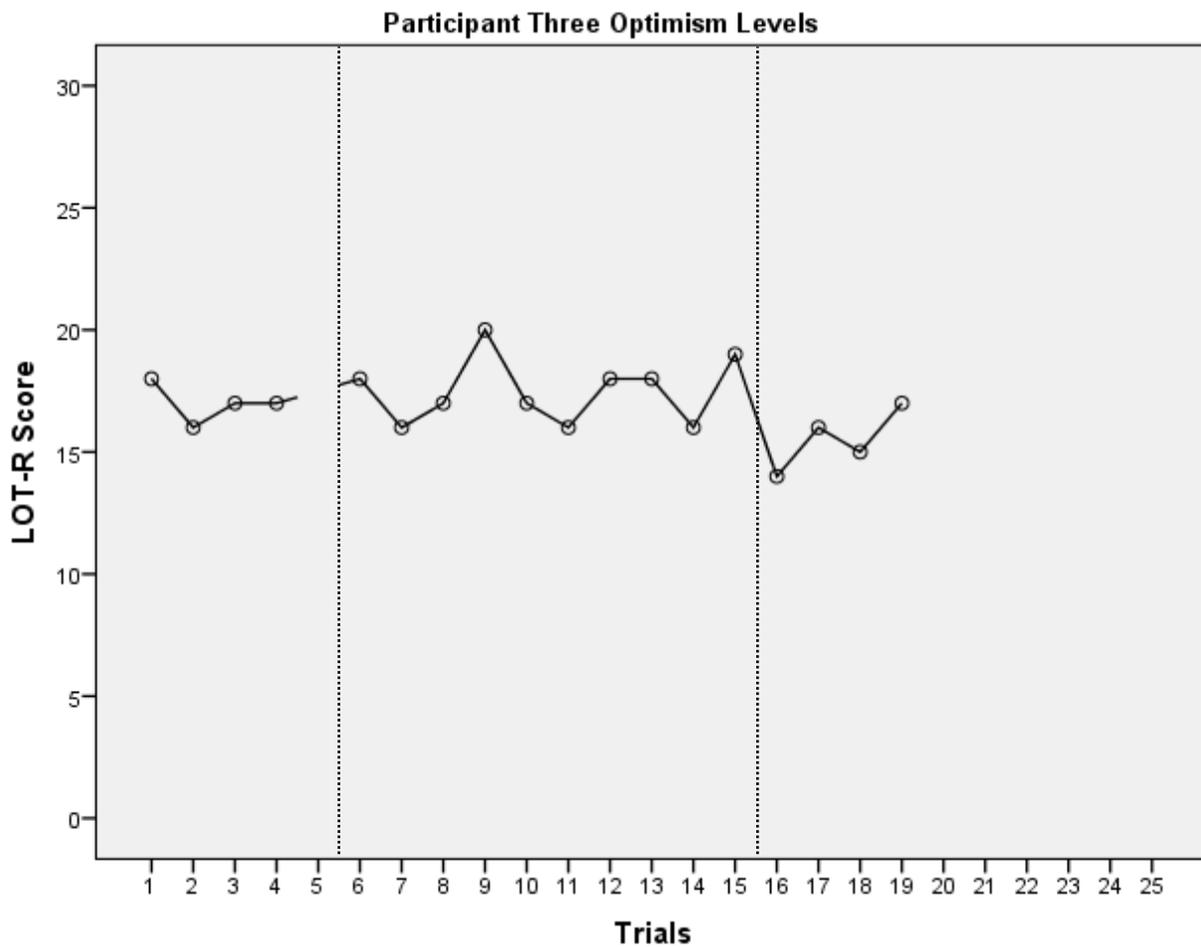
Participant two showed no change in mean across the phases. Baseline one had a mean of 23.8 while intervention and baseline two had means of 24. There were no changes in level between phases. Participant two had no change in trend and there was no latency of change within each phase.



Participant Three

Participant three showed a slight increase during the intervention phase when compared to both baselines. Baseline one had a mean of 17, the intervention phase showed a mean of 17.5,

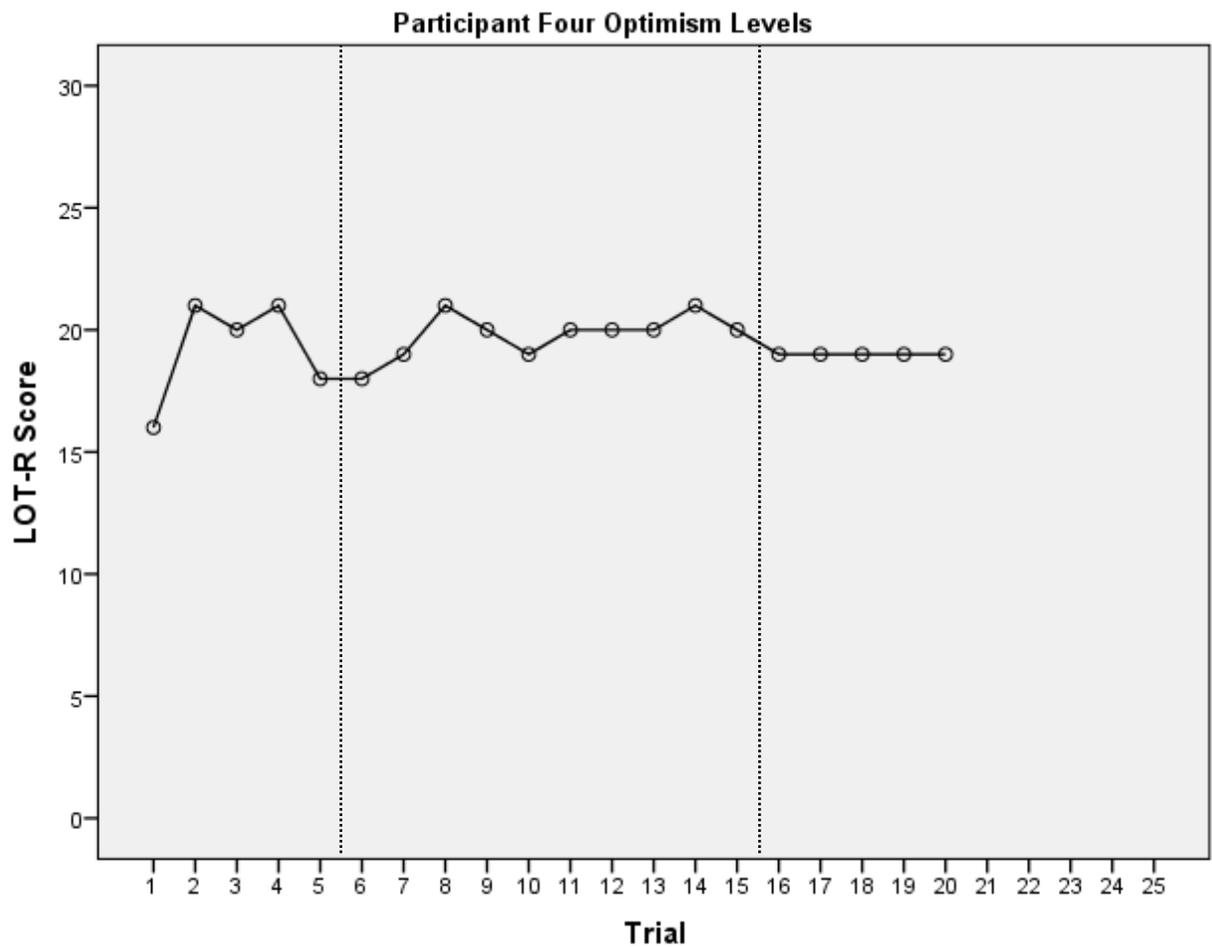
and baseline two exhibited a mean of 15.5. There was no change in level between baseline one and intervention, but there was a change from intervention to baseline two. The intervention phase ended with a score of 19 and the baseline phase started with a score of 14. Participant three showed no obvious change in trend over the three phases.



Participant Four

Participant four showed a slight increase in mean during the intervention phase. Baseline one displayed a mean of 19.2, the intervention had a mean of 19.8, and baseline two revealed a mean of 19. Participant four showed no changes in level between any of the phases. While there

was no evident trend in baseline one, the intervention phase showed a slight increase in scores, and the baseline two was completely stable. The latency of change is evident in the intervention phase and baseline two. In both phases, the change in trend occurred immediately upon the change in conditions.



Discussion

The purpose of the present study was to examine the results of an optimism intervention on optimism levels of collegiate athletes. The results of this optimism intervention showed that each participant had increased optimism levels during the intervention phase. Two individuals had higher scores in the baseline after the intervention than their baseline before the intervention, while two had lower scores in their second baseline when compared to the first baseline.

These results suggest that the intervention itself may increase optimism levels. While it cannot be determined that those optimism levels are maintained after the intervention is complete, all participants saw an increase in optimism levels during the two weeks of the intervention. This may mean that optimism levels can generally be increased when using the techniques of cognitive behavioral therapy. By cognitively priming the participants, keeping the idea of optimism on their minds, their overall optimism levels can rise. Using tools such as the priming video, the visualization script, and the various homework assignments can help improve optimism. The basis of cognitive behavioral therapy is to restructure thoughts in order to change behavior. The process of restructuring thoughts can be done through identifying self-defeating beliefs, determining the accuracy of those beliefs, and then adjusting them based on their accuracy. Using a number of processes, such as inner speech, cognitive structures, and results of previous behaviors, an individual can begin to identify those beliefs and change their behaviors (Meichenbaum, 1977). However, it also means that once the tools being used are taken away or abandoned, the optimism levels may not always stay at the level to which they were raised. This suggests that changes developed through cognitive behavioral therapy need continuous attention. They may not be completely permanent but rather something for an individual to keep working towards.

This study found that optimism can be increased with an intervention. This is supported by Riskind, Sarampote, and Mercier (1996) who found the participants who experienced optimism training had enhanced positive or optimistic thought content when compared to individuals in a control group. The intervention in this study was comprised of a number of different elements, including imagery and positive information. Muris and colleagues (2011) were able to significantly reduce the amount of fear or negative connotations in groups of children through interventions involving positive information and imagery. This study was able to use those features to increase optimism scores throughout the intervention period.

The results from this study can be important for people to consider in a larger context. The findings of this study suggest that people can work on becoming more optimistic. This is supported by Goldwurm et al. (2006), along with Riskind et al. (1996) who had success in increasing optimism levels in individuals through different trainings when compared with control groups. All of these studies show the possibility of optimism being a trait that can be improved with some work. It also shows that a constant effort is needed to enhance optimism. Once that work ceases, the improvement will stop as well. This is supported by a longitudinal study that tried to improve happiness. The results showed that individuals in the intervention who continued to give effort towards increasing their happiness were more successful (Lyubomirsky, Dickerhoof, Boehm & Sheldon, 2011). Similarly, Sheldon and Lyubomirsky (2006) established that continued effort towards an “optimistic thinking” activity predicted a larger change in well-being that was maintained, compared to a control condition. If individuals continue to put forth effort to increase their optimism levels, their optimism can continue to improve even after the strength of the intervention is complete. Hopefully the general population can take this information on the benefits of optimism and the opportunity to increase one’s optimism levels to

enhance themselves. Athletes might ideally take the information given in this study to improve their optimism in order to improve their mind set and in turn, athletic performance.

As Seligman et al. (1990) found, athletes with an optimistic explanatory style are more likely to overcome adversity. After a poor performance, those more optimistic athletes fought harder to improve rather than giving up. If athletes could increase their optimism, they may be more likely to overcome challenges and work to reach their goals. They expect more good things to happen and may be more likely to work hard for those good things.

It is important to take into consideration the importance of outside influences on optimism levels, which may be responsible for a smaller change in scores. While all participants did see an increase in scores during intervention, life outside of the study may have an impact on the scores during any part of the study. Be it a positive or negative influence on optimism scores, those happenings can influence the self-reported levels of optimism in the current study. The athletes in the current study have a busy schedule, with many things to keep track of. It would be easy for them to bring their stresses or excitements into the study each day that would have an effect on their scores. The timing of the study may have played a part in the range of scores. Being close to the middle of the semester, these athletes are starting their spring season trainings and games, along with having to worry about midterm tests and assignments in class. The participants were likely stressed trying to get everything accomplished before the deadlines. This may have also hindered their involvement in the homework assignments. With so many other things on their plate, one more assignment, which was not even for a grade, was probably not a top priority. As discovered by Dewberry and Richardson (2001), anxious individuals were less optimistic about the possibility of an event happening to them. They found that anxiety may tend to reduce optimism in individuals. A possible concern would also be with the nature of the sport

of the athletes who participated. It tends to be a more aggressive sport known for yelling, hitting, and strength. It may be that these athletes are so ingrained in that nature that it is harder to bring optimism into their thoughts.

There are limitations that may have occurred during the data collection process. For instance, many of the participants could not meet at similar times each session. The inconsistency of the meetings and the possibility of the participants not completing the homework at the same time of day may have played a part in the scores that were reported from day to day. Another limitation may be the number of times the participants were asked to fill out the LOT-R. There may have been a testing effect by the subjects becoming too familiar or bored with the questionnaire after completing it up to 20 times.

It is suggested for future researchers to administer the Optimism Pessimism Scale (Dember et al., 1989) that tends to measure more state optimism instead of dispositional optimism. If possible, future research could extend the study to keep the intervention in place for a longer period of time. This would allow for more time to pass between completing the questionnaire but also give more figures to analyze throughout the course of the intervention. There would be a greater chance for scores to stabilize after the intervention. It could be beneficial to complete an intervention closer to or during the season of the sport so the athlete may have more invested in their mental state rather than using their off-season to prepare for the next season. It would be interesting to try with a variety of sports, ages, genders, and backgrounds. Researchers interested in this topic could also look to see if there is a difference in optimism levels of scholarship and non-scholarship athletes.

In conclusion, this study suggests that optimism has the potential to increase through an intervention based on cognitive behavioral therapy. There are a number of options for future

research that can help look further into the idea of an optimism intervention to help athletes increase their athletic performance through increasing their optimism.

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APPENDIX A

RESEARCH QUESTIONS, DELIMITATIONS, LIMITATIONS, ASSUMPTIONS, AND

DEFINITIONS

Research Question

1. Will optimism levels increase after an optimism training intervention for NCAA Division I athletes?

Delimitations

1. This study will only focus on NCAA Division I athletes from the southeast ages 18 to 24.
2. Participants will be chosen from one university.
3. Less optimistic people will be chosen from the convenience sample in which the tests were distributed.
4. Only quantitative results are available from the LOT-R.

Limitations

1. Convenience sampling will be used.
2. Generalizability may be questioned as the six participants chosen in the southeast region of the United States may not be representative of the general collegiate athletic population.
3. Participants may not fully understand or participate in intervention sessions.
4. Participants may not fully understand or participate in the homework assigned.
5. The length of total intervention may not be enough time for maximum effects.
6. Participants may possess internal biases which may affect the results of the optimism interventions.

Assumptions

1. Each participant will complete the LOT-R honestly and to the best of their ability.
2. All participants will be fully engaged in interventions and homework.
3. Participants will not be affected by outside influences unrelated to the optimism interventions during the length of the study.

Definitions

1. Optimism- an inclination to put the most favorable construction upon actions and events or to anticipate the best possible outcome (Merriam-Webster, 2011).
2. Pessimism- an inclination to emphasize adverse aspects, conditions, and possibilities or to expect the worst possible outcome (Merriam-Webster, 2011).
3. Cognitive Priming- an increase in the availability of specific types of information in memory that can influence social thought of many contexts (Baron, 1992, p. 612).
4. Positive Visualization- creating an experience in the mind using all of the senses to generate a favorable situation.
5. Optimism Training- the process of increasing one's optimism through a series of techniques.

Review of Literature

Riskind, J. H., Sarampote, C. S., & Mercier, M. A. (1996). For every malady a sovereign cure: optimism training. *Journal of Cognitive Psychotherapy: An International Quarterly*, *10*(2), 105-117.

Riskind, Sarampote, and Mercier (1996) examined the effectiveness of various cognitive-behavioral therapy techniques on increasing optimism. Participants were randomly divided into four groups assigned to different treatments; optimism training, standard cognitive therapy, cognitive priming, and progressive muscle relaxation. All groups went through treatments and were told they were trying to increase problem solving skills but were actually measured for optimism levels. Results showed that the optimism training yielded the most changes in optimism with standard cognitive therapy showing fewer significant effects. Cognitive priming only had a marginally significant effect, which was measured against the progressive muscle relaxation treatment that was used as the control. This information helps the current study by showing optimism can be increased but the actual treatments are not clear and a different scale was used to measure optimism.

Gould, D., Dieffenbach, K., & Moffett, A. (2002). Psychological characteristics and their development in olympic champions. *Journal of Applied Sport Psychology*, (14), 172-204.

Gould, Dieffenbach, and Moffett (2002) observed the psychological characteristics of Olympic champions. Using interviews with the athletes, a coach, and a significant person in the athlete's life, and a number of psychological inventories completed by the athlete, a set of similar characteristics among the athletes were revealed. These include anxiety control, confidence, mental toughness, sport intelligence, focus, competitiveness, hard work-ethic, goal-setting

ability, coachability, dispositional hope, optimism, and adaptive perfectionism. Results showed there were a number of influences in the development of these psychological characteristics including family, community, sport and non-sport personnel, and the individual athlete. The common characteristic of optimism in Olympic athletes helps argue that increasing optimism in athletes will be helpful for the individuals.

Seligman, M. E. P., Nolen-Hoeksema, S., Thornton, N., & Thornton, K. M. (1990). Explanatory style as a mechanism of disappointing athletic performance. *Psychological Science, 1*(2), 143-146.

The purpose of this study was to explore the difference of explanatory style on a disappointing athletic performance. Based on the results of the Attributional Style Questionnaire, swimmers were categorized as either having an optimistic or pessimistic explanatory style. For the first study, coaches rated each swimmer on how they thought the swimmer would perform after defeat. Coaches also rated swimmer's performance at each meet based on how they were expected to do. The results found that explanatory style and coaches judgments on resiliency after defeat were able to predict how many poor performances a swimmer would have over the season. In the second study, researchers timed the swimmers in their best event then gave them a slower time than was actually swum. The swimmers swam the timed event again after a rest. Results showed that those with an optimistic explanatory style for negative events generally did the same or better than their original time while individuals with a pessimistic explanatory style's performance was worse.

Goldwurm, G. F., Bielli, D., Corsale, B., & Marchi, S. (2006). Optimism training; methodology and results. *Homeostasis in health and disease; international journal devoted to integrative brain functions and homeostatic systems*, 44(1-2), 27-33.

The aim of this study was to assess the worth of optimism training on non-pathological individuals. With an experimental group and a control group, participants completed three different tests measuring levels of optimism and happiness. The experimental group then participated in a two-month training involving different exercises and homework. At the end of the two months both groups completed the three tests again. Results showed that the experimental group showed a significant increase in optimism.

Norlander, T., & Archer, T. (2002). Predicting performance in ski and swim championships: effectiveness of mood, perceived exertion, and dispositional optimism. *Perceptual and Motor Skills*, (94), 153-164.

Norlander and Archer (2002) completed these two studies to examine the efficacy of three psychological tests on predicting athletic performance. The first study consisted of cross-country skiers and ski marksmen who completed the three tests 5 weeks prior to competition in a national championship. Results revealed that the higher the optimism level, the better the performance. In the second study swimmers preparing for the Senior National Swedish Championship completed the tests. These results showed that those with higher levels of optimism performed less well at the competition.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219-247.

Scheier and Carver (1985) used a scale that measures dispositional optimism to examine how optimism might be related to health, specifically in experiencing physical symptoms. Undergraduate participants completed this scale, a questionnaire about private self-consciousness, and a checklist of physical symptoms 4 weeks before the end of the semester and again on the last day of classes. It was found that more optimistic individuals reported fewer symptoms of illness than those who were less optimistic.

Muris, P., Huijding, J., Mayer, B., van As, W., & S, (2011). Reduction of verbally learned fear in children: A comparison between positive information, imagery, and a control condition. *Journal of Behavior Therapy and Experimental Psychiatry*, 42, 139-144.

This study examined the effectiveness of positive information and imagery in a verbally learned fear in children. Researchers took a group of 9-13 year olds and instilled fear of a fictitious animal through providing negative information. Participants were divided into three intervention groups; positive information, imagery, and a control. Results indicated that both positive information and imagery were more effective than the control group and that positive information was more successful than imagery.

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

This study aimed to reevaluate the predictive ability of the Life Orientation Test. Two studies were completed in this process. The first used data collected by 4,309 undergraduates who completed a number of scales measuring different aspects including optimism, neuroticism, coping, and physical symptoms. Based on the results of the correlations between these scales, it

was concluded that the LOT is a feasible instrument for assessing one's general sense of optimism and that it deserves continued development. The second study looked to reexamine whether or not the items on the scale measured what they were intended to measure. The purpose of the items is to measure a general expectancy of good versus bad outcomes in life. The researchers acknowledged two different items in the LOT which seemed to be problematic in that regard. The researchers ended up removing a negatively worded item and adding a positively keyed item making the number of positive and negative items equal at three a piece with an additional four filler items. The revised edition of this scale was tested for internal consistency and test-retest reliability. Both received high scores, meaning the LOT-R is a consistent and reliable measure of optimism.

O'Hanlon, B., & Bertolino, B. (2012). *The therapist's notebook on positive psychology:*

Activities, exercises, and handouts. (pp. 61-89). New York, NY: Taylor and Francis Group.

This workbook on positive psychology includes exercises for therapists to use with clients. Exercises touch on all aspects of positive psychology from purpose and meaning to positive talk, social connections, and exercise. Each section has activities to do in sessions or be assigned outside of sessions. The exercises used for this research were taken from the optimism and orientation section. The objectives of these exercises are to help clients see more optimistic elements of their lives and train them to look at things in a more positive orientation. The exercises used will be assigned as homework to help clients apply new optimistic skills to life outside of interventions.

Schulman, P. (1999). Applying learned optimism to increase sales productivity. *Journal of*

Personal Selling and Sales Management, 19(1), 31-37.

Schulman applied Dr. Seligman's findings of optimism being a predictor of achievement to salespersons. This article serves as a guideline to aid individuals in increasing their sales. He covers learned helplessness and learned optimism while including the benefits and application of learned optimism. The article goes on to describe and give recommendations on how to use learned optimism to change one's outlook.

In the Moment

Exercise:

To complete this exercise, complete the following steps.

1. Think about the songs or pieces of music that have brought out positive emotions in you. Make a list of those songs in the space below.

2. Next to each song, write a few of the positive emotions that the song typically evokes for you (e.g. happiness, joy, inspiration, optimism, etc.)
3. Make sure you have access to the songs you identified and have a means of playing them at home, in your car, on a walk, etc.
4. Make a plan to listen to two songs consecutively at least two times throughout your day. Be sure to plan these moments at times that you are not going to be interrupted.
5. Listen to the songs you have selected. As you do, let yourself become immersed in the music. Let it fill your body, mind, soul. Try not to think deliberately about anything in particular, just letting yourself become absorbed in the moment.
6. After listening to the two songs, take a couple minutes to reflect on the positive emotions you felt. Think about how you can carry that emotion with you for a portion of your day. You might even consider humming a few bars from time to time as a reminder.
7. As you think of new songs, add them to your list. You might also find more than two times a day to listen to those songs that raise your level of happiness. And when you feel down, overwhelmed, disconnected in some way, or just not yourself, you can turn on your music and change your emotions.

Personal Benchmarking

Exercise:

For the first part of this exercise, think of the best moments of your life, or the times when you have dealt with difficulties in a way that worked or of which you felt proud. When thinking of those times, capture some skills and aspects from those times to use in everyday life or when you are faced with a problem by writing your response in the space provided below.

In those better moments or times:

- How were you thinking or how do you think? _____

- On what did/do you focus your attention? _____

- What did/do you do differently than when things weren't/aren't going so well? _____

- Who do you tend to be around and spend time with (or are you usually alone)? _____

- Where do you spend time? _____

-
-
- Anything else that is different you might be able to use from those moments? _____

-
-
-
-
- Looking back over your answers, what do you notice about what you do well? _____

-
-
-
-
- What could you do with this information to improve just a little bit from your past successes? _____

-
-
-
-
- How can you continue to grow, improve, and build on your baseline success? _____
-
-
-
-

The Writing Ritual

Exercise:

Here are the instructions to give to the clients about doing the writing ritual.

How to do the writing ritual:

1. Write honestly and openly about your deepest feelings and thoughts about the situation you are in or went through. Make sure you keep these writings private or you may find yourself unconsciously censoring what you write and diluting the effects of the writing. Consider destroying what you wrote after it is complete, again for the same reason. Perhaps make a ritual of the burning or destroying of the writing.
2. Write for a relatively short time, say 15 minutes. This writing is often draining or emotionally difficult. Limiting the time makes it both a bit more tolerable and more likely that you will do it.
3. Write for only four or five days. This time limit seemed to work very well in the experiments that were done. They are not carved in granite, however, and if you find you need more time, you can take it. One of the points of this limit of a few days is again to contain the experience so it doesn't take over your life.
4. Try to find both a private and unique place to write, somewhere you can be both uninterrupted and someplace that won't be associated with other things or that have the usual smells, sights, and sounds of places you already know well.
5. Don't worry about grammar or spelling or getting it right. Just write.
6. During the writing days, try to use the same time each day or evening to write. It's not crucial, but it can sometimes give your unconscious mind some structure and preparation time if it knows exactly when the writing will take place. This can also help contain the emotions and intrusive thinking that may occur and interfere with your day or evening.
7. Writing seems to be the most powerful, but if for some reason that won't work for you, you could try "writing" by speaking into a tape recorder or a video camera.
8. Ignore these guidelines if you discover something else works better for you. Everyone is unique.

A Letter from Your Best Day to Your Bad Days

Exercise:

Write a letter to yourself whenever you feel particularly good, powerful, healthy, or functional. Address yourself in your worst moments and speak to the areas that follow. Your letter need not be lengthy unless you prefer it that way. You can use a separate piece of paper, or there is space provided below if you would like to write your letter on these pages.

- What advice would you give yourself for coping with your worst moments from those better moments?
- What should you keep in mind in your worst moments that you are likely to forget?
- What kinds of activities might help you in your worst moments?
- What could give you hope during this bad time?

Additional Resources

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