

The effectiveness of cognitive behavioural therapy on optimism in male students

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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 students. Therefore, the purpose of this study was to examine the effectiveness of an optimism training intervention on state optimism levels of students. 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. These results suggest optimism training may increase optimism levels. Further research examining varying jobs, length of intervention, and timing the intervention closer to in-season is suggested.

Key words: Cognitive behavioral therapy, optimism, male students

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. 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 et al, 2010).

Optimism can be defined as the expectation that good things will happen (Carver et al, 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 et al, 2010). According to research, optimism and mental toughness, defined by authors as control, confidence, and coping skills, are highly correlated (Nicholls et al, 2008). This suggests that by possibly increasing optimism, mental toughness can also be increased, leading to higher achievement. 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 et al (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 cartels 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), "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.

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 et al (1996) demonstrate effective ways to help increase a person's level of optimism. 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. 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 college students. Therefore, the purpose of this study is to examine the effectiveness of an optimism training intervention on optimism levels of college students.

METHODS

Participants

Participants consisted 30 male students (CBT = 15 and control (C) =15) from a Islamic Azad university, Neka branch. Participants were between the ages of 19 and 24 that they were divided 2 age groups, 19-24 and 25-29 years. Before participation, all individuals signed an informed consent form.

Attributional Style Measure

The Attributional Style Questionnaire (ASQ; Peterson et al., 1982) is a self-report measure of attributional style, comprising 6 hypothetical negative events and 6 hypothetical positive events sampled from the domains of achievement and affiliation. The hypothetical ASQ events allow an individual to subjectively interpret each event and its possible cause (Schulman et al., 1989). Respondents are instructed to think of a cause for each event and then to rate the cause along three 7-point scales representing the locus, stability, and globality causal dimensions. Higher scores on the ASQ scale items represent more internal, stable, and global attributions, whereas lower scores represent more external, unstable, and specific attributions (Peterson et al., 1982). In total, the ASQ generates 36 scores: three items (i.e., locus, stability, globality) for each of the 12 hypothetical events. The locus, stability, and globality items are then summed (or averaged) across the negative events and separately summed across the positive events to create a locus, stability, and globality composite score for each type of event. Optimists have low composite negative scores and high composite positive scores; in contrast, pessimists have high composite negative scores and low composite positive scores.

Peterson et al. (1982) found modest internal consistencies for the individual dimensions but the composite scores have a more respectable Cronbach's alpha ($\alpha = .75$ for CP; $\alpha = .72$ for CN). Similarly, Peterson et al. (1982) reported good test-retest correlations with an interval of four weeks: $r = .70$ for the positive event composite score and $r = .64$ for the negative event composite score. In the present study, internal consistencies for CN ($\alpha = .79$) and CP ($\alpha = .82$) were acceptable.

Interventive plan

- Session 1 Attendants' introduction, group rules, the goal and introduction of education course, individual's commitment to attend in all sessions, introduction of ABC model, create the positive visualization, homework explain, then pretest and feedback.
- Session 2 Review of previous session and homework, educational speech, Analysis of Advantages and Disadvantages Training, homework, summarizing and

- feedback.
- Session 3 Review of previous session and homework, educational speech, Completing the second part of the assumptions, rules and should, analysis of advantages and disadvantages of assumptions, fill of DAS questionnaire, homework, summarizing and feedback.
- Session 4 Review of previous session and homework, analysis of advantages and disadvantages of assumptions, Arrow down technique to detect cognitive triangles, homework, summarizing and feedback.
- Session 5 Review of previous session, educational speech about Arrow down technique to detect cognitive triangles, Training, Teaching problem solving, homework, summarizing and feedback.
- Session 6 Review of all sessions and homework, Teaching problem solving, assumptions replacement in cognitive model, Conclusion and feedback on each member.

Data Analysis

Data analysis was conducted with descriptive & inference statistics. In descriptive statistics analysis, diagram, means & standard deviation & in inference statistics part of the analysis, multi- variable covariance was used to analyze research hypotheses. All analysis was done by SPSS 16 software.

RESULTS

Mean of optimism scores were higher in 19-24 years male students in both pre and post intervention. These results showed that younger students has higher optimism (Table 1).

Table 1. Mean, variance and SD of optimism scores of pre and post- Interventionstage

Age (Year)	N	Mean		variance		SD	
		Pre test	Post test	Pre test	Post test	Pre test	Post test
19-24	12	77.08	91.5	104.4	561.69	10.2	23.7
25-29	18	75.1	82.4	92.16	466.56	9.6	21.6

Mean score of optimism was relatively equal in both groups at pre-intervention stage, but has significance differences between C and CBT at 95% confidence level (Table 2). Other comparisons showed that mean score of optimism at post-intervention stage has significance difference, and CBT groups have higher score than C group about 2-fold (Table 2).

Table 2. Compare of optimism between control and CBT groups at pre and post- Intervention stage

Variable	N	Mean	SD	t	df	sig
Pre- Intervention	C	15	72.7	9.3	-1.9	28
	CBT	15	79.13	9.4		
post- Intervention	C	15	65.2	6.9	-14.7	28
	CBT	15	106.9	8.5		

Optimism analysis in CBT group before and after Intervention showed significance difference that intervention led to increase optimism score (Table 3).

Table 3. Compare of optimism in CBT group before and after Intervention

Variable	Mean of before Intervention	Mean of after Intervention	mean difference	t	df	sig
CBT group	79.13	106.9	-2.78	-10.002	14	0.000

Our finding showed that effect of covariance variable is significance difference that related to intervention. Results showed significance difference between groups of CBT and C, in the other words, 89 percent of optimism of students are related to CBT.

Table 4. Summary of covariance analysis on the total score of optimism scale without interaction effects

source	SS	df	SM	F	sig	Eta
Covariate variable	13503.3	2	6751.6	144.8	0.000	0.9
Pre-test	440.7	1	440.7	9.5	0.005	0.26
Group	10104.2	1	10104.2	216.8	0.000	0.89
Error	1258.6	27	46.6			
The total revised	14761.9	29				

DISCUSSION

The purpose of the present study was to examine the results of an optimism intervention on optimism levels of collegiate students. The results of this optimism intervention showed that each participant had increased optimism levels during the intervention phase. Individuals had higher scores in the baseline after the intervention than their baseline before the intervention. 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 et al, 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. Students might ideally take the information given in this study to improve their optimism in order to improve their mind set and in turn, living and educational performance. 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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