

Effectiveness of a Competence- and Worthiness-Based Educational Program for Self-Esteem, Assertiveness, and Psychological Well-Being in Male Adolescents with Low Self-Esteem

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Article Info

Article type:

Original Research

How to cite this article:

Karandish, M. A., Rahmanian, M., Agahheris, M., Rafiepoor, A., & Kordmirza Nikoozadeh, E. (2027). Effectiveness of a Competence- and Worthiness-Based Educational Program for Self-Esteem, Assertiveness, and Psychological Well-Being in Male Adolescents with Low Self-Esteem. *Journal of Adolescent and Youth Psychological Studies*, 8(4), 1-14.
<http://dx.doi.org/10.61838/kman.jayps.6512>



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ABSTRACT

Objective: This study aimed to determine the effectiveness of a competence- and worthiness-based educational program in improving self-esteem, assertiveness, and psychological well-being among male adolescents with low self-esteem.

Methods and Materials: This quasi-experimental study employed a pretest-posttest-follow-up design with a control group. The statistical population consisted of male upper-secondary school students in Qazvin, Iran. Thirty adolescents who obtained scores below 25 on the Coopersmith Self-Esteem Inventory and met the eligibility criteria were selected and randomly assigned to an intervention group ($n = 15$) and a control group ($n = 15$). The intervention group participated in six weekly 90-minute sessions based on the competence and worthiness framework, whereas the control group received no intervention during the study period. Data were collected using the Coopersmith Self-Esteem Inventory, the Adolescent Assertiveness Scale, and the 18-item Ryff Psychological Well-Being Scales at pretest, posttest, and four-week follow-up. Data were analyzed using mixed repeated-measures analysis of variance and Bonferroni post-hoc comparisons.

Findings: Significant time-by-group interaction effects were observed for self-esteem, Wilks' Lambda = .137, $F(2, 27) = 85.26$, $p < .001$, partial $\eta^2 = .863$; assertiveness, Wilks' Lambda = .089, $F(2, 27) = 137.93$, $p < .001$, partial $\eta^2 = .911$; and psychological well-being, Wilks' Lambda = .051, $F(2, 27) = 249.03$, $p < .001$, partial $\eta^2 = .949$. Bonferroni comparisons indicated significant improvements from pretest to posttest and from pretest to follow-up for all three outcomes, whereas differences between posttest and follow-up were not statistically significant, indicating maintenance of treatment effects.

Conclusion: The competence- and worthiness-based educational program was effective in enhancing self-esteem, assertiveness, and psychological well-being in male adolescents with low self-esteem, and the observed improvements remained stable at follow-up. The program may therefore provide a useful framework for school-based psychological and educational interventions targeting adolescents with diminished self-worth.

Keywords: Adolescence; Assertiveness; Competence; Psychological Well-Being; Self-Esteem; Worthiness

1. Introduction

Adolescence is a developmental period characterized by profound biological, cognitive, emotional, and social transitions that collectively shape emerging identity, interpersonal functioning, and psychological adjustment. During this stage, young people increasingly evaluate themselves in relation to peers, school performance, family expectations, social norms, and anticipated adult roles. These processes make adolescence particularly sensitive to fluctuations in self-evaluation and perceived personal adequacy. Developmental perspectives emphasize that the reorganization of identity, autonomy, peer relationships, and emotional regulation during adolescence creates both opportunities for growth and vulnerabilities to psychological difficulties (Santrock, 2019; Steinberg, 2017). Identity development in particular is neither a fixed nor a linear process, but rather a dynamic sequence of exploration, commitment, reconsideration, and social negotiation that can influence how adolescents interpret their worth and capabilities (Branje et al., 2021). Within this developmental context, self-esteem represents a central psychological construct because it reflects the extent to which individuals evaluate themselves as competent, worthy, and acceptable. When self-esteem is persistently low, adolescents may become more vulnerable to social withdrawal, heightened sensitivity to criticism, interpersonal passivity, emotional distress, and difficulty pursuing age-appropriate developmental goals. Contemporary discussions of adolescent mental health also emphasize that these psychological processes should be understood in relation to cultural and educational contexts, particularly in societies where family expectations, academic pressures, and social norms may strongly influence young people's self-concept (Seyed Alitabar, 2026).

Self-esteem has traditionally been defined as an evaluative dimension of the self-concept that reflects a person's overall sense of value and adequacy. However, theoretical developments have moved beyond treating self-esteem as a simple continuum from low to high. Mruk proposed a two-factor competence-worthiness model in which healthy self-esteem arises from the interaction between perceived competence and perceived worthiness (Mruk, 2006, 2013). Competence refers to the individual's perception of effectiveness, capability, and success in meeting meaningful challenges, whereas worthiness refers to a sense of being valuable, deserving, morally acceptable, and worthy of respect. From this perspective, high self-

esteem cannot be reduced merely to positive self-feelings or inflated self-appraisal; instead, it reflects a balanced integration of actual or perceived competence with a stable sense of personal worth. This formulation is especially relevant in adolescence, when young people face increasing demands for academic achievement, independent problem solving, peer acceptance, and identity consolidation. An adolescent may, for example, feel capable but unworthy, resulting in contingent or fragile self-esteem, or may feel worthy but ineffective, which may undermine motivation and adaptive coping. A competence-worthiness framework therefore provides a theoretically coherent basis for interventions intended to strengthen both the behavioral and evaluative components of self-esteem rather than merely encouraging generalized positive self-statements.

The importance of self-esteem for psychological functioning has been extensively examined, although the direction and magnitude of its effects require careful interpretation. Earlier reviews cautioned against assuming that high self-esteem automatically produces superior academic performance, interpersonal success, healthy behavior, or happiness, noting that many associations are correlational and that artificially increasing self-regard without corresponding competence may have limited benefits (Baumeister et al., 2003). More recent evidence, however, supports meaningful relationships between self-esteem and several indicators of mental health and well-being, particularly when self-esteem is conceptualized as stable, realistic, and integrated with adaptive functioning. A meta-analytic review found that self-esteem is consistently associated with fewer psychological problems and greater well-being, with substantial overlap between healthy self-regard and other adaptive self-relational processes (Muris & Otgaar, 2023). Similarly, research among young adults has shown that low self-esteem is associated with elevated anxiety and may function as a vulnerability factor for emotional distress (Liu et al., 2022). Other studies have linked lower self-esteem with maladaptive behavioral and relational patterns in adolescence, including aggression, particularly when the quality of attachment and interpersonal support is also compromised (Muarifah et al., 2022). Together, these findings suggest that self-esteem should not be viewed as an isolated personality characteristic but as a psychological resource embedded within broader emotional, interpersonal, and developmental systems.

One important domain closely related to self-esteem is assertiveness. Assertiveness refers to the ability to communicate one's thoughts, feelings, needs, preferences,

and rights clearly and appropriately while simultaneously respecting the rights and boundaries of others. It differs from passivity, in which individuals suppress or fail to express legitimate needs, and from aggression, in which personal demands are pursued in ways that disregard others. Classical formulations of assertiveness emphasize balanced self-expression, interpersonal equality, boundary setting, refusal skills, and the capacity to defend personal rights without excessive guilt or hostility (Alberti & Emmons, 2017). Assertiveness is particularly important during adolescence because social relationships become more complex, peer influence intensifies, and adolescents are increasingly required to negotiate disagreement, criticism, social pressure, academic demands, and emerging independence. Deficits in assertive behavior may contribute to avoidance, submissiveness, difficulty resisting peer pressure, dissatisfaction in relationships, and greater vulnerability to bullying or social exclusion. Contemporary theoretical work also conceptualizes assertiveness as multidimensional rather than as a single skill, proposing several pathways through which assertive behavior may promote personal agency, relationship quality, emotional regulation, and well-being (Yoshinaga & Cooper, 2025).

The relationship between assertiveness and self-esteem is both theoretically and empirically plausible. Adolescents who perceive themselves as worthy may be more willing to express needs and establish interpersonal boundaries, while those who experience themselves as competent may feel more capable of handling disagreement and social evaluation. Conversely, successful assertive behavior may reinforce self-esteem by providing experiences of personal effectiveness, autonomy, and social competence. Intervention studies have provided evidence that assertiveness can be taught and that such training may yield benefits extending beyond communication skills. Assertiveness training has a long history as an evidence-based behavioral intervention, despite receiving less attention in contemporary treatment literature than its empirical foundation would warrant (Speed et al., 2018). In adolescent samples, structured assertiveness programs have been shown to significantly increase assertive behavior (Cecen & Zengel, 2009). Related evidence indicates that group counseling and assertiveness training may also enhance self-esteem among students (Bahri, 2010). Comparable findings have been reported in educational settings, where assertiveness training has improved assertiveness, self-esteem, and satisfaction with interpersonal communication (Lin et al., 2004). More recent

work has likewise demonstrated that self-expression and assertiveness skills are associated with improvements in self-esteem and broader indicators of social and occupational adjustment (Jangi Zahi et al., 2023). These findings support the inclusion of assertiveness-related skills within interventions targeting adolescents with low self-esteem.

Assertiveness also has relevance for protection from adverse interpersonal experiences. Adolescents with low self-esteem may have difficulty setting boundaries, resisting coercive peer dynamics, or seeking support when treated unfairly, potentially increasing their vulnerability to bullying and its psychological consequences. A recent scoping review of assertiveness-oriented interventions found that assertiveness therapy may be useful in reducing bullying-related behaviors and mitigating some of their effects among adolescents (Yosep et al., 2024). This is important because the development of healthy self-esteem depends not only on internal cognitive evaluations but also on opportunities to experience effective participation in social environments. School-based contexts are especially salient because students spend substantial portions of their developmental years in educational settings where peer relationships, group belonging, participation, and perceived community can shape psychosocial adjustment. Research on school environments has shown that opportunities for participation and a sense of community are meaningful components of students' educational experience (Yang & Seyed Alitabar, 2022). Consequently, an intervention that strengthens self-esteem through both internal cognitive processes and external interpersonal competence may be particularly appropriate for adolescents.

Psychological well-being represents another important outcome linked to healthy self-esteem. Unlike models that define mental health primarily as the absence of symptoms, psychological well-being encompasses positive functioning, meaningful engagement, self-acceptance, autonomy, positive relationships, environmental mastery, purpose in life, and continued personal growth. In adolescence, well-being is a multidimensional construct shaped by emotional, social, developmental, contextual, and relational factors (Avedissian & Alayan, 2021). A young person may therefore be free from a diagnosable disorder yet still experience low levels of self-acceptance, purpose, agency, or relational satisfaction. Conversely, adolescents who possess a stable sense of worth and competence may be better positioned to manage developmental demands, establish meaningful relationships, and pursue personally significant goals.

Recent research further supports the association between self-esteem and mental well-being, while also suggesting that resilience can mediate or modify this relationship (Cui et al., 2024). Such findings indicate that self-esteem may function as part of a broader adaptive system in which positive self-evaluation supports coping, persistence, and psychological adjustment.

The possibility of modifying self-esteem through structured intervention is therefore of considerable practical interest. Positive psychology and cognitive-behavioral approaches have increasingly incorporated techniques aimed at strengthening positive self-beliefs, self-efficacy, confidence, and adaptive coping. A recent narrative review of interventions for students with dyslexia found that positive psychology interventions could increase self-esteem, self-efficacy, and confidence while reducing anxiety, suggesting that structured programs targeting positive psychological resources can be effective even among students facing persistent academic and developmental challenges (Abu Omar et al., 2024). Similarly, a recent intervention integrating self-esteem enhancement into a standard cognitive-behavioral protocol produced improvements in quality of life among clinical participants, further demonstrating that self-esteem can be a meaningful and modifiable treatment target (Rat et al., 2025). Although these findings come from populations that differ from adolescents with low self-esteem in school settings, they reinforce the broader proposition that focused work on self-evaluation can generate benefits extending to emotional and psychosocial functioning.

Nevertheless, interventions that simply encourage positive thinking may be insufficient if they do not address the underlying dimensions that sustain low self-esteem. A competence-worthiness approach offers an advantage in this respect because it combines cognitive, behavioral, interpersonal, and experiential pathways. The worthiness component can be strengthened through identifying personal strengths, challenging global negative self-judgments, modifying interpretations of failure, receiving constructive feedback, and developing a more stable sense of personal value. The competence component can be enhanced through problem-solving practice, mastery experiences, goal-directed behavior, and opportunities to recognize successful coping. Such an approach is theoretically consistent with the view that healthy self-esteem must be grounded in both self-respect and effective engagement with meaningful life challenges (Mruk, 2013). It also avoids the potential weakness identified in critiques of indiscriminate self-

esteem enhancement, namely that positive self-regard unsupported by competence or realistic self-knowledge may not necessarily produce adaptive outcomes (Baumeister et al., 2003). By integrating both dimensions, intervention may simultaneously strengthen how adolescents perceive themselves and how effectively they act in interpersonal and problem-solving situations.

There are also developmental reasons to expect that a competence- and worthiness-based program may influence assertiveness and psychological well-being in addition to self-esteem itself. As adolescents develop greater cognitive sophistication, they become increasingly capable of reflecting on self-beliefs, identifying maladaptive interpretations, considering alternative perspectives, and linking behavior to longer-term personal goals (Santrock, 2019). At the same time, the developmental push toward autonomy makes skills such as decision making, problem solving, self-expression, and boundary setting particularly salient (Steinberg, 2017). Strengthening competence may therefore foster confidence in managing academic and interpersonal demands, whereas strengthening worthiness may reduce fear of rejection and excessive dependence on external approval. Together, these changes may make assertive behavior more likely because adolescents may feel both entitled to express themselves and capable of doing so effectively. They may also experience higher psychological well-being as increased self-acceptance, agency, environmental mastery, and interpersonal effectiveness reinforce one another.

Despite the conceptual and empirical links among self-esteem, assertiveness, and psychological well-being, these constructs are often addressed separately in intervention research. Some programs focus primarily on assertiveness and communication skills, while others emphasize cognitive restructuring, positive psychology, or symptom reduction. Although assertiveness training has shown beneficial effects in educational and clinical contexts (Cecen & Zengel, 2009; Speed et al., 2018), and self-esteem-focused interventions have shown promise across student and clinical populations (Abu Omar et al., 2024; Rat et al., 2025), fewer studies have evaluated a theoretically integrated intervention explicitly grounded in the competence-worthiness model and examined its effects across several developmental outcomes simultaneously. This gap is particularly relevant for male adolescents with low self-esteem, as social expectations surrounding masculinity, emotional expression, competence, achievement, and interpersonal strength may complicate help-seeking and self-evaluation. A structured

school-based group program may provide a developmentally appropriate format for addressing these issues through guided discussion, cognitive restructuring, problem solving, positive feedback, and behavioral practice.

The Iranian educational context further underscores the importance of examining such interventions within specific sociocultural settings. Adolescent mental health is shaped by interactions among individual development, family expectations, cultural norms, educational pressures, and broader social conditions (Seyed Alitabar, 2026). Evidence from Iranian studies suggests that assertiveness-related interventions can improve self-esteem and social functioning (Bahri, 2010; Jangi Zahi et al., 2023), yet additional research is needed to determine whether a program specifically organized around competence and worthiness can produce simultaneous and durable changes in self-esteem, assertiveness, and psychological well-being. The inclusion of a follow-up assessment is especially important because immediate post-intervention gains do not necessarily demonstrate that behavioral and psychological changes are maintained beyond the active treatment period. Evaluating outcomes at multiple time points can therefore provide a stronger indication of whether observed improvements represent transient responses to participation or more stable changes in psychological functioning.

Accordingly, the present study aimed to determine the effectiveness of a competence- and worthiness-based educational program in improving self-esteem, assertiveness, and psychological well-being among male adolescents with low self-esteem.

2. Methods and Materials

2.1. Study Design and Participants

This applied study employed a quasi-experimental pretest-posttest-follow-up design with an intervention group and a control group to examine the effectiveness of a competence- and worthiness-based educational program for improving self-esteem, assertiveness, and psychological well-being among male adolescents with low self-esteem. The independent variable was participation in the competence- and worthiness-based educational program, whereas self-esteem, assertiveness, and psychological well-being constituted the dependent variables. Measurements were conducted at three assessment occasions, including pretest before implementation of the intervention, posttest immediately after completion of the educational sessions, and follow-up four weeks after the posttest. The statistical

population consisted of male students enrolled in upper-secondary schools in Qazvin, Iran, during the 2025–2026 academic year. Participants were recruited through a combination of multistage cluster sampling and purposive screening. Initially, one educational district in Qazvin was randomly selected, after which two boys' upper-secondary schools were selected from the schools operating within the selected district. Eligible students in these schools completed the Coopersmith Self-Esteem Inventory as an initial screening measure, and students obtaining scores below 25 were considered to have low self-esteem and were further evaluated according to the study eligibility criteria. From among eligible students, 30 adolescents were selected and randomly allocated to either the intervention group or the control group, with 15 participants in each group. The inclusion criteria were enrollment in upper-secondary education, obtaining a score below 25 on the Coopersmith Self-Esteem Inventory, willingness to participate voluntarily, provision of parental consent, absence of a diagnosed psychiatric disorder, and absence of current psychiatric medication use based on student self-report and available school records. The exclusion criteria consisted of absence from more than two intervention sessions, voluntary withdrawal at any stage of the research, emergence of a significant psychological crisis during the intervention as identified by the researcher or school personnel, and simultaneous participation in another psychological or educational intervention with objectives comparable to those of the present program. After allocation, participants in both groups completed the study instruments at pretest. The intervention group subsequently participated in the educational program, whereas the control group received no intervention during the study period. Both groups completed the same outcome measures immediately after the intervention and again at the four-week follow-up. Participation was voluntary, confidentiality of participant information was maintained, withdrawal from the study was permitted without penalty, and parental consent was obtained before participation. The criterion concerning psychological crisis was included to protect participants and ensure referral for appropriate support if clinically significant concerns emerged during the study. The intervention and assessments were conducted in the school setting, and only aggregated data without personally identifying information were used in the analyses and reporting of the findings.

2.2. Measures

The Coopersmith Self-Esteem Inventory was used to assess participants' level of self-esteem and to identify adolescents who met the screening criterion for low self-esteem. The school form of the instrument was developed by Coopersmith (1967) to measure individuals' evaluative attitudes toward themselves, particularly among children and adolescents. The inventory consists of 58 dichotomously scored items, of which 50 items contribute to the substantive assessment of self-esteem and eight items constitute a lie or defensiveness scale intended to identify socially desirable or potentially unreliable response patterns. The substantive items assess four domains of self-esteem, including general self-esteem, home-parent self-esteem, social-peer self-esteem, and school-academic self-esteem. Each substantive item is scored as either 0 or 1 according to the scoring key, with reverse scoring applied to negatively keyed statements where necessary. Scores from the substantive items are summed to generate an overall self-esteem score ranging from 0 to 50, with higher scores indicating stronger and more positive self-evaluation. The inventory has been extensively used in research involving children and adolescents, and previous psychometric investigations have demonstrated acceptable levels of internal consistency and temporal stability (Bedeian et al., 1977; Spatz & Johnston, 1973). In the present study, a total score below 25 was used as the operational criterion for identifying adolescents with low self-esteem and determining eligibility for participation. The instrument was administered at the pretest, posttest, and four-week follow-up stages to assess changes in self-esteem across the study period.

The Adolescent Assertiveness Scale was used to measure participants' ability to express thoughts, feelings, preferences, rights, and needs appropriately in interpersonal situations. The 33-item instrument developed by Lee et al. (1985) presents respondents with a series of common interpersonal situations relevant to adolescent social functioning. For each situation, three alternative behavioral responses are provided, generally representing an appropriately assertive response, a shy or passive response, and an aggressive or passive-aggressive response. The response reflecting appropriate assertiveness is assigned one point, whereas the remaining alternatives receive no point, producing a total possible score ranging from 0 to 33. Higher total scores represent greater assertiveness and a stronger capacity to communicate personal needs and rights while respecting the rights of others. The instrument was selected

because its situational format is particularly suitable for evaluating assertive behavior among adolescents and provides a direct behavioral index rather than relying exclusively on broad personality descriptions. Lee et al. (1985) reported satisfactory psychometric properties for the original instrument. In Persian-language applications, Bahri (2010) reported a Cronbach's alpha coefficient of .81, indicating acceptable internal consistency, and the scale has also been employed in previous research evaluating assertiveness interventions among adolescent populations (Cecen & Zengel, 2009). In the present study, the total assertiveness score was used as the principal outcome indicator, and the scale was administered at all three assessment occasions to determine whether participation in the competence- and worthiness-based program resulted in sustained changes in assertive interpersonal functioning.

The 18-item Psychological Well-Being Scales based on Ryff's multidimensional model were used to assess participants' positive psychological functioning. Ryff's conceptualization of psychological well-being extends beyond the absence of psychological distress and defines well-being in terms of optimal functioning across six theoretically distinct but related dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989; Ryff & Keyes, 1995). The brief 18-item version includes three items representing each of these six dimensions. In the present study, each item was rated on a five-point Likert-type scale ranging from 1, indicating strongly disagree, to 5, indicating strongly agree. Negatively worded items were reverse-scored before calculation of the total score. Following appropriate reverse scoring, responses were summed to produce an overall psychological well-being score ranging from 18 to 90, with higher scores indicating higher levels of positive psychological functioning, including greater self-acceptance, stronger interpersonal relationships, increased autonomy, greater perceived control over the environment, clearer purpose in life, and stronger orientation toward personal growth. Ryff's six-dimensional model has received substantial empirical support across diverse populations, although the reliability of individual subscales may vary when abbreviated versions containing relatively few items per dimension are used (Ryff & Keyes, 1995). Because the primary purpose of the present study was to assess overall change in psychological well-being rather than changes within individual dimensions, the total score of the 18-item form was used in the statistical analyses. The instrument was administered at pretest,

immediately after completion of the intervention, and at the four-week follow-up.

2.3. Intervention

The competence- and worthiness-based educational intervention consisted of six weekly group sessions, each lasting approximately 90 minutes, and was implemented for participants assigned to the intervention group. The program was designed on the assumption that healthy self-esteem reflects the integration of two complementary components: perceived competence, referring to the individual's belief in his capacity to cope effectively with tasks and challenges, and perceived worthiness, referring to the sense of being valuable, deserving, and acceptable as a person. The first session focused on establishing a psychologically supportive group environment, clarifying expectations, introducing the objectives and structure of the program, establishing group rules, and providing an initial conceptual explanation of self-esteem and its functions in emotional, interpersonal, and academic life. The second session concentrated on increasing awareness and understanding of self-esteem by explaining different levels and manifestations of self-esteem, identifying common difficulties associated with low self-esteem, and helping participants recognize the personal, interpersonal, familial, and academic experiences that contributed to their evaluations of themselves. The third session focused primarily on the worthiness component and included exercises involving positive feedback, identification of personal strengths, examination of excessively negative self-evaluations, and cognitive restructuring of dysfunctional beliefs and interpretations related to inadequacy, rejection, and failure. Participants were encouraged to identify recurring negative cognitive patterns and to generate more balanced and realistic interpretations of themselves and their experiences. The fourth session emphasized competence and introduced structured problem-solving skills, including identifying and defining problems, generating alternative solutions, evaluating possible consequences, selecting appropriate responses, implementing selected solutions, and reviewing outcomes. Guided exercises and problem-solving worksheets were used to provide participants with opportunities to practice these skills using situations relevant to their everyday academic and interpersonal experiences. The fifth session focused on the active management and maintenance of self-esteem, integrating the competence and worthiness components and assisting participants in

developing individualized strategies for responding to future setbacks, interpersonal criticism, academic difficulties, and negative self-evaluations. Each participant developed a personal self-esteem action plan incorporating behavioral goals, cognitive strategies, and practices intended to reinforce both capability and personal worth. The sixth session served as a booster and consolidation session in which the principal concepts and skills taught throughout the program were reviewed, participants discussed perceived improvements and remaining barriers, successful experiences were reinforced, and strategies for maintaining gains after completion of the intervention were emphasized. Participants were encouraged to continue practicing cognitive restructuring, constructive self-feedback, assertive responding, problem-solving, and implementation of their individualized self-esteem plans following completion of the formal sessions. The control group did not receive the competence- and worthiness-based educational program or another comparable intervention during the study period.

2.4. Data Analysis

Statistical analyses were conducted using SPSS version 26. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were initially calculated to summarize participant characteristics and study variables across the three measurement occasions. Before inferential analyses were performed, the principal statistical assumptions required for mixed repeated-measures analysis of variance were examined. The normality of the outcome variables within the study groups was evaluated using the Shapiro-Wilk test, while homogeneity of error variances between the intervention and control groups was assessed using Levene's test. Homogeneity of covariance matrices was evaluated using Box's M test. Because the same participants were assessed repeatedly across pretest, posttest, and follow-up, the assumption of sphericity was examined using Mauchly's test. When this assumption was violated, Greenhouse-Geisser corrections were applied to adjust the degrees of freedom and provide more accurate significance estimates. Mixed repeated-measures analysis of variance was then used separately for self-esteem, assertiveness, and psychological well-being, with time representing the within-subject factor and group representing the between-subject factor. Particular emphasis was placed on the time-by-group interaction because this effect indicated whether changes across the three measurement occasions differed significantly between

participants who received the competence- and worthiness-based intervention and those in the control condition. When significant temporal or interaction effects were identified, Bonferroni-adjusted pairwise comparisons were conducted to determine whether significant differences occurred between pretest and posttest, pretest and follow-up, and posttest and follow-up assessments while controlling for inflation of the Type I error rate associated with multiple comparisons. Effect sizes were reported using partial eta squared to indicate the magnitude of observed intervention effects in addition to statistical significance. All statistical tests were conducted using a two-sided significance level of .05.

Table 1

Means and Standard Deviations of Study Variables by Group and Assessment Occasion

Outcome	Group	Pretest M	Pretest SD	Posttest M	Posttest SD	Follow-up M	Follow-up SD
Self-esteem	Intervention	21.20	2.70	36.33	2.25	35.20	2.70
Self-esteem	Control	20.26	2.25	20.73	1.98	21.26	2.46
Assertiveness	Intervention	12.86	1.59	24.00	1.88	21.80	1.78
Assertiveness	Control	13.33	1.54	12.13	2.32	12.40	1.84
Psychological well-being	Intervention	37.06	3.15	69.53	3.77	66.00	3.81
Psychological well-being	Control	38.46	4.01	35.93	4.57	35.93	3.63

As shown in Table 1, the intervention group exhibited substantial increases in all three outcome variables after receiving the competence- and worthiness-based educational program. Mean self-esteem increased from 21.20 ± 2.70 at pretest to 36.33 ± 2.25 at posttest and remained at 35.20 ± 2.70 at follow-up. Assertiveness increased from 12.86 ± 1.59 to 24.00 ± 1.88 and was 21.80 ± 1.78 at follow-up. Similarly, psychological well-being increased from 37.06 ± 3.15 at pretest to 69.53 ± 3.77 at posttest and remained relatively high at 66.00 ± 3.81 at follow-up. In contrast, the control group demonstrated no comparable improvement across the assessment occasions. Although these descriptive patterns suggested a favorable effect of the intervention, inferential analyses were conducted to determine whether the changes over time differed significantly between the two groups.

Before conducting the repeated-measures analyses, the relevant statistical assumptions were examined. Shapiro-Wilk tests were nonsignificant for self-esteem at pretest, posttest, and follow-up ($W = .972, .981, \text{ and } .976$,

3. Findings and Results

The descriptive statistics for self-esteem, assertiveness, and psychological well-being across the three assessment occasions are presented in Table 1. Examination of the pretest scores indicated that the intervention and control groups began the study with relatively similar levels of the three dependent variables. Following implementation of the competence- and worthiness-based educational program, however, a clear divergence emerged between the two groups, with the intervention group demonstrating substantial improvement at posttest and maintaining most of these changes at the four-week follow-up.

respectively; all $p > .05$), assertiveness ($W = .968, .982, \text{ and } .975$; all $p > .05$), and psychological well-being ($W = .973, .980, \text{ and } .977$; all $p > .05$), supporting the assumption of approximate normality. Levene's tests were also nonsignificant at all three measurement occasions for self-esteem ($F = .614, .728, \text{ and } .583$; all $p > .05$), assertiveness ($F = .731, .869, \text{ and } .612$; all $p > .05$), and psychological well-being ($F = .795, .674, \text{ and } .583$; all $p > .05$), indicating homogeneity of error variances between the groups. Box's M tests did not indicate significant violations of covariance-matrix homogeneity for self-esteem, $F = .794, p = .575$, assertiveness, $F = .609, p = .724$, or psychological well-being, $F = .457, p = .841$. Mauchly's tests indicated violations of the assumption of sphericity; therefore, Greenhouse-Geisser corrections were applied to the univariate within-subject analyses. Collectively, these findings indicated that the assumptions required for proceeding with the mixed repeated-measures analyses were adequately addressed.

Table 2

Mixed Repeated-Measures Analysis of Variance for Self-Esteem, Assertiveness, and Psychological Well-Being

Outcome	Effect	Wilks' Lambda	F	df	Error df	p	Partial η^2
Self-esteem	Time	.122	96.896	2	27	< .001	.878
Self-esteem	Time $\times$ Group	.137	85.259	2	27	< .001	.863
Assertiveness	Time	.130	90.043	2	27	< .001	.870
Assertiveness	Time $\times$ Group	.089	137.932	2	27	< .001	.911
Psychological well-being	Time	.070	178.851	2	27	< .001	.930
Psychological well-being	Time $\times$ Group	.051	249.030	2	27	< .001	.949

The repeated-measures analysis presented in Table 2 demonstrated significant effects of time and, more importantly, significant time-by-group interactions for all three dependent variables. For self-esteem, the time-by-group interaction was statistically significant, Wilks' Lambda = .137, $F(2, 27) = 85.259$, $p < .001$, partial $\eta^2 = .863$, indicating that changes in self-esteem across the three assessment occasions differed substantially between the intervention and control groups. A significant interaction was also observed for assertiveness, Wilks' Lambda = .089, $F(2, 27) = 137.932$, $p < .001$, partial $\eta^2 = .911$, and psychological well-being, Wilks' Lambda = .051, $F(2, 27) = 249.030$, $p < .001$, partial $\eta^2 = .949$. The very large partial

eta-squared values indicated that the interaction between group membership and assessment time accounted for a substantial proportion of variance in each outcome. Consistent results were obtained from the Greenhouse-Geisser-corrected univariate analyses. The corrected time-by-group effects remained significant for self-esteem, $F = 81.990$, $p < .001$, partial $\eta^2 = .745$; assertiveness, $F = 86.370$, $p < .001$, partial $\eta^2 = .755$; and psychological well-being, $F = 244.684$, $p < .001$, partial $\eta^2 = .897$. Thus, the observed improvements cannot be attributed merely to changes over time, because the pattern of change differed significantly between adolescents who received the educational program and those in the control condition.

Table 3

Bonferroni-Adjusted Pairwise Comparisons Across Assessment Occasions

Outcome	Occasion 1	Occasion 2	Mean Difference (1–2)	SE	Adjusted p
Self-esteem	Pretest	Posttest	-7.800	.551	< .001
Self-esteem	Pretest	Follow-up	-7.500	.746	< .001
Self-esteem	Posttest	Follow-up	.300	.564	1.000
Assertiveness	Pretest	Posttest	-4.967	.478	< .001
Assertiveness	Pretest	Follow-up	-4.000	.402	< .001
Assertiveness	Posttest	Follow-up	.967	.591	.339
Psychological well-being	Pretest	Posttest	-14.967	.895	< .001
Psychological well-being	Pretest	Follow-up	-13.200	.818	< .001
Psychological well-being	Posttest	Follow-up	1.767	.897	.177

The Bonferroni-adjusted pairwise comparisons presented in Table 3 further clarified the temporal pattern of change. For self-esteem, significant differences were found between pretest and posttest (MD = -7.800, SE = .551, $p < .001$) and between pretest and follow-up (MD = -7.500, SE = .746, $p < .001$), whereas the difference between posttest and follow-up was not significant (MD = .300, SE = .564, $p = 1.000$). For assertiveness, pretest scores differed significantly from both posttest (MD = -4.967, SE = .478, $p < .001$) and follow-up scores (MD = -4.000, SE = .402, $p < .001$), while the posttest-follow-up difference was nonsignificant (MD = .967, SE = .591, $p = .339$). Psychological well-being

followed the same pattern, with significant differences between pretest and posttest (MD = -14.967, SE = .895, $p < .001$) and between pretest and follow-up (MD = -13.200, SE = .818, $p < .001$), but no significant difference between posttest and follow-up (MD = 1.767, SE = .897, $p = .177$). Taken together with the significant time-by-group interactions and the descriptive trajectories, these findings indicate that the intervention produced substantial improvements in self-esteem, assertiveness, and psychological well-being and that these improvements were largely maintained over the four-week follow-up period.

4. Discussion

The present study examined the effectiveness of a competence- and worthiness-based educational program in improving self-esteem, assertiveness, and psychological well-being among male adolescents with low self-esteem. The findings showed significant time-by-group interaction effects for all three dependent variables, indicating that changes observed across pretest, posttest, and follow-up differed substantially between the intervention and control groups. The intervention produced marked improvements in self-esteem, assertiveness, and psychological well-being, and the large effect sizes suggested that these changes were not only statistically significant but also practically meaningful. In addition, Bonferroni-adjusted comparisons showed significant differences between pretest and posttest and between pretest and follow-up for all three outcomes, whereas the differences between posttest and follow-up were nonsignificant. This pattern indicates that the benefits obtained immediately after the intervention were largely maintained over the four-week follow-up period. Overall, the results support the proposition that an educational program integrating perceived competence and personal worth can positively influence multiple dimensions of adolescent psychological functioning.

The significant improvement in self-esteem is consistent with the theoretical assumptions of the competence-worthiness model, according to which healthy self-esteem emerges from the integration of perceived capability and a stable sense of personal value (Mruk, 2006, 2013). The intervention directly targeted both components. Activities related to cognitive restructuring, positive feedback, recognition of strengths, and modification of failure-related beliefs were designed to strengthen worthiness, whereas problem-solving practice, mastery-oriented tasks, and action planning were intended to increase perceived competence. This dual focus may explain why the intervention produced a strong effect on self-esteem. Rather than attempting to increase self-esteem simply through positive affirmations, the program encouraged adolescents to reinterpret negative self-evaluations while simultaneously developing skills that could generate actual experiences of effectiveness. This is important in light of earlier critiques suggesting that indiscriminate attempts to raise self-esteem without grounding it in competence or adaptive behavior may not necessarily produce beneficial outcomes (Baumeister et al., 2003). The present findings therefore provide empirical

support for a more balanced approach in which self-worth is reinforced alongside behavioral competence.

The improvement in self-esteem is also compatible with previous intervention studies showing that self-esteem can be modified through structured psychological and educational programs. Positive psychology interventions have been reported to enhance self-esteem, self-efficacy, and confidence among students, particularly when they include exercises that strengthen personal strengths, adaptive beliefs, and coping resources (Abu Omar et al., 2024). Similarly, recent evidence indicates that explicit self-esteem enhancement can improve broader indicators of adjustment and quality of life when integrated within structured cognitive-behavioral approaches (Rat et al., 2025). In educational contexts, group-based interventions focusing on assertive expression and interpersonal skills have also produced increases in self-esteem (Bahri, 2010; Lin et al., 2004). The present findings extend this literature by showing that a brief six-session competence- and worthiness-based intervention may produce sizeable gains in male adolescents who were specifically selected for low baseline self-esteem. The maintenance of these gains at follow-up further suggests that participants may have internalized at least some of the cognitive and behavioral strategies introduced during the program.

From a developmental perspective, the observed self-esteem improvement is also understandable because adolescence is a period during which self-concept and identity are actively reorganized in response to changing social roles, peer relationships, academic expectations, and growing autonomy (Santrock, 2019; Steinberg, 2017). Identity development during adolescence involves repeated processes of exploration, evaluation, commitment, and reconsideration, all of which may influence how young people define their strengths and weaknesses (Branje et al., 2021). Adolescents with low self-esteem may interpret failures or interpersonal difficulties as evidence of global personal inadequacy. The intervention may have weakened such global negative interpretations by helping participants distinguish specific setbacks from overall personal worth and by providing structured opportunities to recognize strengths and develop problem-solving competence. This is particularly relevant in the context of adolescent mental health, where individual self-evaluations interact with school pressures, family expectations, social norms, and broader cultural demands (Seyed Alitabar, 2026).

The significant increase in assertiveness represents a second important finding. Participants who received the

intervention demonstrated substantially greater assertiveness after the program, and these gains were largely maintained at follow-up. This finding is consistent with the conceptual relationship between self-esteem and assertive behavior. Assertiveness requires individuals to recognize that their needs, opinions, preferences, and boundaries are legitimate while also possessing sufficient confidence and interpersonal skill to express them appropriately. The combination of worthiness and competence is therefore directly relevant to assertive functioning. A person who experiences worthiness without competence may believe that personal rights matter but lack the confidence or skills to communicate them effectively, whereas a person who feels competent but fundamentally unworthy may hesitate to express needs or establish boundaries. By strengthening both dimensions, the intervention may have created a psychological foundation for more confident and respectful self-expression.

This interpretation is consistent with classic and contemporary approaches to assertiveness. Assertiveness has been described as the ability to express thoughts, feelings, and rights directly while maintaining respect for others and avoiding both submissiveness and aggression (Alberti & Emmons, 2017). More recent conceptualizations emphasize that assertiveness is multidimensional and may contribute to well-being through pathways involving agency, interpersonal effectiveness, self-expression, and adaptive boundary setting (Yoshinaga & Cooper, 2025). The present program included cognitive restructuring, recognition of personal worth, problem-solving exercises, and continued self-management, all of which may have reduced fear of negative evaluation and strengthened participants' sense of agency. Adolescents who increasingly viewed themselves as capable and deserving of respect may have become more willing to communicate openly and respond effectively to social challenges.

The results concerning assertiveness also align with previous intervention studies. Structured assertiveness training has been shown to significantly increase assertive behavior among adolescents (Cecen & Zengel, 2009), and broader reviews indicate that assertiveness training remains an empirically supported intervention despite receiving comparatively less attention than other cognitive-behavioral techniques (Speed et al., 2018). In addition, assertiveness-focused group interventions have been associated with improvements in self-esteem and interpersonal communication (Bahri, 2010; Lin et al., 2004). Similar findings have been reported in Iranian research, where self-

expression and assertiveness skills were linked with improved self-esteem and social adjustment (Jangi Zahi et al., 2023). The present study is consistent with these findings but differs in that assertiveness was not addressed as an isolated behavioral skill. Instead, it was expected to improve as part of a broader intervention targeting underlying self-evaluative processes. The size of the observed effect suggests that strengthening self-worth and perceived competence may constitute an important mechanism through which adolescents become more assertive.

The improvement in assertiveness may also have implications for adolescents' ability to manage peer pressure, conflict, and potentially harmful interpersonal situations. Assertiveness interventions have been examined as strategies for reducing bullying-related behaviors and their psychosocial consequences among adolescents (Yosep et al., 2024). Young people with low self-esteem may be particularly susceptible to interpersonal submissiveness, avoidance, or difficulty setting boundaries because they anticipate rejection or assume that their needs are less legitimate than those of others. Increasing self-worth may reduce this vulnerability, while strengthening competence may increase confidence in responding to interpersonal challenges. The school context may further amplify the importance of such changes, as adolescents spend substantial time interacting with peers and teachers in environments where participation, belonging, and sense of community can influence psychological and educational adjustment (Yang & Seyed Alitabar, 2022). Thus, improvement in assertiveness may represent not only a communication outcome but also a broader enhancement of social functioning.

The third major finding was the substantial increase in psychological well-being among participants in the intervention group. This result is theoretically coherent because psychological well-being includes dimensions such as self-acceptance, positive relationships, autonomy, environmental mastery, personal growth, and purpose in life. Many of these dimensions are directly related to how individuals evaluate their worth and effectiveness. Adolescents who develop a more stable sense of value may experience greater self-acceptance, whereas those who perceive themselves as more competent may report greater environmental mastery and autonomy. Improvement in assertiveness may further support positive relationships by enabling more balanced communication and clearer interpersonal boundaries. Psychological well-being in adolescence is multidimensional and reflects the interaction

of emotional, relational, developmental, and contextual processes (Avedissian & Alayan, 2021). It is therefore plausible that an intervention targeting both internal self-evaluation and adaptive behavioral functioning would influence well-being more broadly.

The current findings are also consistent with evidence linking self-esteem to positive mental health. Self-esteem has been associated with psychological well-being and lower levels of psychological problems across studies, with meta-analytic evidence supporting a substantial relationship between healthy self-regard and adaptive psychological functioning (Muris & Otgaar, 2023). Low self-esteem has also been identified as a predictor or correlate of anxiety, suggesting that negative self-evaluation may increase vulnerability to emotional distress (Liu et al., 2022). Conversely, higher self-esteem appears to operate alongside resilience and other protective factors in predicting mental well-being (Cui et al., 2024). The present intervention may therefore have increased psychological well-being through several overlapping pathways: reducing maladaptive self-judgments, strengthening confidence in problem solving, improving social self-expression, increasing perceived control, and promoting more positive expectations about personal development.

The results may also be interpreted through the association between self-esteem and behavioral adjustment in adolescence. Previous research has linked lower self-esteem with maladaptive outcomes such as aggression, particularly within relational contexts involving insecure attachment or interpersonal strain (Muarifah et al., 2022). Although aggression was not assessed in the present study, the observed increases in assertiveness and psychological well-being suggest movement toward a healthier interpersonal profile in which adolescents may be better able to communicate needs without resorting to either passivity or aggression. The competence-worthiness framework may be especially useful in this regard because it does not frame psychological health as simply feeling good about oneself. Rather, it emphasizes realistic capability, responsibility, self-respect, and constructive functioning (Mruk, 2013). This distinction may help explain why improvements occurred simultaneously across self-esteem, assertiveness, and well-being.

An additional important finding was the stability of the intervention effects from posttest to follow-up. For all three outcomes, posttest-follow-up differences were nonsignificant, while pretest-follow-up differences remained significant. Although the follow-up period was

relatively brief, this pattern suggests that the intervention effects were not limited to an immediate response to participation in group sessions. Several elements of the program may have supported maintenance. Cognitive restructuring provided participants with strategies that could continue to be applied after the formal sessions, problem-solving exercises offered transferable skills for future challenges, and the individualized self-esteem action plan encouraged continued practice and self-monitoring. The booster and consolidation session may also have strengthened retention by reviewing core concepts and explicitly addressing barriers to maintaining change. The maintenance of gains is especially relevant in adolescence because developmental challenges continue beyond the intervention itself; therefore, useful programs must provide skills that can be generalized to new situations rather than producing only temporary changes during treatment.

5. Conclusion

The simultaneous improvement across all three outcomes also supports the view that self-esteem, assertiveness, and psychological well-being are interconnected rather than independent constructs. Improvements in competence may strengthen confidence in handling social and academic challenges; improved worthiness may reduce excessive self-criticism and fear of rejection; enhanced assertiveness may increase interpersonal effectiveness; and these changes may collectively contribute to better psychological well-being. This reciprocal pattern is consistent with research demonstrating associations between self-esteem and emotional well-being (Muris & Otgaar, 2023), self-esteem and anxiety vulnerability (Liu et al., 2022), assertiveness and interpersonal functioning (Lin et al., 2004), and assertiveness-based interventions and healthier adolescent social behavior (Yosep et al., 2024). The findings therefore support an integrated rather than fragmented approach to school-based psychological intervention, particularly for adolescents whose difficulties involve negative self-evaluation and reduced interpersonal confidence.

6. Limitations & Suggestions

Several limitations should be considered when interpreting the findings. First, the sample consisted of only 30 male upper-secondary students from schools in Qazvin, which limits the statistical power and restricts generalizability to adolescents in other regions, educational settings, age groups, and female populations. Second,

participants were selected on the basis of low self-esteem and school-based eligibility criteria, and no structured clinical diagnostic interview was used to determine the presence of psychological disorders beyond self-report and school records. Third, all dependent variables were assessed using self-report instruments, which may be affected by social desirability, response expectations, and awareness of group assignment. Fourth, the control group did not receive an active comparison intervention; consequently, nonspecific factors such as group attention, interpersonal support, therapist contact, and expectations of benefit cannot be completely separated from the specific effects of the competence- and worthiness-based content. Fifth, the follow-up period was limited to four weeks and therefore does not provide evidence regarding the long-term durability of intervention effects across several months or years. Finally, the relatively small sample prevented examination of potential moderators such as age, baseline severity, socioeconomic status, academic performance, family functioning, or individual differences in engagement with the intervention.

Future studies should replicate the present findings using substantially larger samples recruited from multiple schools, educational districts, and geographic regions to improve external validity. Inclusion of female adolescents and mixed-gender samples would allow examination of whether intervention effects differ according to gender and socialization patterns. Randomized controlled trials with active comparison conditions should be conducted to distinguish the specific effects of the competence- and worthiness-based program from general benefits associated with attention, group participation, and supportive interaction. Longer follow-up periods, such as three, six, and twelve months, would provide stronger evidence regarding the stability of treatment gains. Future research could also incorporate behavioral observations, teacher and parent ratings, peer reports, and clinical interviews alongside self-report measures to reduce common-method bias. Mediation analyses may be particularly useful for determining whether increases in perceived competence and worthiness directly account for subsequent improvement in assertiveness and psychological well-being. Researchers could also investigate potential moderators, including baseline self-esteem severity, social support, parenting style, peer relationships, school climate, academic achievement, and treatment engagement, to identify adolescents who may benefit most from the intervention.

The findings suggest that school psychologists, counselors, and educational professionals may consider competence- and worthiness-based training as a brief preventive or early-intervention option for adolescents showing persistently low self-esteem. Programs should avoid relying solely on generalized praise or positive statements and should instead combine realistic recognition of strengths with opportunities to develop concrete skills and mastery experiences. Cognitive restructuring can be used to help adolescents challenge global self-devaluing beliefs, while problem-solving exercises can strengthen confidence in managing academic and interpersonal challenges. Assertiveness practice should be incorporated to help students express needs, set boundaries, and respond to peer pressure without aggression or excessive passivity. Individual action plans and booster sessions may help maintain gains after the formal intervention ends. Schools may also benefit from training counselors and teachers to recognize students with low self-esteem early and to create classroom and counseling environments that support both personal worth and meaningful competence. Where feasible, collaboration with parents may further reinforce adaptive self-evaluation, constructive feedback, independence, and consistent opportunities for adolescents to experience successful problem solving in everyday life.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors equally contributed to this article.

References

- Abu Omar, D., Kirkman, A., Scott, C., Babicova, I., & Irons, Y. (2024). Positive psychology interventions to increase self-esteem, self-efficacy, and confidence and decrease anxiety among students with dyslexia: A narrative review. *Youth*, 4(2), 835-853. <https://doi.org/10.3390/youth4020055>
- Alberti, R. E., & Emmons, M. L. (2017). *Your Perfect Right: Assertiveness and Equality in Your Life and Relationships* (10th ed.). Impact Publishers. <https://books.google.com/books?id=iPAhDgAAQBAJ>
- Avedissian, T., & Alayan, N. (2021). Adolescent well-being: A concept analysis. *International journal of mental health nursing*, 30(2), 357-367. <https://doi.org/10.1111/inm.12833>
- Bahri, N. (2010). The effect of group counseling-based assertiveness training on female students' self-esteem. *Peayk Noor Journal*, 8(1), 124-137.
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4(1), 1-44. <https://doi.org/10.1111/1529-1006.01431>
- Branje, S., de Moor, E. L., Spitzer, J., & Becht, A. I. (2021). Dynamics of identity development in adolescence: A decade in review. *Journal of Research on Adolescence*, 31(4), 908-927. <https://doi.org/10.1111/jora.12678>
- Cecen, A. R., & Zengel, M. (2009). The effectiveness of an assertiveness training programme on adolescents' assertiveness level. *Elementary Education Online*, 8(2), 485-492.
- Cui, Z., Lin, Z., Ren, J., Cao, Y., & Tian, X. (2024). Exploring self-esteem and personality traits as predictors of mental wellbeing among Chinese university students: The mediating and moderating role of resilience. *Frontiers in psychology*, 15, 1308863. <https://doi.org/10.3389/fpsyg.2024.1308863>
- Jangi Zahi, S., Raeisi, M., Jangi Zahi, F., & Heybat Zahi, E. (2023). *Effectiveness of self-expression and assertiveness skills for self-esteem, occupational success, and social desirability among education employees* Proceedings of the Second National Conference on Social and Psychological Harms with Emphasis on Behavioral Sciences, <https://civilica.com/doc/1988558>
- Lin, Y. R., Shiah, I. S., Chang, Y. C., Lai, T. J., Wang, K. Y., & Chou, K. R. (2004). Evaluation of an assertiveness training program on nursing and medical students' assertiveness, self-esteem, and interpersonal communication satisfaction. *Nurse Education Today*, 24(8), 656-665. <https://doi.org/10.1016/j.nedt.2004.09.004>
- Liu, X., Cao, X., & Gao, W. (2022). Does low self-esteem predict anxiety among Chinese college students? *Psychology research and behavior management*, 15, 1481-1487. <https://doi.org/10.2147/PRBM.S361807>
- Mruk, C. J. (2006). *Self-Esteem: Research, Theory, and Practice* (3rd ed.). Springer.
- Mruk, C. J. (2013). *Self-Esteem and Positive Psychology: Research, Theory, and Practice* (4th ed.). Springer Publishing Company.
- Muarifah, A., Mashar, R., Hashim, I. H. M., Rofiah, N. H., & Oktaviani, F. (2022). Aggression in adolescents: The role of mother-child attachment and self-esteem. *Behavioral Sciences*, 12(5), 147. <https://doi.org/10.3390/bs12050147>
- Muris, P., & Otgaar, H. (2023). Self-esteem and self-compassion: A narrative review and meta-analysis on their links to psychological problems and well-being. *Psychology research and behavior management*, 16, 2961-2975. <https://doi.org/10.2147/PRBM.S402455>
- Rat, L. A., Ghitia, T. C., & Maghiar, A. M. (2025). Effectiveness of a self-esteem enhancement intervention integrated into standard CBT protocol for improving quality of life in patients with colorectal cancer. *European Journal of Investigation in Health Psychology and Education*, 15(4), 42. <https://doi.org/10.3390/ejihpe15040042>
- Santrock, J. W. (2019). *Adolescence* (17th ed.). McGraw-Hill Education.
- Seyed Alitabar, S. H. (2026). Adolescent mental health in contemporary Iran: A body-mind-culture perspective. *International Journal of Body Mind and Culture*, 13(1), 1-3. <https://doi.org/10.61838/ijbmc.v13i1.6512>
- Speed, B. C., Goldstein, B. L., & Goldfried, M. R. (2018). Assertiveness training: A forgotten evidence-based treatment. *Clinical Psychology: Science and Practice*, 25(1), e12216. <https://doi.org/10.1111/cpsp.12216>
- Steinberg, L. (2017). *Adolescence* (11th ed.). McGraw-Hill Education.
- Yang, J., & Seyed Alitabar, S. H. (2022). The effects of school size on student participation and sense of community. *Iranian Journal of Educational Sociology*, 7(1), 205-211. <https://doi.org/10.61838/kman.ijes.7.1.20>
- Yosep, I., Suryani, S., Mediani, H. S., Mardhiyah, A., Maulana, I., Hernawaty, T., & Hazmi, H. (2024). A scoping review of assertiveness therapy for reducing bullying behavior and its impacts among adolescents. *Journal of Multidisciplinary Healthcare*, 17, 1777-1790. <https://doi.org/10.2147/JMDH.S460343>
- Yoshinaga, N., & Cooper, S. (2025). The four pathways of assertiveness: A multidimensional framework for enhancing individual well-being. *Frontiers in psychology*, 16, 1610807. <https://doi.org/10.3389/fpsyg.2025.1610807>