Iranian Evolutionary Educational Psychology Journal
IEEPJ
University of Hormozgan
Online ISSN: 2588 - 4395
Homepage: https://ieepj.hormozgan.ac.ir

Mediating Role of Psychological Adjustment in the Relationship between Academic Quality of Life and Self-Regulation among Students

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Article Info

Article type:
Research Article

Article history:
Received 14 Aug. 2024
Received in revised form 14 Oct. 2024
Accepted 19 Jan. 2025
Published online 01 Jun. 2025

Keywords:
Quality of academic life,
Self-regulation,
Psychological adjustment,
High school students

ABSTRACT

Objective: This study aimed to explore the mediating role of psychological adjustment in the relationship between academic quality of life and self-regulation among high school students.

Methods: The research followed an applied, descriptive-correlational design. The statistical population comprised all male and female secondary school students in Baharestan during the 2023 academic year. A stratified sampling method was used to select 300 eligible participants, ensuring representation across genders (male and female) and grade levels (tenth, eleventh, and twelfth). Data were collected using validated questionnaires assessing academic quality of life, self-regulation, and psychological adjustment. Pearson correlation analysis was conducted using SPSS (Version 24) to examine variable relationships.

Results: The findings indicated a significant indirect effect of self-regulation on academic quality of life through psychological adjustment ($p < 0.05$). Additionally, the direct relationship between self-regulation and academic quality of life was positive and statistically significant ($p < 0.01$).

Conclusions: The study highlights the crucial mediating role of psychological adjustment in enhancing the relationship between self-regulation and academic quality of life. Students with stronger self-regulation skills tend to experience better psychological adjustment, which in turn positively influences their academic quality of life.

Cite this article: Khastan, M., Mirzamani Bafghi, S. M. & Niusha, B. (2025). Mediating role of psychological adjustment in the relationship between academic quality of life and self-regulation among students. *Iranian Evolutionary Educational Psychology Journal*, 7 (2), 1-11.
DOI: https//doi.org/ 10.22034/7.2.1

Publisher: University of Hormozgan.
DOI: https// doi.org/ 10.22034/7.2.1

[DOI: 10.22034/ieepj.2025.7.2.985]

Introduction

Academic quality of school life is influenced by multiple factors, one of which is self-regulation. Self-regulation plays a pivotal role in shaping students' academic quality of life. It can be defined as the conscious engagement of students in learning, behavioral, motivational, and cognitive processes aimed at achieving meaningful academic goals (Inzlicht et al., 2021; McClelland et al., 2017). Moreover, self-regulated learning is a multidimensional process encompassing metacognitive, emotional, behavioral, and motivational dimensions (Panadero, 2017; Poorgholamy et al., 2020; Zimmerman, 2013). This process includes self-confidence, motivation, and the ability to learn independently in challenging and open learning environments (Mallahi, 2024). By fostering greater understanding and control over one's learning, self-regulation enhances students' academic achievement, facilitates the organization of teaching and learning, and promotes higher levels of self-awareness, self-reflection, and adaptability (Babazadeh et al., 2021).

Empirical studies have confirmed these relationships. For example, the study by Rastgoo and Babakhani (2016) on the relationship between emotional self-regulation and academic quality of life among adolescents and young adults revealed that improved emotion regulation skills lead to higher academic quality of life. Similarly, Niu et al. (2022), in research conducted among high school students, found that academic self-regulation, school culture, and academic engagement not only directly influence academic quality of life but also indirectly, through the mediating role of teacher–student relationships, predict creative thinking. Mascia et al. (2020) further demonstrated that self-regulation plays a crucial role in influencing psychological well-being, academic well-being, and quality of school life in adolescents.

Another key construct examined in the present study is psychological adjustment. Psychological adjustment is a broad concept referring to the strategies individuals employ to manage stressful life situations—whether real or perceived threats (Ano & Vasconcelles, 2005; Paktinatan et al., 2022). In other words, it involves the successful interaction with others in a social context (Khoshravesh et al., 2015). It can be defined as the motivational, perceptual, cognitive, and emotional tendencies of individuals that shape their behavioral responses to life circumstances (Rava et al., 2022). Efforts to improve psychological adjustment can contribute significantly to enhancing the academic quality of life. It entails intentional modification of one's behavior to align

[DOI: 10.22034/ieepj.2025.7.2.985]

with existing cultural norms and includes components such as self-reliance, self-worth, sense of belonging, personal freedom, repressed tendencies, and somatic symptoms (Berkeley & Larsen, 2018).

Previous research underscores this link. Kleinemeier et al. (2010), in a study on individuals with chronic heart failure, found that increased adjustment levels led to improved academic quality of life, particularly in the sexual domain. Interventions that enhance individual adaptation may, therefore, improve multiple dimensions of quality of life. Similarly, Basharpoor and Sheykholeslami (2015) reported a significant association between adjustment and quality of life among women whose spouses were undergoing hemodialysis. More recently, Contreras et al. (2019) highlighted the importance of psychological adjustment in improving the quality of life for patients during the COVID-19 pandemic. Santos et al. (2006) further found that psychosocial adjustment significantly predicted the quality of life among Brazilian patients with various hematologic malignancies.

Schools are among the most important educational environments in which individuals spend a considerable portion of their daily lives. The role of schools extends beyond promoting students' academic achievement; it also includes fostering their physical, emotional, and social well-being. This requires a high level of academic quality of life in areas such as positive peer and teacher relationships, mental and physical health, opportunities for learning and academic advancement, development of positive emotions, and the creation of cohesive and effective relationships within the school environment (Converso et al., 2018).

Given the crucial role of academic quality of life, the present study aims to examine the relationships among self-regulation, academic quality of life, and psychological adjustment—with a particular focus on the mediating role of psychological adjustment—in high school students. By investigating both direct and indirect effects, this research seeks to provide a deeper understanding of the mechanisms through which self-regulation and adjustment contribute to students' quality of school life.

Material and Methods

The present study is an applied research project, employing a descriptive–correlational design to examine the relationships among self-regulation, psychological adjustment, and academic quality

[DOI: 10.22034/ieepj.2025.7.2.985]

of life in high school students. This design was chosen to identify both the direct and indirect associations between variables without manipulating the research environment, thereby enabling the collection of data in a natural educational setting.

The statistical population comprised all male and female upper-secondary school students (Grades 10–12) in Baharestan City during the 2022–2023 academic year. Using stratified sampling to ensure proportional representation of gender and grade level, a total of 300 eligible participants were selected. Stratification was employed to increase representativeness and minimize sampling bias by ensuring equal inclusion from both sexes and all three grade levels.

Instruments

Self-Regulation Questionnaire: Self-regulation was measured using the 15-item scale developed by Zimmerman and Martinez-Pons (1990). Responses were rated on a four-point scale ranging from 1 ("Not at all true of me") to 4 ("Completely true of me"), yielding a possible score range of 15–60. Higher scores indicated greater perceived self-regulatory ability. Zimmerman and Martinez-Pons (1990) confirmed the content validity of the instrument, and reported a Cronbach's alpha reliability coefficient of 0.70. In Iran, Salehi and Jafari (2015) verified face validity through expert judgment and reported test–retest and internal consistency reliabilities of 0.64 and 0.62, respectively.

Psychological Adjustment Questionnaire: Psychological adjustment was assessed using the 60-item instrument developed by Kasundra and Singh (2020), which measures emotional, social, and educational/academic adjustment. The response format is dichotomous ("Yes" = 1; "No" = 0), producing a total score range of 0–60, where lower scores indicate better adjustment. Kasundra and Singh (2020) reported split-half reliabilities of 0.95 (overall adjustment), 0.94 (emotional), 0.93 (social), and 0.96 (educational), as well as test–retest reliabilities of 0.93, 0.90, 0.96, and 0.93, respectively. In Iran, Isanezhad et al. (2012) reported an internal consistency coefficient of 0.91. Content and face validity were confirmed by three academic experts in counseling, psychometrics, and statistics.

Academic Quality of School Life Questionnaire: Academic quality of life was measured using the 39-item questionnaire developed by Ainley and Bourke (1992), assessing seven dimensions: general satisfaction, negative affect, teacher–student relationship, opportunity, achievement, adventure, and social integration. Items were rated on a four-point Likert scale ranging from 1

[DOI: 10.22034/ieepj.2025.7.2.985]

("Strongly disagree") to 4 ("Strongly agree"). Soltani Shal et al. (2011) confirmed convergent validity through correlations with the General Self-Efficacy Scale and the Adolescent Adjustment Scale, while content validity was verified by expert review. Cronbach's alpha reliability in prior research was reported as 0.85.

Data Collection Procedure

After obtaining official permission from educational authorities and informed consent from participants, questionnaires were administered collectively in school classrooms under researcher supervision. Students were assured of the confidentiality of their responses and informed that participation was voluntary.

Data Analysis

Data were analyzed using Pearson's correlation coefficient to examine the bivariate relationships among the variables. Statistical analyses were conducted with SPSS version 24, and the significance level was set at $p < .05$.

Results

Descriptive Statistics

Table 1 presents the descriptive statistics for self-regulation, psychological adjustment, and academic quality of life, including mean, standard deviation, skewness, and kurtosis values.

Table 1. Descriptive statistics for self-regulation, psychological adjustment, and academic quality of life

Variable	Skewness	Kurtosis	Mean	SD
Self-regulation	-0.156	0.203	35.83	4.235
Psychological adjustment	-0.491	0.394	32.19	6.744
academic quality of life	-0.632	1.260	87.50	11.504

The mean scores for self-regulation, psychological adjustment, and academic quality of life were 35.83, 32.19, and 50.87, respectively. Since all skewness and kurtosis values fell within the range of –2 to +2, the data can be considered approximately normally distributed at the 0.05 significance level.

Direct Effect of Self-Regulation on Academic Quality of Life

Table 2 reports the path coefficient between self-regulation and academic quality of life. The results indicated a positive and statistically significant path coefficient at the 0.01 level ($p < .01$).

[DOI: 10.22034/ieepj.2025.7.2.985]

These findings support the research hypothesis that self-regulation exerts a direct positive effect on academic quality of life.

Table 2. Path coefficient for the relationship between self-regulation and academic quality of life

Path	B	Beta	T value	P
Self-regulation to Academic quality of life	0.479	0.78	4.25	0.001

Indirect Effect of Self-Regulation via Psychological Adjustment

Table 3 presents the indirect effect of self-regulation on academic quality of life through the mediating variable of psychological adjustment. The results demonstrated that self-regulation positively influences psychological adjustment, which in turn contributes to higher levels of academic quality of life. This finding confirms the mediating role of psychological adjustment in the relationship between self-regulation and academic quality of life.

Table 3. Indirect path coefficient of self-regulation on academic quality of life through psychological adjustment

Indirect path				Beta	P
Self-regulation	⟶	Psychological adjustment	⟶ academic quality of life	0.038	0.05

Discussion

The results indicated that the indirect effect of self-regulation on academic quality of life through the mediating variable of psychological adjustment was statistically significant at the 0.05 alpha level. Therefore, the research hypothesis regarding the mediating role of psychological adjustment in the relationship between self-regulation and academic quality of life was confirmed. Furthermore, the path coefficient for the direct relationship between self-regulation and academic quality of life was positive and significant, confirming the hypothesis that self-regulation has a direct effect on academic quality of life.

These findings are consistent with previous research in the field. For example, Soorgi et al. (2020) found that the relationship between self-regulation and academic performance, with the mediating role of academic vitality, exhibited both a full effect and a significant direct effect, although the indirect effect was not significant. Gaxiola-Romero et al. (2020), in a study of secondary school students, reported that self-regulated learning, school culture, and academic engagement predicted creative thinking both directly and indirectly through teacher–student relationship quality, with

[DOI: 10.22034/ieepj.2025.7.2.985]

academic quality of life serving as a mediator. Rastgoo and Babakhani (2016) found that higher emotional self-regulation skills were associated with improved academic quality of life in adolescents and young adults. Similarly, Mascia et al. (2020) reported that self-regulation plays a key role in influencing psychological and academic well-being, as well as academic quality of life in adolescents.

The above findings can be explained by the fact that self-regulation is a process that students regularly employ to support and guide their behavior during thinking and problem-solving to achieve academic goals. Using self-regulation skills enables individuals to control their thoughts and behaviors, plan effectively, complete tasks, and solve problems (McClelland et al., 2019). These skills also help learners adapt to classroom demands and expectations. Since the primary aim of self-regulation is goal attainment, students who perceive themselves as capable of reaching their goals experience less psychological stress and greater feelings of calmness and vitality.

From another perspective, self-directed learning is an intentional process whereby learners activate and sustain their thoughts, behaviors, and emotions toward achieving specific objectives. This fosters a sense of competence, autonomy, and resilience in the face of academic challenges, leading to greater satisfaction and enjoyment in their academic life, and consequently, a higher academic quality of life.

With regard to the mediating effect of psychological adjustment, the results confirm that self-regulation indirectly influences academic quality of life through this variable. While no previous study has examined this specific mediation directly, the finding is consistent with the broader literature on self-regulated learning as an active and organized process in which learners set goals for learning and regulate, control, and monitor their cognition, motivation, and behavior. Self-regulation assists students in monitoring their learning during tasks and in selecting effective strategies. It is also central to impulse control, time management, and coping with academic stress, and is closely related to self-referential systems, goal orientation, emotional and cognitive self-efficacy, and motivation (Vollmeyer & Rheinberg, 2006).

The school environment can also be regarded as one of the key assets of the educational setting. A supportive environment fosters knowledge creation and sharing, thereby enhancing academic achievement. Constructive collaboration with peers is instrumental for personal and academic success. When students learn the skills needed to adapt to others, they develop these abilities

[DOI: 10.22034/ieepj.2025.7.2.985]

through repeated social interactions, group activities, and guided conflict resolution by teachers. Consequently, improved adaptability contributes to better academic quality of life within the school setting.

This study was limited to urban areas and did not include rural regions. The sample consisted solely of male and female students from public upper-secondary schools, excluding students from private institutions. Future research should include diverse educational contexts to improve generalizability. It is recommended that educational policymakers and curriculum designers pay closer attention to enhancing students' academic quality of life. Workshops aimed at fostering self-regulation processes and psychological adjustment could be effective in improving students' academic experiences and outcomes.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

Funding

The authors did (not) receive support from any organization for the submitted work.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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[DOI: 10.22034/ieepj.2025.7.2.985]