

# Effect of Positive Self-Talk Training on Depression Alleviation in Students with Suicidal Ideation

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## Abstract

**Background:** Repetitive negative thinking, including rumination, is associated with a variety of depressive symptoms in students. This study aimed to investigate the effect of positive self-talk training on depression alleviation in students with suicidal ideation.

**Methods:** In this quasi-experimental research, we employed a pretest-posttest control group design. The statistical population consisted of all depressed students with suicidal ideation in Heris County (East Azerbaijan Province, Iran) during the 2021–22 academic year. Purposive sampling was used to select 34 students as the research sample. They were then randomly assigned into an experimental group and a control group (17 participants per group). Both groups took a pretest, and the Beck Depression Inventory was used to collect the necessary data. The experimental group received positive self-talk training in eight 90-minute sessions (two sessions a week), after which both groups took the posttest. ANCOVA was used for data analysis in SPSS version 26.

**Results:** The study included 34 male and female students with an average age of  $15.12 \pm 2.69$  years. The mean  $\pm$  SD of depression in the experimental group in the pretest and posttest stages were  $37.53 \pm 6.62$  and  $12.47 \pm 6.33$ , respectively ( $P < 0.001$ ). The difference between the mean  $\pm$  SD of depression in the control group was not significant in the pretest ( $33.65 \pm 6.59$ ) and posttest ( $37.12 \pm 6.30$ ) stages. The results showed that positive self-talk training had a significant effect on depression in students with suicidal ideation ( $P < 0.001$ ). Thus, positive self-talk training alleviated depression in the students.

**Conclusion:** Positive self-talk training can be applied to mitigate depression in students with suicidal ideation. The findings of this study can be practically beneficial to psychologists, school counselors, principals, and teachers.

**Keywords:** Optimism, Depression, Suicidal ideation, Students, Positive psychology

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## 1. Introduction

Depression is a serious chronic psychiatric disorder (1). According to the Diagnostic and Statistical Manual of Mental Disorders, depression symptoms in adolescents include depressed moods presenting as feelings of sadness, emptiness, hopelessness, and irritability. People with this disorder also experience a loss of interest or pleasure in previously enjoyed activities, fluctuations in their weight and appetite, insomnia, bulimia, confusion, exhaustion, and inability to focus and concentrate (2, 3). Depression has a significant impact on both personal life and social life as well as daily functions in eating, sleeping, and general health (4).

In students, repetitive negative thinking is associated with a variety of depressive symptoms, including rumination (5). Rumination is defined as a series of repetitive but passive thoughts that lead to the emergence of mechanisms contributing to depression. It is also widely recognized as a

significant contributor to the onset and persistence of depressive symptoms (6, 7). Negative cognitive processes play a central role in the development and persistence of depressive disorders and make cognitive dysfunction as an essential symptom of depression (8). Moreover, it can reflect pessimistic attitudes toward the world and the future in depressed people (9). The cognitive triad refers to dysfunctional views of self, the world, and the future and the negative cognitive triad results from interactions between negative schemas and negative environmental events (10). Chahar Mahali and colleagues (11) reported that when individuals experience stress, they are more likely to fall into a negative cognitive schema or cognitive triad and increase their risks of depression.

Depression has detrimental effects on the physical, academic, and social functions of students, as well as their mental states (12). Suicide can be facilitated by the pervasive presence of negative factors that reinforce a person's decision to end

their own life (13). Suicidal ideation demonstrates a preoccupation with death that has not yet taken on a practical dimension. Suicide is a multi-step process that involves suicidal ideation, planning to commit suicide, attempting suicide, and taking actions to end life (14). Bazrafshan and colleagues (15) reported that adolescents and young adults are the most susceptible to suicide, the reason for which is their insufficient knowledge of coping strategies.

Self-talk is defined as a cognitive process in which individuals express their thoughts and opinions about themselves, the world, and their relationships. In fact, self-talk is considered a silent or audible internal conversation in which a person interprets their thoughts and emotions and modifies their evaluations and beliefs (16). Theories of cognitive therapy emphasize the connection between a person's self-talk and their actions and behaviors (17, 18). Intrinsic dialogue is among the most potent contributors to thought patterns. By mastering one's inner monologue, a person can demonstrate command over all spheres of life. Happiness and unhappiness in life ensue from a person's use of language and attitude towards extrinsic events (19). Personal statements (i.e., examples of self-talk) have the same impact on behavior as the words of others, and one can learn to overcome terrifying and stressful situations by practicing positive self-talk (20). Inner speech is a form of automatic thought that narrates the activity flow to an individual; automatic thoughts are the thoughts that occur involuntarily in a person's mind (21).

Positive self-talk consists of positive utterances expressing positive emotions and feelings and yielding logical and constructive decisions. With positive self-talk, one facilitates success (22, 23); therefore, a person's subconscious mind supplies everything necessary for success, which it seeks out actively. Consciously altering one's set of core beliefs in the unconscious mind can be accomplished through the use of positive self-talk and the repetition of positive questions. Modifying a person's beliefs will lead to a shift in their line of thinking, which in turn will have an impact on their emotions (24). Hajialiani and colleagues (25) demonstrated that cognitive therapy had an inverse relationship with suicidal ideation and depression. Moreover, according to Kim and Kihl, depression had a significant and positive

correlation with suicidal ideation (26). Based on the previous research, depression is among the primary causes of suicide; as hope increases and depression decreases, the risk of suicide will decline (27). Shadinger and co-workers (28) reported that repeating positive statements in the form of self-talk would alleviate speech anxiety in students.

Depression is one of the most prevalent forms of mental pathology and is the most significant threat to mental health in adolescents. Adolescence is a delicate time marked by profound physiological and psychological changes. This period is also characterized by mounting expectations to step into different roles in the years ahead. Depression can impact students' formative, productive, and defining years. Numerous adolescents with depressive disorders experience suicidal ideation, which is the strongest predictor of self-injurious behavior. However, the increasing suicide rate and the risks of suicidal ideation in adolescents, as well as the significance of depression as a strong predictor of suicidal ideation in teenagers, underline the necessity of analyzing the impacts of positive self-talk on adolescents. Given the paucity of studies on students with suicidal ideation, this study aimed to investigate the effect of positive self-talk training on depression alleviation in students with suicidal ideation in Heris county, East Azerbaijan Province, Iran, in 2022.

## 2. Methods

This quasi-experimental research adopted a pretest-posttest control group design. The statistical population of this study consisted of depressed students with suicidal ideation in Heris County, East Azerbaijan Province during the 2021–22 academic year. The research sample included students referred to the Education Counseling Center by school consultants in Heris. Purposive sampling was employed to select 34 eligible students as the research sample. They were then randomly assigned into an experimental group and a control group (17 participants per group). The adequacy of the sample size in this study was measured using G\*power software (statistical power of 0.90, with an effect size of 1.04, and a significance of 0.05) (29). Randomization was done using a coin-toss method. A coin was tossed into the air once for each student. Heads were considered for the experimental group, and tails for the control group. Thus, when the result of tossing a coin was heads, the participant

was assigned into the experimental group, and when it was tails, the participant was assigned into the control group. The inclusion criteria were: depressed students with suicidal ideation, written consent for participation in research, scoring one point higher than the cut-off point (score=18) in the Beck Depression Inventory, age range between 13 and 17 years, and no simultaneous psychological or pharmaceutical treatment. The exclusion criteria were: more than two absences from the treatment sessions and reluctance to continue the treatment process.

## 2.1. Instruments

### 2.1.1. Beck Depression Inventory (BDI-II):

This questionnaire was developed by Beck and colleagues (30) and consists of 21 items to assess the severity of depression. Participants respond to the items on a four-point scale ranging from 0 to 3. This instrument contains two items pertaining to affective symptoms, 11 items pertaining to cognitive symptoms, two pertaining to overt behaviors, five pertaining to somatic symptoms, and one pertaining to interpersonal symptoms. Scores range from a minimum of 0 to a maximum of 63, determining the severity of depression from mild to severe. A total score of 0–13 is considered in the minimal range, whereas 14–19 is mild, and 20–28 is moderate. Finally, the range of 29–63 is regarded as severe. The cut-off point of this questionnaire is 18. Ghassemzadeh and colleagues (31) reported that the total average content validity ratio (CVR) and content validity index (CVI) were 0.98 and 0.96 for the Persian version of the questionnaire. They also reported that the Persian version of BDI-II had high internal consistency (Cronbach's alpha=0.87) and acceptable test-retest reliability ( $r=0.74$ ). In the

present study, the Cronbach's alpha coefficient for the questionnaire was 0.84.

## 2.2. Procedure

After selecting eligible individuals to participate in the research, an explanatory meeting was held for them, and informed consent was obtained from them to participate in the study. In the next step, the participants were randomly divided into experimental and control groups, and both groups were given a baseline pretest. Afterward, the experimental group received face-to-face positive self-talk group training at the Heris Education Center for eight 90-minute sessions twice a week. Table 1 presents an overview of the executive protocol sessions of positive self-talk. The control group did not receive this training during this period. The posttest was administered at the end of the experimental group training.

## 2.3. Data Analysis

Descriptive and inferential statistics were employed in this study for data analysis. The research hypothesis was examined through the analysis of covariance (ANCOVA) in SPSS version 26. The significance level in this study was considered to be 0.05.

## 3. Results

The participants in this study included 34 male and female students with an average age of  $15.12 \pm 2.69$  years. 15 (44.12%) participants were boys, and 19 (55.88%) were girls. The demographic variables of the research sample are presented in Table 2. Table 3 presents descriptive indicators,

**Table 1:** An overview of the sessions in the positive self-talk executive protocol

Session	Content of each session
1	Getting to know the people in the group; making connections; creating a friendly atmosphere; stating the purpose of holding educational meetings and stating the regulations of the meetings
2	Describing the definition of depression; emotional, intellectual and behavioral signs of depression
3	Defining the concept of ineffective beliefs and the relationship of self-talk with it
4	Investigating the relationship between emotions and thoughts and how students estimate the merits and its effect on failures; becoming acquainted with thoughts, feelings, and behaviors and their connection with self-talk
5	Examining self-talk about difficult situations and strengthening self-talk in a positive and constructive way; cognitive reconstruction by introducing absolutist thinking and cognitive errors
6	Practical practice of positive self-talk by doing homework and replacing negative self-talk with positive self-talk; mental imagery and reconceptualization
7	Teaching the correct way to study and its solutions and how to deal with anxiety and depression through positive self-talk; practicing positive self-talk and role-playing
8	In this meeting, it was discussed to summarize the previous material and emphasize on using positive self-talk and replacing reasonable and realistic thoughts instead of unhealthy and self-defeating thoughts; posttest

**Table 2:** Demographic characteristics of the students with suicidal ideation

Groups	Mean±SD age (years)	Grade				Gender	
		Ninth	Tenth	Eleventh	Twelfth	Boy	Girl
Experimental group	14.89±2.77	5 (29.41%)	5 (29.41%)	4 (23.53%)	3 (17.65%)	7 (41.18%)	10 (58.82%)
Control group	15.23±2.52	6 (35.29%)	4 (23.53%)	5 (29.41%)	2 (11.77%)	8 (47.06%)	9 (52.94%)
P	0.711	0.916				0.734	

**Table 3:** Mean and standard deviation (SD) of depression in experimental and control groups

Variable	Phase	Experimental group	Control group	P (between group)
		Mean±SD	Mean±SD	
Depression	Pretest	37.53±6.62	33.65±6.59	0.096
	Posttest	12.47±6.33	37.12±6.30	0.001
P (within group)		0.001	0.126	-

including the mean and standard deviation of depression scores of students in each group. Under the influence of positive self-talk group training, the mean depression scores in the posttest phase decreased in the experimental group, whereas no significant changes were noticed in the control group.

The normal distribution of depression in the experimental and control groups was analyzed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. According to the results, this variable followed a normal distribution in the research sample.

The results showed a significant difference between the two groups in the mean depression scores ( $F=272.34$ ,  $P<0.001$ ,  $\eta^2=0.90$ ). Finally, group training in positive self-talk significantly alleviated the depression symptoms of students with suicidal ideation.

#### 4. Discussion

The present study aimed to investigate the effect of positive self-talk training on alleviating depression in students with suicidal ideation. The results revealed that positive self-talk group training effectively reduced depression among students with suicidal ideation in the schools of Heris city. This finding is consistent with the research results of Hajialiani and colleagues (25) on the effect of cognitive therapy on depression and suicidal ideation in students and the research findings of Shadinger and colleagues (28) on the effect of positive self-talk statements on anxiety in students.

Mindfulness-based cognitive therapy has been

shown to enhance coping skills, alleviate depressive symptoms, and reduce suicidal ideation in students (25). According to the cognitive perspective, cognitive errors, negative schemas, cognitive styles, and vulnerability are the causes and origins of depression. Three cognitive patterns are associated with the development of depression in vulnerable individuals. In fact, vulnerable people who have negative cognitive patterns towards themselves, the world, and others, evaluate themselves as worthless and inadequate. They also believe that they have no control over negative life experiences and situations (10). Depression is associated with stimulated or reduced cognitive efficiency, including the stimulation of primary maladaptive schemas and the loss of hope. Schemas are the deepest cognitive structures and depression is primarily linked to early maladaptive schemas (25). The depressed individual interprets information from the outside world through a complex network of information and prior knowledge. To a large extent, our preexisting knowledge and worldviews color our interpretations of new stimuli and events. Cognitive impairment constitutes the core of depression. Hence, cognitive interventions aim to correct people's ineffective and negative beliefs, behaviors, and cognitions (10).

This strategy targets adolescents' negative thoughts as a mechanism to alleviate their negative cognitions and ineffective beliefs. Childhood and adolescence are the most significant developmental periods when it comes to the formation and changeability of beliefs. Adolescents should gradually align their opinions and beliefs with the culture, social, and religious climate of the communities in which they reside (16). Some of these beliefs consist of self-talk or the things that



we say to ourselves about ourselves. A person's thoughts can intentionally and relatively directly affect how he/she feels, and through inner self-talk, he/she affects his/her thoughts and tells himself/herself what he should think and believe. When confronted with unwelcomed events, people's illogical self-talk is the primary cause of emotional inconsistencies and related behaviors (19). Controlling one's internal dialogue is among the most effective and potent contributors to his/her thought patterns. By doing so, one is expected to excel in all spheres of life. An individual's level of contentment in life can be affected by his/her choice of words while describing his/her experiences and emotions in response to external events (32).

Planning to speak is a human quality; humans are capable of planning before speaking (33). As a result, people can consciously create their desired new beliefs in their unconscious minds through repetition, constructive suggestions, great thoughts, and positively questioning their self-imagery of mental images (17). As beliefs evolve, thoughts grow and develop. Under the influence of new thoughts and ideas, an individual's emotions also change. Consequently, behavior and actions will change as well. By engaging in positive self-talk, depressed people can create rational, constructive, and positive beliefs about themselves. Hence, their thoughts and emotions will alter, and they will act appropriately in line with the circumstances (20). When an individual has positive self-talk, he/she allows himself/herself opportunities and chances. Furthermore, the unconscious mind supplies the means for success and actively pursues achievements.

#### 4.1. Limitations

Since this was a quasi-experimental study among male and female students in Heris (Iran), one should be cautious in generalizing the research results to other statistical populations. Among other limitations of the present study, we can point out that the follow-up period was not held. Therefore, to reveal the effects of positive self-talk training and increase the ability to generalize and compare the results, it is better to conduct future research with a larger sample size along with long-term follow-up periods.

## 5. Conclusion

Ineffective beliefs are the primary source of

adolescent depression. By fostering positive and effective beliefs and preventing suicidal ideation, positive self-talk can influence adolescents' ideation, feelings, and behavior. Positive self-talk can help depressed individuals develop rational, constructive, and positive beliefs about themselves. Hence, their ideation and emotions will change and they will act appropriately in different situations. Positive self-talk appears to be a productive method for treating depression and, by extension, reducing suicidal ideation in adolescents, thanks to its high efficacy in generating positive beliefs.

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## Ethical Approval

The Ethics Review Board of Payame Noor University approved the present study with the code of IR.PNU.REC.1401.233. Also, written informed consent was obtained from the participants.

**Conflict of Interest:** None declared.

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