

Investigating the Structural Relationships Between Self-Regulated Learning and Academic Motivation with the Mediating Role of Self-Esteem Among Upper Secondary School Students in Babolsar

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1. Round 1

1.1. Reviewer 1

Reviewer:

The statement “self-esteem may operate as a bridge connecting personal resources with academic outcomes” is conceptually important; however, the manuscript does not adequately distinguish global self-esteem from academic self-esteem. Since academic motivation is an educational outcome, it would be valuable to explain why global self-esteem was selected instead of a more domain-specific measure, and how this choice may affect interpretation of the findings.

In the final paragraph of the Introduction, the authors identify a gap concerning Iranian secondary school students. However, the manuscript would be strengthened by providing a more detailed cultural justification. Specifically, the authors should explain how characteristics of the Iranian educational system, academic competition, family expectations, or sociocultural values may influence self-regulation, self-esteem, and academic motivation differently than in other contexts.

In the Methods section, the authors report that the population consisted of 4,242 students and that a sample size of approximately 300–320 students was targeted. However, no formal sample size calculation, power analysis, or justification based on anticipated effect sizes is presented. Including a priori power analysis would provide stronger methodological support for the adequacy of the final sample of 300 participants.

In Table 2, the authors report only structural model fit indices. However, no measurement model results are presented. Because SEM requires validation of the measurement model before testing structural relationships, the manuscript should include confirmatory factor analysis results, standardized factor loadings, construct reliability, and convergent validity evidence.

The path analysis results in Table 3 indicate significant direct and indirect effects; however, the authors do not specify whether the indirect effect was tested using bootstrapping procedures. Contemporary SEM methodology generally recommends bias-corrected bootstrap confidence intervals rather than reliance solely on significance tests. Reporting bootstrap estimates would strengthen confidence in the mediation findings.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The paragraph describing multistage cluster random sampling requires additional detail. The authors indicate that one school was selected from each geographical area and one classroom from each grade level, but they do not report the total number of eligible schools in each region, the method used for randomization, or whether public and private schools were proportionally represented. These details are necessary for evaluating sampling representativeness and external validity.

The inclusion criterion stating “appropriate physical and psychological health” lacks operational definition. The manuscript should clarify how physical and psychological health status was assessed, whether screening procedures were implemented, and whether these judgments were based on self-report, school records, or researcher evaluation.

The authors mention that “the required approval was obtained from the relevant ethics committee,” but no ethics approval code, approval date, or institutional review board information is provided. Given current publication standards, complete ethical approval information should be reported to ensure transparency and research integrity.

In the description of the Self-Regulated Learning Questionnaire, the authors report psychometric evidence from previous studies but do not provide reliability coefficients obtained from the current sample. Cronbach’s alpha, composite reliability, and preferably McDonald’s omega coefficients should be reported for all scales and subscales based on the study data.

The section describing the Academic Motivation Scale identifies intrinsic motivation, extrinsic motivation, and amotivation as dimensions. However, in the structural model, “total academic motivation” appears to be used as the outcome variable. The manuscript should explain how the total score was calculated, particularly considering that amotivation theoretically represents a negative motivational state and may not be conceptually compatible with simple aggregation.

The authors state that the Rosenberg Self-Esteem Scale was scored using an agree/disagree method. This scoring procedure differs from the commonly used four-point Likert format. The manuscript should justify the choice of scoring method and discuss whether this adaptation affects comparability with previous studies or the psychometric properties of the scale.

The Data Analysis section reports that assumptions such as normality, linearity, and adequacy of correlations were examined. However, the actual results of these diagnostic tests are not presented. Reporting values for Mardia’s coefficient, tolerance, VIF, and normality statistics would improve methodological transparency and allow readers to independently assess model assumptions.

Table 1 reveals a strong positive correlation between total academic motivation and amotivation ($r = .87$). This result is theoretically unexpected because amotivation is generally conceptualized as the absence of motivation and would typically be negatively related to overall academic motivation. The authors should carefully verify scoring procedures, coding directions, and interpretation of the amotivation subscale, as this issue raises concerns about construct validity.

The correlation matrix indicates very high intercorrelations among several variables and subcomponents. The manuscript would benefit from reporting discriminant validity indices, such as Average Variance Extracted (AVE), Fornell–Larcker criteria, or HTMT ratios, to demonstrate that the constructs are empirically distinct and not affected by substantial overlap.

Authors uploaded the revised manuscript.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.