



Impact of leadership and self-esteem on life skills in adolescents and the moderating role of assertiveness

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Submitted: 17 July 2026 Revised: 9 September 2026 Accepted: 11 September 2026 Published online: 24 September 2026

Abstract

This study examined the relationships among self-esteem, assertiveness, and youth leadership life skills in adolescents and investigated the moderating role of assertiveness in the relationship between self-esteem and leadership-related life skills. The study employed a quantitative cross-sectional research design and included 360 adolescents aged 12–18 years enrolled in secondary education institutions in xxx. Data were collected using the Youth Leadership Life Skills Scale, the Rosenberg Self-Esteem Scale, and the Rathus Assertiveness Schedule. Construct validity was assessed through confirmatory factor analysis, and the relationships among the study variables were examined using path analysis within a structural equation modeling framework. The findings indicated that higher self-esteem was associated with stronger youth leadership life skills. Assertiveness was also positively related to leadership-related life skills, and adolescents with higher levels of assertiveness demonstrated stronger leadership characteristics. In addition, assertiveness played a moderating role in the relationship between self-esteem and youth leadership life skills. These findings highlight the importance of supporting adolescents' self-esteem and assertiveness in efforts to promote leadership-related life skills. The study contributes to a better understanding of the psychological factors associated with adolescents' leadership development and may inform educational and developmental programs designed to strengthen these competencies.

Keywords: Adolescent development; Assertiveness; Moderation analysis; Self-esteem; Youth leadership

1. Introduction

Adolescence is a developmental period characterized by substantial changes in cognitive, social, emotional, and identity-related functioning. Identity exploration and the development of self-concept are particularly salient during this period, while social and educational contexts can shape how young people understand and evaluate themselves. Recent evidence, for example, indicates that performance pressures and recognition practices in educational settings can influence students' identities and self-concepts (Danişman & Bilgiç, 2026). Adolescents' positive or negative evaluations of themselves are central to self-esteem, which is associated with important psychosocial outcomes but should not be treated as a simple causal determinant of later adjustment (Baumeister et al., 2003; Orth & Robins, 2014). In high school students, self-esteem has been positively associated with resilience, and research with adolescent samples has likewise identified a positive relationship between self-esteem and life skills (Çelik et al., 2023; Singh et al., 2024). Moreover, adolescents' self-evaluations develop within social environments, and negative interpersonal experiences in educational settings may adversely relate to self-esteem and emotional functioning (Sancak Aydın & Nalbant, 2026).

Supporting self-esteem during adolescence enables young people to trust their own judgments, assume responsibility for their decisions, and demonstrate leadership behaviors by guiding and influencing others (Ummet, 2015). Empirical studies indicate that adolescents with high self-esteem are more effective in social interactions and utilize their self-confidence to develop leadership and life skills (Szczesniak et al., 2022). These adolescents experience fewer difficulties in social relationships (Danni & Ahmad, 2025), express themselves more clearly (Rajlic et al., 2019), and exhibit higher psychological resilience when faced with adversity (Mohanty et al., 2025). Moreover, they are better equipped to cope with stressors encountered in daily life (Niveditha et

al., 2025).

During adolescence, the ability to motivate peers, demonstrate interpersonal sensitivity, make effective decisions, manage time efficiently, think creatively, and maintain strong social relationships without succumbing to hopelessness constitutes the foundation of leadership behaviors (Kelsey & Fuhrman, 2020). Adolescents who display leadership traits are more successful in directing their own lives (Heibel et al., 2024; Seevers et al., 1995) and contribute positively to the communities in which they live (Cahyati & Nurhayati, 2024). Jandhyala and Kumar (2024) emphasize that adolescents' awareness of their strengths and weaknesses, their capacity to regulate emotions, and their leadership abilities are mutually reinforcing skills closely linked to self-esteem.

Assertiveness refers to the capacity to express one's thoughts, feelings, needs, and personal rights openly and appropriately while respecting the rights of others (Danni & Ahmad, 2025). It is generally regarded as a modifiable interpersonal skill, and assertiveness training has demonstrated benefits across different populations and contexts (Speed et al., 2018). Assertiveness is also relevant to leadership; however, this relationship does not appear to be simply linear. Both very low and very high levels of assertiveness have been associated with lower perceived leadership effectiveness, as insufficient assertiveness may hinder goal attainment whereas excessive assertiveness may undermine interpersonal relationships (Ames & Flynn, 2007).

During adolescence, assertiveness is associated with both self-esteem and psychological well-being (Sarkova et al., 2013). Self-esteem is likewise associated with broader psychosocial resources in adolescence, including resilience among high school students (Çelik et al., 2023). Intervention research further indicates that assertiveness training can improve self-esteem among female high-school students (Tavakoli et al., 2014), while combined problem-solving and assertiveness training has been associated with improvements in both self-esteem and mental health among female adolescents (Golshiri et al., 2023). These findings provide a basis for examining self-esteem, leadership life skills, and assertiveness together. In particular, investigating whether assertiveness moderates the relationship between self-esteem and leadership life skills may clarify whether the strength of this relationship varies according to adolescents' capacity for assertive interpersonal behavior. Such evidence may also contribute to the development of educational interventions aimed at strengthening adolescents' psychosocial and social competencies, which can be fostered through structured educational experiences (Blažková, 2024).

2. Literature Review

2.1. Self-Esteem

Self-esteem refers to an individual's overall evaluation of their self-worth (Shevlin et al., 1995). It reflects the extent to which individuals value, approve of, appreciate, and accept themselves (Baumeister et al., 2003). Self-esteem encompasses behaviors such as openness to criticism, acceptance of mistakes, and the ability to acknowledge personal strengths and limitations. Adolescents with high self-esteem are more willing to share their experiences and thoughts, recognize humorous aspects of situations, and enjoy their lived experiences (Gupta, 2025).

Previous research consistently indicates that individuals with high self-esteem demonstrate greater social and personal confidence (Arslan & Yildirim, 2023). Rajlic et al. (2019) emphasize that self-esteem is directly related to individuals' ability to cope with life challenges and succeed in social relationships. Accordingly, self-esteem plays a critical role in the development of leadership abilities and life skills (Gupta, 2025).

Rosenberg (1965) argues that individuals with high self-esteem and self-confidence exhibit better overall adaptation to life. Supporting this view, Seevers et al. (1995) suggest that self-esteem inspires leadership behaviors, motivates individuals toward shared goals, and facilitates effective decision-making. Moreover, self-esteem enables leaders to gain respect, establish trust, and maintain credibility within social contexts (Niveditha et al., 2025).

2.2. Youth Leadership Life Skills

Leadership during adolescence can be understood as a multidimensional developmental process involving interpersonal influence, decision-making, participation, and the capacity to act effectively within social contexts. Adolescence and young adulthood are particularly important periods for leadership development because early organizational and social experiences provide opportunities for young people to develop and practice leadership-related competencies (Karagianni & Montgomery, 2018; Schneider et al., 1999). Within this developmental perspective, youth leadership life skills include competencies related to self-understanding, decision-making, oral communication, teamwork, and critical thinking (Kelsey & Fuhrman, 2020). Participation in structured youth leadership programs has also been associated with greater confidence, decision-making ability, community engagement, and transferable skills relevant to later educational and occupational functioning (Cahyati & Nurhayati, 2024; Hisa et al., 2024).

Self-esteem may constitute an important psychological resource underlying the development of these leadership competencies. Among high school students, self-esteem is positively associated with resilience, indicating its broader relevance to adolescents' psychosocial functioning (Çelik et al., 2023). Youth leadership research similarly shows that developmental psychological resources, particularly cognitive empathy and academic psychological capital, are associated with stronger youth leadership life skills (Hastings & McElravy, 2020). More broadly, longitudinal evidence indicates that self-esteem positively predicts subsequent leadership role occupancy, although this evidence is based on adults rather than adolescents (Li et al., 2011). Leadership experiences may themselves also contribute to self-perceptions; for example, leadership training produced improvements in self-esteem among female adolescents in one randomized study, although the effect was not observed consistently across the full sample (Wong et al., 2012). Taken together, these findings provide a theoretical basis for examining self-esteem as a potential antecedent of leadership life skills during adolescence. Accordingly, the following hypothesis was formulated:

Hypothesis 1. Self-esteem positively predicts adolescents' leadership life skills.

2.3. Assertiveness

Assertiveness refers to the capacity to express one's thoughts, feelings, needs, and personal rights openly while respecting the rights of others (Peneva & Mavrodiev, 2013). It involves behaviors such as refusing requests when necessary, expressing feelings appropriately, making one's own decisions, and accepting responsibility for those decisions. Assertiveness is therefore distinguishable from both submissive and aggressive response patterns, as it seeks to balance self-expression with respect for others (Peneva & Mavrodiev, 2013). Among adolescents, assertiveness is also developmentally relevant because difficulties in confident self-expression may be accompanied by submissive or aggressive patterns of interaction (Nikolaiev et al., 2023; Parray et al., 2020).

Assertiveness and self-esteem are related but conceptually distinct psychological resources. Research with adolescents has demonstrated a positive association between assertiveness and self-esteem (Kumar & Rathi, 2020), while assertiveness training among high-school students has been associated with increases in both assertiveness and self-esteem and decreases in aggression and submission (Parray et al., 2020). Self-esteem is also related to broader psychosocial resources during adolescence, including resilience among high-school students (Çelik et al., 2023). These findings suggest that positive self-evaluations and the capacity to express oneself effectively may operate together in adolescents' interpersonal functioning.

This distinction may be particularly important in the context of leadership. Self-esteem may provide adolescents with a sense of personal worth and confidence, whereas assertiveness may facilitate the interpersonal expression of that confidence through communicating ideas, stating positions, initiating action, and defending one's views without disregarding others. Leadership research likewise indicates that assertiveness is relevant to perceived leadership effectiveness, although its relationship with leadership is not simply linear; very low assertiveness may constrain goal attainment, whereas excessive assertiveness may undermine interpersonal relationships

(Ames & Flynn, 2007). Thus, assertiveness may help explain why similar levels of self-esteem do not necessarily translate into leadership-related behavior to the same extent across adolescents.

Accordingly, the present study conceptualizes assertiveness as a potential moderator rather than merely an additional predictor. Specifically, adolescents with higher self-esteem may be better able to translate positive self-evaluations into leadership life skills when they also possess the interpersonal capacity to express their views, defend their positions, and participate confidently in social interactions. At lower levels of assertiveness, by contrast, positive self-evaluations may be less readily expressed through observable leadership-related behaviors. On this theoretical basis, the following hypothesis was formulated:

Hypothesis 2. Assertiveness moderates the relationship between self-esteem and adolescents' youth leadership life skills.

Although self-esteem and assertiveness are related psychological constructs, they should not be treated as interchangeable. Self-esteem refers to the evaluative and affective dimensions of the self-concept and, during adolescence, encompasses global evaluations of self-worth as well as perceived self-value and competence (Moksnes et al., 2024). Foundational conceptualizations similarly describe self-esteem as the evaluative component of self-knowledge, reflecting how favorably individuals evaluate themselves (Baumeister et al., 2003). By contrast, assertiveness concerns the capacity to advocate for one's positions and rights, express oneself directly, and pursue personal goals without disregarding the rights of others (Peneva & Mavrodiev, 2013). Thus, for the purposes of the present study, self-esteem is treated primarily as a self-evaluative psychological resource, whereas assertiveness is treated as an interpersonal mode of expressing and defending one's thoughts, feelings, needs, and positions.

Empirical evidence indicates that the two constructs are nevertheless related during adolescence. Assertiveness and self-esteem have been found to be positively associated among adolescents (Kumar & Rathi, 2020), and assertiveness training has been associated with increases in both assertiveness and self-esteem among high-school students (Parray et al., 2020). Self-esteem is also associated with broader psychosocial resources during adolescence, including resilience among high-school students (Çelik et al., 2023). These findings support treating self-esteem and assertiveness as related but conceptually distinct resources rather than as equivalent constructs. This distinction is particularly relevant to the present study because it provides a theoretical rationale for examining whether assertiveness changes the extent to which adolescents' positive self-evaluations are expressed through interpersonal and leadership-related behaviors.

Existing research has predominantly examined self-esteem or assertiveness as independent predictors of psychosocial and leadership-related outcomes, while comparatively limited attention has been given to their interaction within a unified framework. More specifically, it remains unclear whether adolescents' levels of assertiveness influence the strength of the association between self-esteem and youth leadership life skills. This represents an important gap because self-esteem may provide adolescents with a sense of personal worth and confidence, whereas assertiveness may influence how effectively these personal resources are expressed in interpersonal and leadership contexts.

The present study addresses this gap by examining the relationships among self-esteem, assertiveness, and youth leadership life skills and, more importantly, by testing whether assertiveness moderates the relationship between self-esteem and youth leadership life skills. By incorporating a moderation perspective, the study extends previous research beyond simple direct associations and provides a more nuanced understanding of the conditions under which self-esteem may be associated with adolescents' leadership-related competencies. The findings may contribute to the theoretical understanding of adolescent leadership development and provide an empirical basis for educational and developmental interventions that aim to strengthen self-esteem, assertiveness, and leadership life skills simultaneously.

3. Method

The primary objective of this study was to examine the effects of assertiveness [RA] skills on self-esteem [SE] and youth leadership life skills [YL] among adolescents aged 15–18 years. Additionally, the study aimed to investigate whether assertiveness moderates the relationship between self-esteem and leadership life skills.

3.1. Research Design

The present study employed a quantitative, cross-sectional research design to examine the relationships among self-esteem, assertiveness, and youth leadership life skills in adolescents. The study specifically investigated the effect of self-esteem on youth leadership life skills and examined whether assertiveness moderates this relationship. In line with the main purpose of the study, the following research model was developed (Figure 1).

Figure 1

Model of the Research

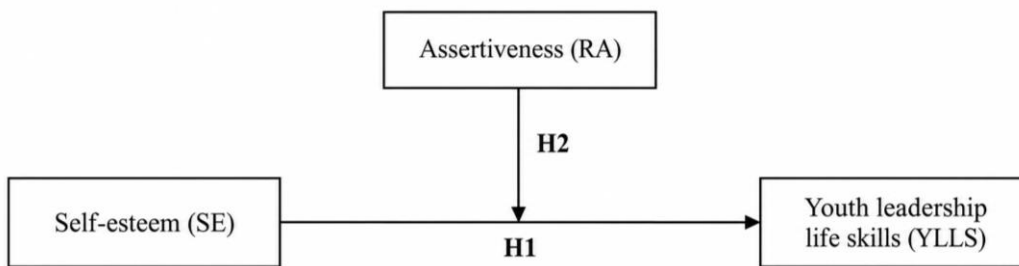


Figure 1 presents the proposed research model, in which self-esteem is specified as a predictor of youth leadership life skills, while assertiveness is examined as both a predictor and a moderating variable. The model proposes that self-esteem is positively associated with youth leadership life skills and that the strength of this relationship varies according to adolescents' level of assertiveness. Accordingly, the study examined whether self-esteem positively affects adolescents' youth leadership life skills and whether assertiveness moderates this relationship, such that the positive association between self-esteem and youth leadership life skills becomes stronger at higher levels of assertiveness.

3.2. Participants

The study population consisted of adolescents living in Konya, Türkiye. The sample comprised 360 adolescents aged 12–18 years who were selected using simple random sampling. Of the participants, 30.0% ($n = 108$) were aged 12–14 years, whereas 70.0% ($n = 252$) were aged 15–18 years. In terms of gender, 31.4% ($n = 113$) of the participants were male and 68.6% ($n = 247$) were female.

Socio-demographic characteristics of the participants, including parental educational status, number of siblings, and perceived family economic level, are presented in Table 1. According to Table 1, 37.8% of the participants' mothers were primary school graduates, while 33.9% of their fathers were high school graduates. Regarding family characteristics, 30.6% of the participants had two siblings, and 72.5% reported a medium family economic level.

3.3. Data Collection

Data were collected digitally using Google Forms. The survey link was distributed through social media communication channels, including Instagram and WhatsApp, to facilitate participation. Before completing the questionnaire, participants were informed about the purpose and procedures of the study, and participation was voluntary.

Table 1
Socio-demographic characteristics of the participants

Categories	n	%
Mother's education level		
Illiterate	7	1.9
Primary school graduate	136	37.8
Secondary school graduate	66	18.3
High school graduate	80	22.2
University graduate	71	19.7
Father's education level		
Illiterate	3	0.8
Primary school graduate	64	17.8
Secondary school graduate	52	14.4
High school graduate	122	33.9
University graduate	119	33.1
Number of siblings		
Only child	81	22.5
2 siblings	110	30.6
3 siblings	103	28.6
4 or more siblings	66	18.3
Family economic level		
Low	9	2.5
Medium	261	72.5
High	30	8.3

The Rosenberg Self-Esteem Scale consists of positively and negatively worded items. To ensure that all items were oriented in the same direction for scoring and interpretation, the negatively worded items were reverse-coded before the total self-esteem score was calculated. Accordingly, higher scores consistently represented higher levels of self-esteem, whereas lower scores represented lower levels of self-esteem. Because the positive and negative items differ in their original wording and scoring direction, the mean scores of the two item groups were not interpreted as directly comparable indicators of self-esteem. The positive and negative item groups were used to examine the structure of the scale, whereas the overall self-esteem score was used to represent the participants' general level of self-esteem. The questionnaire included the socio-demographic information form and the measurement instruments described in the following.

3.3.1. Youth Leadership Life Skills Development Survey

This scale is based on the Youth Leadership Life Skills Development Survey developed by Seevers et al. (1995). It is a data collection tool that assesses a wide range of competencies related to youth leadership development. This tool consists of seven areas and 30 items, including "communication, decision-making, interpersonal relationships, learning, management, self-understanding, and group cooperation." In an initial validation study, developers reported extremely strong internal consistency with a Cronbach's Alpha coefficient of .98 (Seevers et al., 1995).

The scale includes following subheadings and question numbers: communication (3, 15), decision-making (1, 4, 8, 16, 19), interpersonal relationships (5, 9, 17, 20, 23, 25, 29), learning (6, 10, 21, 27), management (7, 28, 30), self-understanding (2, 12, 13, 22, 24, 26), and group work (11, 14, 18). Babacan (2008) adapted the scale into Turkish and proposed a revised 29-item, six-factor structure. The adapted version demonstrated satisfactory psychometric properties. In this study, the reliability of the Turkish version was confirmed, and Cronbach's Alpha was .876. Scale is scored using a four-point Likert-type format (1=Strongly Disagree, 4=Always). Babacan (2008) retained six subheadings in his revision of the scale: decision making, interpersonal relationships, learning, management, self-reflection, and group cooperation. In this study, a validated Turkish adaptation has been used, with construct validity based on the original scale.

3.3.2. Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) consists of 10 items that assess individuals' overall self-esteem. This scale is a 4-point Likert scale ranging from "1=Strongly Agree" to "4=Strongly Disagree." The scale consists of items containing an equal number of positive and negative statements. While low scores indicate higher SE, high scores indicate lower SE. Çuhadaroglu (1986) reported adequate validity (.71) and reliability (.75) in the Turkish adaptation. In this study, the psychometric properties of the scale have been re-evaluated within the sample.

The Rathus Assertiveness Schedule was first developed by Rathus (1973) to measure patterns of assertive behavior. The original development study reported a reliability coefficient of .78 (Rathus, 1973). The current research used the Turkish version of the instrument, drawing on existing empirical evidence regarding its validity and reliability. RAS consists of 30 items, including 13 positively worded items (items 3, 6, 7, 8, 10, 18, 20, 21, 22, 25, 27, 28, 29) and 17 negatively worded, reverse-scored items (items 1, 2, 4, 5, 9, 11, 12, 13, 14, 15, 16, 17, 19, 23, 24, 26, 30). Responses are rated on a 6-point scale ranging from 1 ("Does not describe me at all") to 6 ("Describes me very well"). Assertiveness scores range from 30 to 180 points.

3.4. Data Analysis

Descriptive statistics were calculated to summarize the study variables. Confirmatory Factor Analysis [CFA] was conducted to assess the construct validity of the measurement instruments. The reliability and convergent validity of the scales were evaluated using Cronbach's alpha, Composite Reliability [CR], and Average Variance Extracted [AVE] coefficients. Pearson correlation analysis was performed to examine the relationships among self-esteem, assertiveness, and youth leadership life skills.

Structural Equation Modeling [SEM] and path analysis were used to examine the proposed relationships among the study variables. In the structural model, self-esteem was specified as a predictor of youth leadership life skills, while assertiveness was included both as a predictor and as a moderating variable. The moderating effect of assertiveness on the relationship between self-esteem and youth leadership life skills was tested by examining the interaction between self-esteem and assertiveness.

Prior to conducting the parametric analyses, the distributional characteristics of the study variables were examined using skewness and kurtosis values. Values within the range of ± 1 were considered indicative of acceptable univariate normality (Kim, 2013). Accordingly, parametric statistical procedures were used. CFA and SEM were estimated using the Maximum Likelihood estimation method.

Model fit was evaluated using multiple fit indices, including the chi-square/degrees of freedom ratio (χ^2/df), Normed Fit Index [NFI], Comparative Fit Index [CFI], Root Mean Square Error of Approximation [RMSEA], Standardized Root Mean Square Residual [SRMR], Goodness-of-Fit Index [GFI], Adjusted Goodness-of-Fit Index [AGFI], Incremental Fit Index [IFI], and Tucker-Lewis Index [TLI]. Model fit was evaluated based on established methodological recommendations, with lower χ^2/df , RMSEA, and SRMR values and higher incremental fit index values generally indicating better model fit (Cho et al., 2020; Goretzko et al., 2024; Hu & Bentler, 1999). All statistical analyses were conducted using the statistical software specified in the study, and statistical significance was evaluated at $p < .05$.

4. Results

4.1. Descriptive Statistics and Normality

Descriptive statistics and distributional characteristics of the study variables are presented in Table 2. The mean scores for the Youth Leadership Life Skills dimensions were 3.07 ± 0.560 for Skills in Getting Along with Others and 2.98 ± 0.587 for Learning Skills. The overall mean score for Youth Leadership Life Skills was 3.08 ± 0.524 . For self-esteem, the mean scores were 2.18 ± 0.638 for Positive Self-Esteem, 2.41 ± 0.752 for Negative Self-Esteem, and 2.27 ± 0.622 for the total Self-

Esteem score. The mean score for the Rathus Assertiveness Schedule was 4.19 ± 0.685 based on the standardized score used in the analyses.

The skewness values ranged from -0.245 to 0.632 , while the kurtosis values ranged from -0.036 to 0.738 . All skewness and kurtosis values were within the ± 1 range, indicating acceptable univariate normality of the study variables. Therefore, the data were considered suitable for subsequent parametric analyses. The descriptive statistics and normality results are presented in Table 2.

Table 2

Descriptive statistics and normality values of the study variables

	Mean	SD	Skewness	SE	Kurtosis	SE
Skills in Getting Along with Others (SO)	3.07	.560	-.073	.129	.564	.256
Learning Skills (LS)	2.98	.587	-.245	.129	.738	.256
Youth Leadership Life Skills (YL)	3.08	.524	.097	.129	.558	.256
PositiveSelf esteem (SE)	2.18	.638	.341	.129	.422	.256
NegativeSelf esteem (SE)	2.41	.752	.632	.129	-.036	.256
Self Esteem Total	2.27	.622	.229	.129	.105	.256
RathusAssertiveness (RA)	4.19	.685	.254	.129	.691	.256

As shown in Table 2, all study variables demonstrated acceptable skewness and kurtosis values, indicating that the distributions were sufficiently close to normality for the subsequent parametric analyses.

4.2. Measurement Model and Confirmatory Factor Analysis

A two-step approach was followed, first evaluating the measurement model and subsequently testing the structural model. Exploratory Factor Analysis supported a two-factor structure for the Youth Leadership Life Development Skills Survey and the Rosenberg Self-Esteem Scale. Sample adequacy was confirmed ($KMO = 0.856$), and Bartlett's test of sphericity was significant ($\chi^2 = 1564.304, p < .001$). Factor loadings ranged from .59 to .83 and explained 63% of the total variance. Reliability estimates for the factors, expressed as Cronbach's alpha, were .85, .81, and .83, respectively.

Although the Self-Esteem Scale has traditionally been considered unidimensional, the EFA results in the present study indicated a two-factor structure comprising positive and negative self-esteem items. Before confirming the two-factor model identified through EFA, a CFA was first conducted using a unidimensional specification based on previous literature and conventional practice. Subsequently, a revised CFA model was estimated to examine the two-factor structure Table 3.

As shown in Table 3, the factor loadings of the retained items were acceptable, ranging from .59 to .87. The final measurement model demonstrated acceptable-to-good fit across the reported indices, with $\chi^2/df = 2.083$, $NFI = .929$, $CFI = .961$, $AGFI = .923$, $GFI = .950$, $IFI = .962$, $TLI = .949$, $SRMR = .044$, and $RMSEA = .055$. These results indicate that the final measurement model provided an adequate representation of the observed data. The model comprised two factors for self-esteem (positive and negative self-esteem) and two factors for youth leadership life skills (skills in getting along with others and learning skills). Internal consistency coefficients for the subscales ranged from .67 to .84, indicating acceptable levels of reliability.

The initial CFA model showed only partial agreement with commonly used model-fit criteria: $\chi^2 = 2100.819$, $df = 704$, $CMIN/df = 2.984$, $NFI = 0.706$, $CFI = 0.781$, $AGFI = 0.683$, $GFI = 0.728$, $IFI = 0.784$, $TLI = 0.757$, $SRMR = 0.077$, and $RMSEA = 0.074$. The measurement model was subsequently revised by removing indicators with insufficient factor loadings and examining modification indices. Items with factor loadings below .50 were removed, and correlations between error terms were introduced only where theoretically justified.

Table 3

Results of confirmatory factor analysis of youth leadership life skills and self-esteem

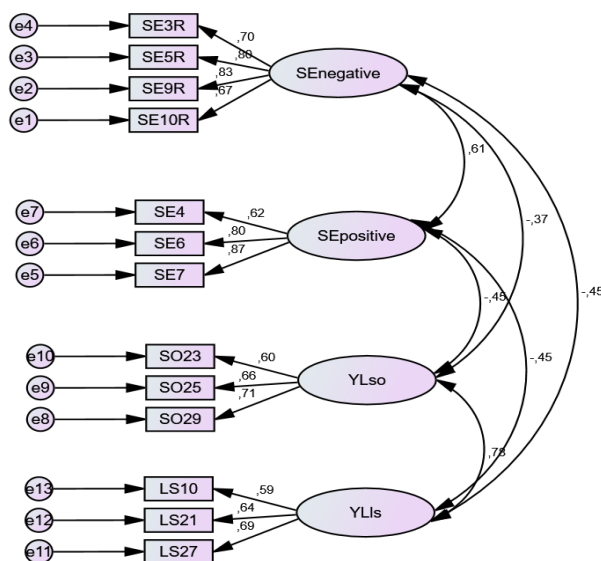
Construct / Item	Std. Estimate	SE	t Value / Estimate	Cronbach's α	Mean	SD
Youth Leadership Life Skills (YL)				.770		
Skills in Getting Along with Others (SO)				.693		
SO23	.60	.104	.94		3.04	.705
SO25	.66	.091	.88		3.06	.601
SO29	.71	—	1.00		3.06	.635
Learning Skills (LS)				.671		
LS10	.59	.114	1.00		2.98	.772
LS21	.64	.094	.87		2.89	.622
LS27	.69	—	1.00		3.08	.663
Self-Esteem (SE)				.839		
Positive Self-Esteem				.812		
SE4	.62	.58	.68		1.97	.677
SE6	.80	.60	.90		2.25	.696
SE7	.87	—	1.00		2.23	.708
Negative Self-Esteem				.836		
SE3R	.70	.083	.95		2.33	.753
SE5R	.80	.088	1.11		2.23	.773
SE9R	.83	.097	1.25		2.39	.844
SE10R	.67	—	1.00		2.73	.836

Note. Factor loadings for all factors were statistically significant at $p < .001$.

Following these modifications, the revised measurement model demonstrated substantially improved fit: $\chi^2 = 122.916$, $df = 59$, $CMIN/df = 2.083$, $NFI = 0.929$, $CFI = 0.961$, $AGFI = 0.923$, $GFI = 0.950$, $IFI = 0.962$, $TLI = 0.949$, $SRMR = 0.044$, and $RMSEA = 0.055$.

The final CFA supported a two-factor structure for the Self-Esteem Scale, with one factor representing positive self-evaluations and the other representing negative self-evaluations. Each factor was represented by the retained indicators shown in Table 3. The Youth Leadership Life Skills Scale also demonstrated a two-factor structure, consisting of Skills in Getting Along with Others and Learning Skills. Cronbach's alpha coefficients for the dimensions ranged from .69 to .84, indicating acceptable to good internal consistency. The confirmatory factor analysis model is presented in Figure 1.

Figure 1

Confirmatory factor analysis model

Note. Goodness-of-fit statistics: $\chi^2 = 122.916$, $df = 59$, $CMIN/df = 2.083$, $NFI = .929$, $CFI = .961$, $AGFI = .923$, $GFI = .950$, $IFI = .962$, $TLI = .949$, $SRMR = .044$, $RMSEA = .055$.

4.3. Correlations among Study Variables

The relationships among self-esteem, youth leadership life skills, and assertiveness were examined using Pearson correlation analysis. The results are presented in Table 4.

Table 4

Correlation analysis results

Variable	M	SD	(1)	(2)	(3)	(4)	(5)
SE-P (1)	2.18	.638	—				
SE-N (2)	2.41	.752	.424**	—			
SE (3)	2.27	.622	.669**	.800**	—		
SO (4)	3.07	.560	.315**	.244**	.292**	—	
LS (5)	2.98	.587	.279**	.282**	.296**	.445**	—
YL (6)	3.08	.524	.319**	.303**	.340**	.722**	.757**
RA (7)	4.19	.685	.331**	.311**	.339**	.213**	.412**

Note. SE-P = positive self-esteem; SE-N = negative self-esteem; SE = self-esteem; SO = skills in getting along with others, a subdimension of youth leadership life skills; LS = learning skills; YL = youth leadership life skills; RA = Rathus assertiveness; ** $p < .01$.

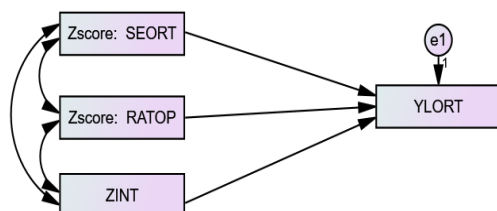
As shown in Table 4, the total Self-Esteem score was positively correlated with Youth Leadership Life Skills ($r = .340, p < .01$) and Rathus Assertiveness ($r = .339, p < .01$). Positive Self-Esteem was also positively correlated with Youth Leadership Life Skills ($r = .319, p < .01$) and Rathus Assertiveness ($r = .331, p < .01$). These findings indicate that higher self-esteem was associated with higher levels of youth leadership life skills and assertiveness.

4.4. Structural Model and Moderating Effect of Assertiveness

A structural equation model was used to examine the proposed relationships among self-esteem, assertiveness, and youth leadership life skills. The model included self-esteem as a predictor of youth leadership life skills, assertiveness as an additional predictor, and the interaction term between self-esteem and assertiveness (ZINT) to test the moderating effect.

Figure 2

AMOS Path Model of Self-Esteem, Assertiveness, and Youth Leadership Life Skills



The structural model indicated a positive association between self-esteem and youth leadership life skills ($\beta = .137, p < .001$). Assertiveness was also positively associated with youth leadership life skills ($\beta = .130, p < .001$). Importantly, the interaction term between self-esteem and assertiveness was statistically significant and positively associated with youth leadership life skills ($\beta = 0.052, p = .019$), indicating a significant moderating effect of assertiveness. Regression coefficients for the moderation model are presented in Table 5.

Table 5

Regression weights for the moderation model

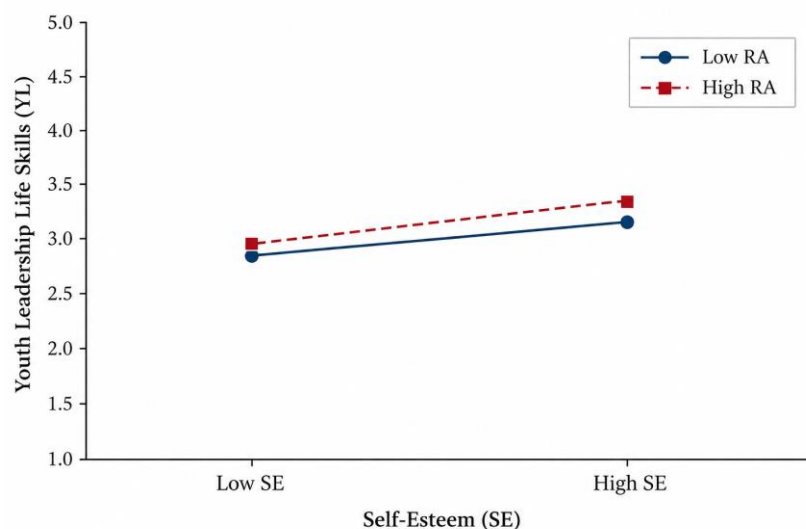
Parameter	Estimate	S.E.	C.R.	p
YLORT $\leftarrow$ ZSEORT	.137	.027	5.152	<.001
YLORT $\leftarrow$ ZRATOP	.130	.027	4.887	<.001
YLORT $\leftarrow$ ZINT	.052	.022	2.338	.019

Note. YLORT = mean score of youth leadership life skills; ZSEORT = standardized mean score of self-esteem; ZRATOP = standardized total score of Rathus assertiveness; ZINT = interaction term between self-esteem and assertiveness; S.E. = standard error; C.R. = critical ratio.

The interaction coefficient was statistically significant ($\beta = .052$, $p = .019$), supporting the moderating role of assertiveness in the relationship between self-esteem and youth leadership life skills. Specifically, the positive association between self-esteem and youth leadership life skills was stronger at higher levels of assertiveness. The interaction effect of self-esteem and assertiveness on youth leadership life skills is presented in Figure 3.

Figure 3

Interaction effect of self-esteem and assertiveness on youth leadership life skills



The interaction plot indicates that the positive association between self-esteem and youth leadership life skills was stronger among adolescents with higher levels of assertiveness. Thus, the results provide support for the proposed moderation hypothesis.

5. Discussion

This study demonstrated that self-esteem has a significant, positive effect on adolescents' leadership life skills. Overall, the findings provide evidence that self-esteem constitutes a key psychological resource supporting adolescents' leadership-related competencies, particularly when considered alongside assertiveness.

The present findings are generally consistent with previous empirical research highlighting the importance of self-esteem in adolescents' leadership-related competencies. In the current study, self-esteem was positively associated with youth leadership life skills, supporting previous research suggesting that adolescents with higher self-esteem tend to demonstrate greater confidence and leadership-related competencies (Cahyati & Nurhayati, 2024; Hastings & McElravy, 2020). This finding is also consistent with the broader view that positive self-evaluations may facilitate adolescents' confidence in social interactions, decision-making, and participation in group contexts. Thus, the present findings reinforce existing evidence regarding the positive relationship between self-esteem and leadership-related development.

The findings concerning assertiveness are consistent with previous research emphasizing the interpersonal relevance of assertive behavior during adolescence. Assertiveness has been associated with adolescents' self-esteem and psychological well-being, while specific dimensions of assertiveness, including open expression, emotional control, consideration for others, and self-direction, have been linked to interpersonal behavior and adjustment among high-school students (Sarkova et al., 2013; Watanabe, 2010). Assertiveness-focused interventions have also been associated with improvements in assertiveness and self-esteem among adolescents (Parray et al., 2020). In the present study, assertiveness was positively associated with youth leadership life skills, suggesting that adolescents who are better able to express themselves and engage confidently in interpersonal situations may also report stronger leadership-related competencies. This finding extends adolescent assertiveness research into the domain of youth leadership life skills. Previous youth leadership research has shown that psychological and interpersonal

resources, including academic psychological capital and cognitive empathy, are associated with stronger youth leadership life skills (Hastings & McElravy, 2020). The present findings add assertiveness to this pattern of associations. They are also compatible with the broader leadership literature, in which assertiveness has been identified as relevant to perceived leadership effectiveness, although evidence suggests that its relationship with leadership may be nonlinear rather than uniformly positive (Ames & Flynn, 2007). More importantly, the significant interaction between self-esteem and assertiveness provides a more differentiated account of how these psychological resources are associated with youth leadership life skills. The positive association between self-esteem and youth leadership life skills was stronger at higher levels of assertiveness. One plausible interpretation is that positive self-evaluations may be more readily reflected in leadership-related interpersonal behavior when adolescents are also able to communicate their views, express their needs, and defend their positions appropriately. This interpretation is consistent with evidence linking adolescent assertiveness to interpersonal functioning and self-esteem (Sarkova et al., 2013; Watanabe, 2010), as well as research showing that self-esteem is associated with broader psychosocial resources such as resilience during adolescence (Çelik et al., 2023). However, the interaction observed in the present study goes beyond these previously established bivariate relationships by indicating that the association between self-esteem and youth leadership life skills varies as a function of assertiveness. Thus, the findings support viewing self-esteem and assertiveness as distinct but potentially complementary resources in understanding adolescents' leadership-related competencies.

When examining the subdimensions of youth leadership life skills, namely interpersonal skills and learning skills, participants reported relatively high levels of social interaction and interpersonal compatibility (Kelsey & Fuhrman, 2020). This finding suggests that adolescents possess a foundational capacity for leadership development, which aligns with established developmental theories emphasizing the increasing importance of peer relationships and social acceptance during adolescence (Rydell & Brocki, 2024). At the same time, previous research indicates that self-regulation, responsibility-taking, and strategic planning in social contexts develop more gradually during this period (Mishra, 2024). The medium-to-high overall level of youth leadership life skills observed in this study is therefore consistent with the normative developmental profile of adolescence. With respect to self-esteem, the findings revealed relatively low levels of positive self-esteem and comparatively higher levels of negative self-evaluations among participants. This pattern is consistent with prior literature describing adolescence as a period in which self-esteem is particularly fragile and susceptible to external influences (Baumeister et al., 2003). Rather than indicating a deficit, these findings may reflect normative developmental processes characterized by heightened social comparison and fluctuating self-perceptions. Thus, the self-esteem profile observed in this sample can be interpreted as developmentally typical.

The relatively high mean score on the Rathus Assertiveness Scale indicates that adolescents in the sample generally tend to express themselves assertively and participate actively in social interactions. Assertiveness is closely associated with identity formation and the emergence of individuality during adolescence (Peneva & Mavrodiev, 2013). Moreover, assertiveness supports adolescents' ability to articulate their thoughts and establish personal boundaries in social contexts (Tavakoli et al., 2014). Notably, this pattern of relatively high assertiveness alongside lower positive self-esteem suggests that adolescents may display socially outward and confident behaviors even when their internal self-evaluations remain unstable. This differentiation underscores the importance of considering assertiveness and self-esteem as related but distinct constructs. From a psychometric perspective, the measurement model demonstrated adequate validity and reliability. Exploratory and confirmatory factor analyses supported the structural adequacy of the Youth Leadership Life Skills Scale and the Rosenberg Self-Esteem Scale within the present sample. Although the Rosenberg Self-Esteem Scale is traditionally conceptualized as unidimensional (Cuahadaroğlu, 1986), the emergence of positive and negative self-esteem dimensions in this study is consistent with prior research suggesting that self-esteem in

adolescence may be better understood as a multidimensional construct (Moksnes et al., 2024). Given the dynamic nature of self-esteem during adolescence (Ummet, 2015), such sample-specific variations appear theoretically meaningful (Bouih et al., 2022) rather than methodologically problematic. The correlational findings indicated positive associations among self-esteem, assertiveness, and youth leadership life skills, with a moderate positive relationship between self-esteem and leadership life skills (Singh et al., 2024). These results are consistent with previous studies reporting that higher self-esteem is associated with stronger leadership capacities and life skills in adolescents (Mohanty et al., 2025). Moreover, prior research has consistently demonstrated that adolescents' social skills are positively related to both leadership and self-esteem (Baumeister et al., 2003) thereby strengthening the theoretical foundation of the proposed model.

A central contribution of this study lies in demonstrating the moderating role of assertiveness in the relationship between self-esteem and youth leadership life skills (Cahyati & Nurhayati, 2024). The findings showed that assertiveness significantly strengthens the effect of self-esteem on leadership life skills, indicating that adolescents with higher levels of assertiveness are better able to translate positive self-evaluations into functional leadership behaviors (Hastings & McElravy, 2020). The significant interaction between self-esteem and assertiveness suggests that self-esteem alone may be insufficient for leadership development if adolescents lack the interpersonal confidence and expressive skills associated with assertiveness (Kelsey & Fuhrman, 2020). This finding helps explain why adolescents with high self-esteem but low assertiveness may struggle to exhibit leadership behaviors.

Consistent with these results, previous studies have reported reciprocal relationships between self-esteem and assertiveness in adolescence (Kumar & Rath, 2020) and have shown that social and communication skills can shape the impact of self-esteem on broader life outcomes (Szczeniak et al., 2022). However, the present findings diverge from those of Wong et al. (2012), who found that leadership training enhanced leadership skills without significantly affecting self-esteem. This discrepancy may be attributable to differences in study design, cultural context, or the distinction between intervention-based and correlational research. Whereas Wong et al. (2012) focused on the effects of a structured leadership program, the present study examined naturally occurring variations in self-esteem and assertiveness, which may operate through different developmental mechanisms.

The findings suggest that self-esteem functions as a fundamental psychological resource for leadership development in adolescence. At the same time, assertiveness plays a critical regulatory role in shaping how self-esteem is expressed in leadership-related behaviors. By integrating self-esteem, assertiveness, and youth leadership life skills within a single model, this study contributes to a more nuanced understanding of adolescent leadership development.

6. Limitations and Recommendation for the Further Studies

Despite the significant findings obtained in this study, several limitations should be considered when interpreting the results. First, the study employed a quantitative, cross-sectional research design, which restricts the ability to draw causal inferences or to capture developmental changes over time. Therefore, the observed relationships among self-esteem, assertiveness, and youth leadership life skills should be interpreted with caution. Future studies employing longitudinal or experimental designs would provide stronger evidence regarding the directionality and developmental nature of these relationships.

Second, the sample consisted of adolescents from a single province, which may limit the generalizability of the findings. Cultural, socio-economic, and educational contexts are likely to influence adolescents' self-esteem, assertiveness, and leadership-related competencies. Replicating the present research with larger samples drawn from different geographical regions, school types, and socio-cultural backgrounds would strengthen the external validity of the proposed model.

Third, the study relied exclusively on self-report measures, which reflect participants' subjective evaluations and may be susceptible to response biases, such as social desirability or self-perception distortions. This limitation is particularly relevant when assessing sensitive constructs such as self-

esteem, assertiveness, and leadership during adolescence. Future research may benefit from using multiple data sources, including parent, teacher, or peer reports, as well as observational or behavioral measures.

In light of the findings, future research should also explore intervention-based approaches to enhance adolescents' leadership development. Training programs focusing on recognizing and expressing emotions, accepting criticism, providing constructive feedback, emotion regulation, decision-making, responsibility-taking, assertive communication (e.g., saying "no" and setting boundaries), and conflict resolution may be particularly effective in strengthening self-esteem and assertiveness, thereby supporting leadership life skills. Further studies could examine the effectiveness of such programs using longitudinal or experimental designs.

Addressing these limitations in future research will contribute to a more comprehensive understanding of how self-esteem and assertiveness interact to shape leadership life skills during adolescence.

7. Conclusions

The findings of this study indicate that higher levels of self-esteem are associated with stronger youth leadership life skills among adolescents. Adolescents with elevated self-esteem demonstrate greater effectiveness in leadership-related life skills, including empathy, sensitivity, responsibility, teamwork, cooperation, goal planning, self-management, effective communication, problem solving, and decision-making. These findings highlight self-esteem as a central psychological resource that supports adolescents' capacity to engage in leadership behaviors within social and developmental contexts.

In addition, the results reveal that assertiveness plays a significant regulatory role in the relationship between self-esteem and leadership life skills. Adolescents with higher levels of assertiveness exhibit stronger leadership competencies and are better able to translate positive self-evaluations into functional leadership behaviors. Assertiveness facilitates this process by enabling adolescents to express their thoughts and emotions clearly, protect their own rights while respecting others, and engage confidently in interpersonal interactions. In this sense, assertiveness functions as a key mechanism through which self-esteem is expressed and enacted in leadership contexts.

The study further demonstrates that adolescents with high levels of assertiveness tend to exhibit stronger leadership life skills. The ability to communicate openly, set boundaries, and participate actively in group processes provides assertive adolescents with a distinct advantage when assuming leadership roles. Moreover, the findings suggest that self-esteem contributes not only to the presence of leadership skills but also to their effective and adaptive use. Accordingly, self-esteem should be conceptualized as a foundational psychological resource for the development and qualified application of leadership life skills during adolescence.

From a practical perspective, these findings underscore the importance of supporting adolescents' self-esteem and assertiveness within educational and developmental settings. Programs aimed at fostering leadership development may benefit from incorporating components that strengthen self-awareness, emotional expression, assertive communication, decision-making, responsibility-taking, and conflict resolution skills. By addressing self-esteem and assertiveness simultaneously, such interventions may more effectively promote adolescents' leadership capacities and psychosocial development. This study contributes to the literature by demonstrating that adolescent leadership life skills are shaped not only by self-esteem but also by the regulatory role of assertiveness. Integrating these psychological constructs within a single explanatory framework offers a more comprehensive understanding of leadership development in adolescence and provides a foundation for future research and practice.

Acknowledgements: The authors would like to thank all the participating children, their families, and all the educators at the school for their support throughout the study.

Author contributions: Şebnem Yücel: Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing. Hatice Yalçın: Conceptualization, Methodology, Investigation, Data curation, Writing – review & editing. Demet Akarçay Ulutaş: Conceptualization, Methodology, Validation, Writing – review & editing. Recep Yücel: Conceptualization, Methodology, Validation, Writing – review & editing.

Data availability: The datasets generated and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of interest: The authors declare that they have no conflict of interest regarding the publication of this paper.

Ethical statement: This study was reviewed and approved by the KTO Karatay University Ethics Committee prior to data collection. Ethical approval was granted on August 6, 2021, under approval number 2021/016. The study procedures were conducted in accordance with the ethical principles governing research involving human participants.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

- Arslan, S., & Yıldırım, B. (2023). Global self-esteem in adolescents: mixed method research. *Journal of Family, Counseling and Education*, 7(2), 20–30. <https://doi.org/10.32568/jfce.1136984>
- Ames, D. R., & Flynn, F. J. (2007). What breaks a leader: The curvilinear relation between assertiveness and leadership. *Journal of Personality and Social Psychology*, 92(2), 307–324. <https://doi.org/10.1037/0022-3514.92.2.307>
- Babacan, H. (2008). *Demeter rural area leadership program* [Unpublished master's thesis]. Kocaeli University.
- 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>
- Blažková, M. (2024). Adaptive soft-skills: Orientation course as an opportunity to develop social skills. *Journal of Pedagogical Sociology and Psychology*, 6(2), 1–16. <https://doi.org/10.33902/jpsp.202424951>
- Bouih, A., Benattabou, D., Nadif, B., Benhima, M., & Benfilali, I. (2022). The Rosenberg self-esteem scale: A confirmatory factor analysis study. *European Journal of Psychology and Educational Research*, 5(2), 143–160. <https://doi.org/10.12973/ejper.5.2.143>
- Cahyati, S. C., & Nurhayati, S. (2024). The impact of youth basic leadership training on Generation z's leadership skill enhancement. *Dimensi*, 13(1), 118–127. <https://doi.org/10.33373/dms.v13i1.6016>
- Cho, G., Hwang, H., Sarstedt, M., & Ringle, C. (2020). Cutoff criteria for overall model fit indexes in generalized structured component analysis. *Journal of Marketing Analytics*, 8(4), 189 – 202. <https://doi.org/10.1057/s41270-020-00089-1>
- Çelik, E., Süler, M., Söylemez, A., & Koçak, L. (2023). The mediating role of time attitude in the relationship between self-esteem and resilience in high school students. *Journal of Pedagogical Research*, 7(1), 82–102. <https://doi.org/10.33902/JPR.202317971>
- Çuhadaroglu, F. (1986). *Self-esteem in adolescents* [Unpublished specialization thesis]. Hacettepe University.
- Danişman, Ş., & Bilgiç, E. (2026). The fragile “math person”: Identities and existential experiences of mathematically gifted students in performance-driven schooling. *Gifted Education International*, 42(2), 283–301. <https://doi.org/10.1177/02614294261417905>
- Danni, U. & Ahmad, F. (2025). Building adolescent assertiveness awareness through individual counseling services: a psychoeducational approach. *Jurnal Profesi Pendidikan*, 4(1), 77–95. <https://doi.org/10.22460/jpp.v4i1.27453>
- Golshiri, P., Mostofi, A., & Rouzbahani, S. (2023). The effect of problem-solving and assertiveness training on self-esteem and mental health of female adolescents: A randomized clinical trial. *BMC Psychology*, 11, Article 106. <https://doi.org/10.1186/s40359-023-01154-x>
- Goretzko, D., Siemund, K., & Sterner, P. (2024). Evaluating model fit of measurement models in confirmatory factor analysis. *Educational and Psychological Measurement*, 84(1), 123–144. <https://doi.org/10.1177/00131644231163813>

- Gupta, B. (2025). Impact of social media on self-esteem of pre-teens and adolescents. *International Journal of Social Impact*, 10(3), 12-15. <https://doi.org/10.25215/2455/1003S03>
- Hastings, L. J. & McElravy, L. J. (2020). Further examination of youth leadership skills predictors. *Journal of Leadership Education*, 19(1), 99-118. <https://doi.org/10.12806/V19/I1/R4>
- Heibel, B., Boyer, H., Tasci, K. & Anderson, R. (2024). Youth leadership development: A synthesis of literature. *The CTE Journal*, 12(1), 1-16. https://www.thectejournal.com/uploads/1/0/6/8/10686931/heibel_summer_2024.pdf
- Hisa, A., Mohiddin, F., & Susanto, H. (2024). The impact of youth leadership program on perceived employability skills: Evidence from Brunei Darussalam. *Asian Academy of Management Journal*, 29(2), 133-164. <https://doi.org/10.21315/aamj2024.29.2.6>
- Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Jandhyala, S. & Kumar, N. (2024). Everyday assertiveness and its significance for overall mental well-being. *Universal Journal of Public Health*, 12(2), 250-257. <https://doi.org/10.13189/ujph.2024.120208>
- Karagianni, D., & Montgomery, A. J. (2018). Developing leadership skills among adolescents and young adults: A review of leadership programmes. *International Journal of Adolescence and Youth*, 23(1), 86-98. <https://doi.org/10.1080/02673843.2017.1292928>
- Kelsey, K.D. & Fuhrman, N.E. (2020). Leadership and life skills development among 4-H state-level youth leaders. *Journal of Human Sciences and Extension*, 8(2), 2. <https://doi.org/10.54718/IZUO2900>
- Kim, H. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics*, 38, 52-54. <https://doi.org/10.5395/rde.2013.38.1.52>
- Kumar, L. & Rathi, K. (2020). Assertiveness and self-esteem among adolescents - a correlational study. *International Journal of Indian Psychology*, 8(4), 1424-1430. <https://doi.org/10.25215/0804.155>
- Li, W.-D., Arvey, R. D., & Song, Z. (2011). The influence of general mental ability, self-esteem and family socioeconomic status on leadership role occupancy and leader advancement: The moderating role of gender. *The Leadership Quarterly*, 22(3), 520-534. <https://doi.org/10.1016/j.leaqua.2011.04.009>
- Mishra, S. (2024). The paradox of social media: Self-esteem among young adults in India. *International Journal for Research in Applied Science & Engineering Technology*, 12(7), 1552-1561. <https://doi.org/10.22214/ijraset.2024.63818>
- Mohanty, S., Kumar Parida, P. & Jena, S.K. (2025). Impact of life skills education on enhancing self-esteem among high school students. *International Journal of Economic Practices and Theories*, 2025(1), 512-529. <https://doi.org/10.52783/ijept.58>
- Moksnes, U. K., Espnes, G. A., Eilertsen, M. E. B., Bjørnsen, H. N., Ringdal, R., & Haugan, G. (2024). Validation of Rosenberg self-esteem scale among Norwegian adolescents—Psychometric properties across samples. *BMC Psychology*, 12, Article 506. <https://doi.org/10.1186/s40359-024-02004-0>
- Nikolaiev, L., Herasina, S., Hrechanovska, O., Vlasenko, O., Skliarenko, S., & Hrande, K. (2023). The development of assertiveness of the individual as a subject of communication. *Revista Românească pentru Educație Multidimensională*, 15(2), 210-228. <https://doi.org/10.18662/rrem/15.2/730>
- Niveditha, C. S., Srikanth, J. & Kulkarni, S. (2025). A cross-sectional study to assess the self-esteem among adolescents in an urban poor locality of Bengaluru City. *Apollo Medicine*, 22(4), 277-281. <https://doi.org/10.1177/09760016241283567>
- Orth, U., & Robins, R. W. (2014). The development of self-esteem. *Current Directions in Psychological Science*, 23(5), 381-387. <https://doi.org/10.1177/0963721414547414>
- Parray, W. M., Kumar, S., & David, B. E. (2020). Investigating the impact of assertiveness training on assertiveness and self-esteem of high school students. *Polish Psychological Bulletin*, 51(3), 171-176. <https://doi.org/10.24425/ppb.2020.134724>
- Peneva, I. & Mavrodiev, S. (2013). A historical approach to assertiveness. *Psychological Thought*, 6(1), 3-26. <https://doi.org/10.5964/psyct.v6i1.14>
- Rajlic, G., Kwon, J., Roded, K., & Hubley, A. (2019). Development of the global self-esteem measure: A pilot study. *Journal of Psychoeducational Assessment*, 37(7), 863-873. <https://doi.org/10.1177/0734282918801816>
- Rathus, S. A. (1973). A 30-item Schedule for assessing assertive behavior. *Behavior Therapy*, 4(3), 398-406. [https://doi.org/10.1016/S0005-7894\(73\)80120-0](https://doi.org/10.1016/S0005-7894(73)80120-0)
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Rydell, A.M. & Brocki, K.C. (2024). Behavior problems, social relationships, and adolescents' future orientation: Links from middle to late adolescence. *Journal of Adolescence*, 96(6), 1198-1211. <https://doi.org/10.1002/jad.12329>

- Sancak Aydın, G., & Nalbant, A. (2026). Teacher-perpetrated emotional violence in the classroom: A study based on pre-service teachers' perceptions. *Journal of Pedagogical Sociology and Psychology*, 8(1), e42066. <https://doi.org/10.33902/JPSP.202642066>
- Sarkova, M., Bacikova-Sleskova, M., Orosova, O., Madarasova Geckova, A., Katreniakova, Z., Klein, D., van den Heuvel, W., & van Dijk, J. P. (2013). Associations between assertiveness, psychological well-being, and self-esteem in adolescents. *Journal of Applied Social Psychology*, 43(1), 147-154. <https://doi.org/10.1111/j.1559-1816.2012.00988.x>
- Schneider, B., Paul, M. C., White, S. S., & Holcombe, K. M. (1999). Understanding high school student leaders, I: Predicting teacher ratings of leader behavior. *The Leadership Quarterly*, 10(4), 609-636. [https://doi.org/10.1016/S1048-9843\(99\)00038-7](https://doi.org/10.1016/S1048-9843(99)00038-7)
- Seevers, B. S., Dormody, T. J., & Clason, D. L. (1995). Developing a scale to research and evaluate youth leadership life skills development. *Journal of Agricultural Education*, 36(2), 28-34. <https://doi.org/10.5032/jae.1995.02028>
- Shevlin, M. E., Bunting, B. P., & Lewis, C. A. (1995). Confirmatory factor analysis of the Rosenberg Self-Esteem Scale. *Psychological Reports*, 76(3), 707-710. <https://doi.org/10.2466/pr0.1995.76.3.707>
- Singh, S., Sandhu, K. J. S., & Jain, D. (2024). Correlational study of life skills, self-esteem and aggression among adolescent students. *African Journal of Biomedical Research*, 27(3S), 4655-4661. <https://doi.org/10.53555/AJBR.v27i3S.3221>
- 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>
- Szcześniak, M., Bajkowska, I., Czaprowska, A., & Sileńska, A. (2022). Adolescents' self-esteem and life satisfaction: Communication with peers as a mediator. *International Journal of Environmental Research and Public Health*, 19(7), Article 3777. <https://doi.org/10.3390/ijerph19073777>
- Tavakoli, P., Setoodeh, G., Dashtbozorgi, B., Komili Sani, H., & Pakseresht, S. (2014). The influence of assertiveness training on self-esteem in female students of government high schools of Shiraz, Iran: A randomized controlled trial. *Nursing Practice Today*, 1(1), 17-23.
- Ümmet, D. (2015). Self esteem among college students: A study of satisfaction of basic psychological needs and some variables. *Procedia-Social and Behavioral Sciences*, 174, 1623-1629. <https://doi.org/10.1016/j.sbspro.2015.01.813>
- Watanabe, A. (2010). The relationship between four components of assertiveness and interpersonal behaviors, interpersonal adjustment in high school students' friendship. *The Japanese Journal of Psychology*, 81(1), 56-62. <https://doi.org/10.4992/jjpsy.81.56>
- Wong, M. C. S., Lau, T. C. M., & Lee, A. (2012). The impact of leadership programme on self-esteem and self-efficacy in school: A randomized controlled trial. *PLOS ONE*, 7(12), e52023. <https://doi.org/10.1371/journal.pone.0052023>