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# The Effectiveness of Positive Self-Talk Training on Self-Esteem and Achievement Motivation in Depressed Students Preparing for the University Entrance Exam

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A B S T R A C T

**Purpose:** The present study aimed to examine the effectiveness of positive self-talk training in enhancing self-esteem and achievement motivation among depressed students preparing for university entrance exams.

**Methods and Materials:** This study employed a quasi-experimental design using a pretest-posttest control group format. The statistical population consisted of all depressed students preparing for university entrance exams in Tehran during the 2024–2025 academic year. From this population, 30 students were selected through convenience sampling based on specific inclusion and exclusion criteria. Participants were randomly assigned to either the experimental group (n = 15) or the control group (n = 15). Data were collected using the Coopersmith Self-Esteem Inventory (CSEI) and the Hermans Achievement Motivation Test (HAMT). The experimental group underwent ten 45-minute sessions of positive self-talk training. Data analysis was conducted using analysis of covariance (ANCOVA) via SPSS software (version 23).

**Findings:** The findings revealed that the mean scores for self-esteem and achievement motivation significantly increased in the experimental group compared to the control group following the intervention ($F = 22.23$, $p < .05$). Effect size analysis indicated that 76% of the variance in self-esteem and 72% of the variance in achievement motivation between the groups could be attributed to the positive self-talk training.

**Conclusion:** Given the results, positive self-talk training appears to be an effective psychological strategy for improving self-esteem and achievement motivation among depressed students preparing for university entrance exams.

***Keywords:*** *Positive Self-Talk Training; Self-Esteem; Achievement Motivation; Depressed Students; University Entrance Exams.*

## 1. Introduction

The preparatory phase for Iran's national university entrance examination, known as the Konkur, represents a critical milestone in students' academic trajectories and is often associated with heightened levels of psychological distress. These stressors typically arise from intense competition for admission to prestigious universities, elevated expectations from family and society, and pervasive concerns regarding future academic and career prospects (Nazari Chamak, 2022). Among this population, students repeating the Konkur for a second or subsequent time—referred to as post-Konkur students—face additional psychological burdens. Previous exam failure, feelings of disappointment and frustration, and amplified societal pressures may exacerbate psychological issues such as depression in these students (Narimani & Miri, 2017). Depression in post-Konkur students not only impairs academic performance but also adversely affects various domains of functioning. These students frequently report diminished concentration and memory, disruptions in sleep and appetite, reduced energy and motivation, and pervasive feelings of worthlessness and hopelessness. Such symptoms can contribute to further academic deterioration, social withdrawal, and, in extreme cases, suicidal ideation (Ebrahimnejad & Abedpour, 2022). Accordingly, the identification and treatment of depression in this vulnerable student group warrant serious attention.

A major consequence of depression is diminished self-esteem. Self-esteem, conceptualized as an individual's subjective evaluation of personal worth and competence, is a foundational component of psychological well-being and social adjustment (Zeigler-Hill, 2013). Students with low self-esteem frequently perceive themselves as incompetent and may withdraw when faced with academic or interpersonal challenges. These individuals are more susceptible to self-criticism, guilt, shame, and an overwhelming fear of failure (Noronha et al., 2018). Low self-esteem may, in turn, contribute to reduced achievement motivation and hinder academic performance in depressed post-Konkur students. Achievement motivation, defined as the internal drive to attain success and accomplish goals, plays a vital role in enhancing academic performance and fostering overall life satisfaction (Brunstein & Heckhausen, 2018). Students with high achievement motivation tend to exert greater effort toward their academic objectives and display increased resilience in the face of obstacles. Conversely, reduced achievement motivation inhibits persistence and may foster a sense of purposelessness and despair in these individuals (Wang et al., 2020).

To address these issues, various psychological interventions have been developed for depressed post-Konkur students. One such intervention is positive self-talk training. Positive self-talk, a cognitive-behavioral technique, involves the use of constructive and affirming internal statements aimed at modifying maladaptive thought patterns and regulating emotional responses (Kim et al., 2021). This approach assists students in identifying and restructuring self-critical cognitions into more supportive and empowering beliefs (Feeney, 2022). In this regard, Kannasut et al. (2024), in their study The Effect of Positive Self-Talk Training Program for Supervisors with Depression on Adolescent Depression, found that implementing positive self-talk training in supervisors significantly alleviated depressive symptoms (Kannasut et al., 2024). Furthermore, Aulia et al. (2025) explored the application of positive self-talk training in athletic populations and reported significant improvements in self-confidence, emotional regulation, and achievement motivation (Aulia et al., 2025).

Given the high prevalence of depression and its associated adverse outcomes among post-Konkur students—and considering the centrality of self-esteem and achievement motivation in navigating academic and psychological challenges—the present study aimed to examine the effectiveness of positive self-talk training in enhancing self-esteem and achievement motivation in depressed post-Konkur students.

## 2. Methods and Materials

### *2.1. Study Design and Participants*

This study employed a quasi-experimental research design incorporating pre-test and post-test measures with a control group. The study population consisted of all depressed post-Konkur students residing in Tehran during the 2024–2025 academic year. Based on methodological recommendations suggesting a minimum of 15 participants per group in experimental research, 30 qualified participants were selected via convenience sampling, in accordance with predefined inclusion and exclusion criteria. Participants were randomly allocated to either the intervention group (n = 15) or the control group (n = 15).

Inclusion criteria included a clinical diagnosis of depression confirmed by a licensed psychiatrist, completion of an informed consent form, and absence of concurrent psychotherapy or pharmacological treatment. Exclusion


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criteria comprised missing one or more training sessions, failure to complete the assessment instruments, or withdrawal from the study at any stage.

During the first session, informed consent was obtained from all participants. Pre-test assessments were administered to both the intervention and control groups. The intervention group subsequently received ten sessions of positive self-talk training, each lasting 45 minutes and conducted twice per week over a five-week period. The control group did not receive any form of intervention. Upon completion of the intervention, post-test measures were administered to both groups.

### *2.2. Measures*

The Coopersmith Self-Esteem Inventory (CSEI), developed by Coopersmith in 1967, is designed to assess levels of self-worth in social and academic contexts. The inventory includes five content domains: academic tasks, peer relationships, family dynamics, self-perception, and future orientation. It is composed of 58 dichotomous (Yes/No) items and yields scores on four subscales: general self-esteem, social self-esteem (peers), family self-esteem (parents), and academic self-esteem. Coopersmith et al. reported an internal consistency coefficient (Cronbach's alpha) of 0.88 for the overall scale. Divergent validity was established through a significant negative correlation with the neuroticism subscale of the Eysenck Personality Questionnaire, while convergent validity was confirmed through a positive correlation with the extroversion subscale (Coopersmith, 1967). The Persian version, translated and psychometrically validated by (Asadi, 1997), was utilized in this study. The Cronbach's alpha coefficient for the current sample was calculated at 0.796, and the validity coefficient (correlated with the Eysenck subscales) was reported as 0.792.

The Hermans Achievement Motivation Test (HAMT), developed by Hermans in 1970, is a psychometric instrument designed to measure individuals' motivation to achieve. The test comprises 29 items rated on a 5-point Likert scale, where respondents indicate their level of agreement with each statement. Items are scored either directly (higher scores reflecting stronger achievement motivation) or inversely, depending on the item content. The total score is computed by summing responses across all items, with possible scores ranging from 29 to 145. Higher scores represent stronger achievement motivation (Hermans, 1970). The HAMT has demonstrated sound construct validity through factor analysis in prior research.

### *2.3. Intervention*

The Positive Self-Talk Training Protocol is a structured cognitive-behavioral intervention designed to enhance self-esteem, motivation, and emotional resilience by teaching individuals to consciously replace maladaptive thoughts with constructive affirmations. Targeted at individuals experiencing negative self-perceptions, anxiety, low self-confidence, or heightened stress—such as students, athletes, and professionals—the program is implemented over a 5-week period, consisting of 10 sessions delivered twice weekly, each lasting 45 minutes. The protocol begins with an introduction to the concept of positive self-talk, its psychological foundations, and its impact on behavior and emotional regulation. Participants engage in self-assessment to identify their habitual negative thought patterns. Subsequent sessions focus on developing cognitive awareness and recognizing self-talk triggers through tools such as the "Thought Monitoring Worksheet." Participants are trained to reframe negative cognitions into adaptive alternatives using real-life scenarios, followed by the creation of personalized affirmations grounded in individual challenges and values. Techniques for embedding affirmations into daily routines are introduced alongside emotional regulation strategies such as mindfulness and controlled breathing. Later sessions emphasize applying positive self-talk under pressure, strengthening self-esteem through targeted exercises, and connecting self-talk practices with goal-setting and intrinsic motivation. Visualization techniques and resilience-building strategies are taught to equip individuals with cognitive tools for navigating setbacks and reinforcing a growth mindset. The final session focuses on sustaining long-term use of the techniques by developing individualized action plans and reinforcing strategies for continued independent practice (Mulawarman et al., 2024).

### *2.4. Data Analysis*

Statistical analysis was performed using analysis of covariance (ANCOVA) to compare outcomes between the groups.

## 3. Findings and Results



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The results of the demographic analysis, including age, gender, and academic field, are presented in Table 1.

**Table 1**

*Demographic Variables*

| Demographic Variable / Group | Control Group | Intervention Group |
|---|---|---|
| Age | 18–19: 10<br>19–20: 3<br>21 and above: 2 | 18–19: 9<br>19–20: 5<br>21 and above: 1 |
| Sex | Male: 5, Female: 10 | Male: 4, Female: 11 |
| Academic Field | Empirical Sciences: 9<br>Mathematics: 3<br>Humanities: 3 | Empirical Sciences: 10<br>Mathematics: 3<br>Humanities: 2 |

The means and standard deviations of pre-test and post-test scores for the self-esteem and achievement motivation variables are presented in Table 2.

**Table 2**

*Descriptive Statistics of Variables*

| Variable | Statistical Index | Intervention Group (Pre-test) | Intervention Group (Post-test) | Control Group (Pre-test) | Control Group (Post-test) |
|---|---|---|---|---|---|
| Self-Esteem | Mean | 12.11 | 38.33 | 18.10 | 17.17 |
| | Standard Deviation | 3.22 | 3.21 | 3.19 | 2.02 |
| Achievement Motivation | Mean | 34.13 | 85.16 | 30.05 | 33.31 |
| | Standard Deviation | 3.08 | 3.13 | 3.50 | 2.08 |

As shown, the post-test mean scores for self-esteem and achievement motivation increased markedly in the intervention group. Inferential statistical analysis was conducted using Analysis of Covariance (ANCOVA).

Prior to conducting ANCOVA, the relevant statistical assumptions were tested. The Kolmogorov–Smirnov test confirmed that the distribution of scores was normal (Table 3). In addition, Levene's test indicated homogeneity of variances between the groups in both the pre-test and post-test conditions for self-esteem and achievement motivation ($p > .05$). The assumption of homogeneity of regression slopes was also met ($p = .211$).

**Table 3**

*Test of Normality*

| Variable | Kolmogorov–Smirnov Value | Degrees of Freedom | Significance Level |
|---|---|---|---|
| Self-Esteem | 0.117 | 30 | 0.08 |
| Achievement Motivation | 0.118 | 30 | 0.07 |

Table 4 displays the results of the one-way ANCOVA, which was used to examine the effect of the intervention after adjusting for pre-test scores.



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**Table 4**

*Results of One-Way Analysis of Covariance (ANCOVA)*

| Dependent Variable | Source | Sum of Squares | Degrees of Freedom | Mean Square | F | Significance Level | Partial $\eta^2$ |
|---|---|---|---|---|---|---|---|
| Self-Esteem | Group | 4163.01 | 1 | 4163.01 | 23.22 | 0.03 | 0.76 |
| | Pre-test | 221.21 | 1 | 221.21 | 12.01 | 0.12 | |
| | Error | 88.36 | 23 | 3.10 | | | |
| Achievement Motivation | Group | 4389.02 | 1 | 4389.02 | 20.21 | 0.04 | 0.72 |
| | Pre-test | 232.22 | 1 | 232.22 | 11.12 | 0.11 | |
| | Error | 88.22 | 22 | 2.98 | | | |

The ANCOVA results, adjusted for pre-test scores (Table 4), revealed statistically significant differences in the post-test means of self-esteem and achievement motivation between the intervention group (which received positive self-talk training) and the control group (which received no training) ($p < .05$).

These findings suggest that positive self-talk training significantly enhanced self-esteem and achievement motivation among depressed students preparing for university entrance examinations.

Moreover, the effect size analysis indicated that 76% of the variance in self-esteem scores and 72% of the variance in achievement motivation scores between the intervention and control groups were attributable to the positive self-talk training intervention.

## 4. Discussion and Conclusion

The post-Konkur period presents a particularly stressful and psychologically demanding phase in the lives of students. Characterized by uncertainty about the future, intense academic competition, and heightened familial and societal expectations, this period can lead to marked declines in students' psychological well-being, notably in the form of diminished self-esteem, reduced achievement motivation, and heightened vulnerability to depressive symptoms (Smith, 2020). Self-esteem, understood as an individual's overall appraisal of their own worth and capability, plays a crucial role in both mental health and academic success (Branden, 2021). Likewise, achievement motivation, which refers to the intrinsic drive to pursue success and overcome challenges, is a key predictor of academic and occupational performance (McClelland, 2019). Given the significant role of these constructs in students' adaptation during this critical period, it becomes imperative to explore psychological interventions that can effectively enhance self-esteem and achievement motivation. One promising approach is positive self-talk training, which involves the deliberate use of constructive and affirming inner dialogue to modify maladaptive thinking patterns and strengthen adaptive self-perceptions (Kendall, 2020).

The present study sought to evaluate the effectiveness of positive self-talk training on self-esteem and achievement motivation among depressed post-Konkur students. The findings, based on analysis of covariance, demonstrated that the intervention had a statistically significant effect on both outcome variables. These results are consistent with previous research, including Kannasut et al. (2024), who observed a reduction in depressive symptoms among adolescent supervisors following similar training (Kannasut et al., 2024); and Aulia et al. (2025), who found enhancements in self-confidence, emotional regulation, and achievement motivation in athletes as a result of positive self-talk techniques (Aulia et al., 2025). The consistency between these findings and the present study underscores the broad applicability and psychological efficacy of this intervention across various populations.

Several mechanisms can be posited to explain these outcomes. Positive self-talk helps students identify and restructure negative cognitive schemas, replacing self-critical and irrational thoughts with logical, affirming statements. This cognitive restructuring reduces maladaptive rumination, increases perceived control, and fosters improvements in affective regulation (Beck, 1979). Moreover, through repeated verbal reinforcement, positive self-talk strengthens adaptive beliefs about personal competence and future potential. These strengthened beliefs contribute to elevated levels of self-confidence, optimism, and goal-oriented behavior, all of which are critical during the high-pressure post-Konkur phase (Bandura, 1997). Additionally, the technique contributes to improved emotion regulation, equipping students with effective strategies to manage anxiety, hopelessness, and frustration. The internalization of calming and supportive dialogue lowers stress reactivity and promotes emotional stability, thereby enhancing performance in challenging academic contexts


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(Gross, 2018). Another important pathway is the enhancement of self-efficacy. Positive self-talk promotes belief in one's ability to succeed, which is directly linked to increased motivation, persistence, and resilience in the face of obstacles (Bandura, 1997). These mechanisms jointly contribute to the observed improvements in self-esteem and achievement motivation among participants.

Despite the promising results, the present study has several limitations that should be acknowledged. First, the reliance on self-report questionnaires rather than direct behavioral observations may have introduced social desirability bias. Participants may have responded in a manner that reflects a desire to present themselves positively or to avoid the stigma associated with admitting psychological distress. Second, the study employed a quasi-experimental design, which, while useful for preliminary investigation, limits the strength of causal inferences and reduces the generalizability of the findings. Third, the sample was drawn from a specific urban and cultural context (Hamadan), which may not adequately reflect the experiences or psychological profiles of students in other regions or cultural settings. This limitation restricts the applicability of the results to broader populations. Finally, the absence of a follow-up assessment means that the long-term stability and durability of the treatment effects remain unknown, leaving open the question of whether the observed benefits persist over time or diminish without continued intervention.

To address these limitations, future research should incorporate randomized controlled trial designs to establish stronger causal conclusions and employ larger, more demographically and culturally diverse samples to improve external validity. Utilizing objective behavioral measures alongside self-report data would enhance the reliability and depth of the findings. Furthermore, longitudinal designs with multiple follow-up assessments would be valuable for examining the persistence of intervention effects and for identifying any delayed benefits or potential relapse. It is also recommended that future studies investigate the differential effectiveness of positive self-talk across subgroups based on severity of depression, academic field, or coping style, in order to develop more targeted and personalized interventions.

In conclusion, the results of this study suggest that positive self-talk training is an effective and accessible psychological strategy for enhancing self-esteem and achievement motivation in depressed post-Konkur students. By transforming maladaptive cognitive patterns, reinforcing positive self-beliefs, improving emotional self-regulation, and boosting self-efficacy, this intervention helps students better manage the unique psychological challenges of the post-Konkur period. Implementing such training as part of school-based mental health programs or preparatory exam support services could significantly contribute to the academic success and psychological resilience of students during one of the most stressful phases of their educational journey.

## Authors' Contributions

All authors significantly contributed to this study.

## Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

## Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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## Declaration of Interest

The authors report no conflict of interest.

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## Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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