

# Optimism in female students: effectiveness of cognitive behavioural therapy

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**ABSTRACT:** Cognitive therapy supports the idea that thoughts, beliefs, attitudes, and perceptions influence the intensity and range of emotions that one feels and by changing our core beliefs and the resulting automatic thoughts, we can change overall perceptions, feelings, and actions. The purpose of this study was to examine the efficacy of cognitive behavior therapy on optimism in male students. The present study was done by quasi experimental method and design of pretest and posttest with CBT and control group. Individuals were selected from among students of Islamic Azad University, Neka Branch. These subjects were randomly divided into two experimental and control groups. The subjects participated in 90-minute treatment sessions held once a week for 6 weeks. Attribution style questionnaire were used in this study. Data was analyzed using t Test and covariance analysis (MANCOVA). The results indicated the effectiveness of cognitive behavioral therapy in optimism score of experimental group in comparison with control group in posttest. Cognitive behavioral therapy cause to increase component of positive psychology and promote psychological capital and psychological well-being.

**Keywords:** cognitive behavioral therapy, positive psychology, optimism.

## INTRODUCTION

Optimists are people who expect good things to happen to them; pessimists are people who expect bad things to happen to them. Folk psychology has long held that these differences among people are important. Research over the past two and a half decades suggests that the folk wisdom is right (at least in this case). This rather simple difference anticipating good versus anticipating bad is linked to core processes that underlie behavior. The ways in which optimists and pessimists differ in their approach to the world have substantial impact on their lives. These people differ in how they confront problems; they differ in how well they cope with adversity; they also differ in their resources, both social and socioeconomic. Individual differences in optimism are relevant to clinical psychology because this dimension is associated, both directly and indirectly, and at both an individual and a social level, with risk for psychopathology. At the most basic level, optimism by definition is inversely related to hopelessness, a risk factor for depressive disorders (Alloy et al., 2006). Further, optimism appears to confer resilience to stressful life events, which are associated with risk for both onset and relapse of psychopathology (e.g., Ellicott et al, 1990; Finlay-Jones & Brown, 1981). Finally, at the broadest levels, optimism clusters with other factors such as socioeconomic status and social integration, which as a group have protective effects for both mental and physical health (House et al, 1988; Kawachi & Berkman, 2001; Lorant et al., 2003). In sum, the trait of optimism may provide cognitive, coping, and contextual resources that promote better mental health. Indeed, the pattern of associations that optimism has with various behavioral and cognitive tendencies may give us broader hints about the nature of optimal living. Given the many ways in which optimists' lives seem to be better than those of pessimists, an important question is whether optimism can be acquired. People's levels of optimism appear to be

trait-like and thus relatively stable over time. Change certainly is possible (see Segerstrom, 2006), but questions remain about how large a change can reasonably be expected from a person and how permanent such a change will be. There also remain questions about whether an optimistic view that is induced, either by intervention or by structured practice, has the same beneficial effects as derive from a naturally occurring optimistic view. The most straightforward way to talk about turning a pessimist into an optimist is the set of techniques known collectively as cognitive– behavioral therapies. The logic behind these techniques is that people sometimes have patterns of negative cognitive distortions. Certain kinds of negative thoughts foster negative affect and lead people to stop trying to reach their goals. We would imagine the interior monologue of the pessimist is filled with such negativity. This class of therapies aims to make the cognitions more positive, thereby reducing distress and fostering renewed effort toward desired ends. Beliefs about one's future would certainly be an important subset of the cognitions to target for change in such therapies (for an example of this viewpoint applied to optimism see Pretzer & Walsh, 2002; Segerstrom, 2006). From a cognitive–behavioral view, the key would appear to be to train oneself to think in the ways optimists think and act in the ways optimists act. Riskind et al, (1996) have suggested one more twist on that reasoning, which returns us to the question of whether absence of pessimism is the same as presence of optimism. Specifically, they noted that much of cognitive therapy is aimed at reducing negative thoughts (in effect, reducing pessimism), and that much less is aimed at actually enhancing positive thoughts (increasing optimism). A decrease in negative thinking does not necessarily translate into an increase in positive thinking. Riskind et al, (1996) argued for the importance of actively developing a positive perspective. They suggested both the challenging of beliefs that are not only negative but actually “optimism suppressing” (e.g., “I don't deserve good outcomes”) and actively engaging in rehearsing positive strategies and positive outcomes. Although some projects have aimed specifically at increasing optimism, interventions need not have that specific focus to have that effect. When people change negative schemas about themselves and the world, or when they learn to deal more effectively with stress, they may gravitate to a more optimistic view of life more generally. As an example, Antoni et al. (2001) tested an intervention among women who were newly diagnosed with non-metastatic breast cancer. The multi-modal intervention that they implemented was an effort to instill a range of stress-management techniques. Positive reframing was one element in the broader treatment, but a relatively minor element. Nonetheless, that intervention proved to increase women's optimism scores over time, compared to a control condition. Two other studies were conducted by Seligman and colleagues to try to prevent depression among college students at risk for depression (Seligman et al., 1999; Seligman et al., 2007). These studies also employed multi-modal cognitive–behavioral procedures, aimed at teaching skills to decrease negative automatic thoughts and increase more constructive thoughts and behaviors. Both studies found evidence that the intervention reduced the incidence of episodes of moderate depression compared to a control condition, and that changes in pessimistic style mediated those changes. We have focused here on changes in generalized optimism, but it should also be apparent that cognitive behavioral interventions often perhaps even usually target beliefs that are domain-specific rather than global. 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.

## MATERIALS AND METHODS

### **Methods**

#### **Participants**

Participants consisted 30 female students (CBT = 15 and control (C) =15) from a Islamic Azad university, Neka branch. Participants were between the ages of 19 and 29 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 (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 AND DISCUSSION**

**Results**

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

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

Age (Year)	N	Mean		variance		SD	
		Pre test	Post test	Pre test	Post test	Pre test	Post test
19-24	14	72.14	89.3	73.96	497.29	8.6	22.3
25-29	16	67.5	85.3	86.49	420.25	9.3	20.5

Mean score of optimism was relatively equal in both female student groups at pre-intervention stage, and not shown significance differences between C and CBT at 95% confidence level (Table 2). Other comparisons showed that mean score of optimism at post-intervention stage in female students has significance difference, and CBT groups have higher score than C group (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	67.4	6.3	-1.37	28
	CBT	15	71.9	11.06		
post- Intervention	C	15	68.9	5.7	-9.8	28
	CBT	15	105.4	13.14		

Optimism analysis in CBT group before and after Intervention showed significance difference that intervention led to increase optimism score in female students (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	71.9	105.4	-33.4	-7.08	14	0.000

Our results showed that effect of covariance variable has significance difference that related to intervention. Results showed significance difference between groups of CBT and C, in the other words, 76 percent of optimism of female students is 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	10401.9	3	4367.3	36.7	0.000	0.7
Pre-test	185.15	1	185.15	1.9	0.004	0.76
Group	959.7	1	959.75	10.18	0.17	0.005
Error	2450.2	26	94.2			
The total revised	12852.17	29				

### Discussion

These results suggest that the CBT 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 et al (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.

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. Researchers interested in this topic could also look to see if there is a difference in optimism levels of scholarship and non-scholarship students.

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