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Predicting Academic Adjustment of Students Based on Emotional Intelligence, Resilience, and Social Support

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ABSTRACT

This research was conducted with the aim of examining the role of emotional intelligence, resilience, and perceived social support in predicting academic adjustment of students. The research method was descriptive-correlational. The statistical population included 555 students from the Faculty of Educational Sciences and Psychology at Birjand University in the academic year 2022-2023, of which 237 were selected using stratified random sampling method. The research instruments included the Academic Adjustment Questionnaire by Baker and Siryk (1984), Emotional Intelligence Questionnaire by Schutte (1995), Resilience Questionnaire by Connor and Davidson (2003), and Perceived Social Support Questionnaire by Zimet et al. (1988). Data were analyzed using Pearson correlation coefficient and stepwise multiple regression. Pearson correlation results showed that the strongest relationship existed between resilience and academic adjustment (r=0.63). Additionally, significant relationships were found between emotional intelligence (r=0.49) and social support (r=0.31) with academic adjustment. Regression analysis showed that the three variables together explained 75% of the variance in academic adjustment. Resilience alone predicted 39%, together with emotional intelligence 62%, and with the addition of social support 75% of the changes in academic adjustment. The findings highlight the importance of developing these skills in improving students' academic adjustment.

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Introduction

In contemporary scholarly discourse, researchers and educators have increasingly illuminated the pivotal significance of student-teacher relationships in cultivating favorable educational outcomes, encompassing academic engagement, emotional growth, and psychological well-being (Pianta, 2013; Pianta & Stuhlman, 2004). The classroom environment serves not merely as a venue for the dissemination of academic knowledge but also as an essential social milieu wherein interpersonal relationships exert a profound influence on students' motivation, attitudes, and academic performance. Among the most consequential of these interpersonal connections is the relationship between students and their educators, which has the potential to act as a protective mechanism against academic disengagement, school-related stressors, and socio-emotional challenges (Roorda et al., 2011).

The dynamics of student-teacher relationships are inherently multidimensional and encompass crucial elements such as emotional support, trust, effective communication, and mutual respect (Gillespie, 2005; Skipper & Douglas, 2015). When students perceive their educators as warm, supportive, and equitable, they are more inclined to experience a sense of safety, value, and motivation to engage actively in academic endeavors (Davis, 2003). In contrast, negative or apathetic relationships can precipitate feelings of alienation, diminished motivation, and academic withdrawal (Hamre et al., 2014). Consequently, educators are increasingly urged to cultivate relational competencies that facilitate students' academic and emotional development.

Academic engagement, which incorporates behavioral, emotional, and cognitive dimensions, is widely acknowledged as a critical predictor of student achievement and overall school success (Fitriyani & Gusripanto, 2021; Fredricks et al., 2005). Students who exhibit behavioral engagement actively participate in classroom activities and adhere to established norms; those demonstrating emotional engagement show interest and maintain positive attitudes toward learning; while cognitively engaged students commit to deep learning and strategic thought processes. The quality of interactions between students and teachers has been empirically shown to directly affect all three types of engagement. Educators who exhibit empathy, encouragement, and responsiveness can foster a sense of belonging and motivate sustained effort among their students (Aghasaleh et al., 2024; Fall & Roberts, 2012).

While the direct correlation between student-teacher relationships and academic engagement is well substantiated, psychological well-being has emerged as a potentially significant mediating variable within this nexus (Rimm-Kaufman & Sandilos, 2011). Psychological well-being is defined as the optimal functioning of individuals characterized by positive emotions, self-acceptance, a sense of purpose in life, autonomy, and environmental mastery (Ryff & Singer, 2008; Sulosaari et al., 2022). Adolescents who report elevated levels of psychological well-being typically manifest more favorable attitudes toward school, improved academic performance, and heightened engagement with academic tasks (Suldo et al., 2022). Supportive teacher relationships can facilitate enhancements in students' psychological well-being by providing emotional security, fostering self-esteem, and promoting autonomy (Brunelle et al., 2007).

Emerging empirical evidence suggests that student-teacher relationships may indirectly bolster engagement by enhancing students' psychological well-being (Thapa et al., 2013). For instance, educators who provide emotional support and cultivate a sense of competence can assist students in developing a more positive self-concept and enhanced life satisfaction, which may subsequently augment their intrinsic motivation and willingness to engage in academic activities (Baker et al., 2008). Similarly, a nurturing classroom environment may act as a buffer against external stressors and mitigate symptoms of anxiety and depression, thereby enabling students to concentrate more effectively on their academic objectives (Longobardi et al., 2016).

In accordance with Self-Determination Theory (SDT), supportive relationships between students and teachers serve to satisfy fundamental psychological needs—namely, relatedness, autonomy, and competence—thereby facilitating psychological development and intrinsic motivation (Deci & Ryan, 2012).

When these essential needs are fulfilled, students exhibit a heightened likelihood of experiencing well-being and engaging constructively within the educational process. Consequently, the intermediary function of psychological well-being provides a sophisticated understanding of how educator behaviors affect student outcomes beyond the confines of immediate classroom dynamics (Deci et al., 2017).

Notwithstanding the expanding corpus of literature emphasizing the significance of affirmative teacher-student interactions, a limited number of studies have investigated the mediating role of psychological well-being in the nexus between student-teacher relationships and academic engagement, particularly within the realm of secondary education in non-Western contexts. Cultural norms, the roles of educators, and the expectations of students differ markedly across societies, thus necessitating culturally attuned inquiries that encapsulate the intricacies of these relationships within diverse educational frameworks (Cheung, 2019).

Furthermore, adolescence represents a crucial developmental phase marked by emotional transformations, the formation of identity, and heightened academic demands (Eccles et al., 1993). During this formative period, educational institutions serve not merely as venues for knowledge acquisition but also as vital social environments where interactions with educators and peers significantly contribute to students' self-esteem and overall life satisfaction. Elucidating how psychological well-being mediates the relationship between student-teacher interactions and academic engagement can provide valuable insights for interventions aimed at enhancing both the mental health and academic achievements of adolescents (Wentzel et al., 2010).

Consequently, the present inquiry intends to address the following research questions: (1) To what degree do student-teacher relationships serve as predictors of students' academic engagement? (2) What is the nature of the relationship between student-teacher relationships and students' psychological well-being? (3) Does psychological well-being act as a mediator in the relationship between student-teacher relationships and academic engagement? Through the exploration of these inquiries, the current research aspires to enrich the existing literature by proposing a comprehensive model that synthesizes relational, psychological, and behavioral dimensions of student functioning.

The results derived from this study may yield significant implications for educational practices and policy formulation. Should psychological well-being be established as a mediating factor between student-teacher interactions and academic engagement, educational institutions could prioritize mental health enhancements as a strategic approach to fostering academic success. Additionally, teacher training programs may be structured to encompass elements focused on emotional intelligence, relationship cultivation, and awareness of student mental health (Jennings & Greenberg, 2009).

In conclusion, student-teacher relationships occupy a central role in shaping students' educational experiences. Beyond their direct impact on academic outcomes, these relationships also contribute to the psychological well-being of students, which subsequently influences their degree of academic engagement. By investigating the mediating role of psychological well-being, this study aims to address a significant gap in the literature and provide actionable insights for educators and mental health practitioners.

Method

Sample and Sampling Method

The sample for this study consisted of 380 high school students (190 males and 190 females) selected from public high schools in Ahvaz, Iran. Participants ranged in age from 15 to 18 years, with a mean age of 16.4 years (SD = 0.91). The sample was drawn using a multistage cluster sampling method to ensure representation across different schools and grades. Prior to data collection, informed consent was obtained from all participants and school administrations. Participation was voluntary, and anonymity was guaranteed**.**

Tools Used

Student-Teacher Relationship Scale – Short Form (STRS-SF): This scale Developed by Pianta (2020), this 15-item instrument assesses students' perceptions of their relationship with teachers across three dimensions: Closeness, Conflict, and Dependency. Responses are scored on a 5-point Likert scale ranging from 1 (definitely does not apply) to 5 (definitely applies). Higher scores on the Closeness subscale reflect stronger positive relationships, while higher scores on the Conflict subscale indicate strained relationships. The Persian version of the scale was validated in previous Iranian research, with Cronbach's alpha coefficients ranging from 0.73 to 0.85.

Academic Engagement Scale: Academic engagement was measured using the scale developed by Freda et al. (2021). This scale assesses three core components: behavioral engagement, emotional engagement, and cognitive engagement. It contains 15 items rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). This instrument has demonstrated high reliability and validity across diverse adolescent populations. In the current study, internal consistency for the total scale was satisfactory (Cronbach's alpha = 0.87).

Ryff's Psychological Well-Being Scale (18-Item Version): Psychological well-being was measured using the 18-item short version of Ryff's Psychological Well-Being Scale (Ryff & Singer, 2008). The scale includes six subscales: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance, with three items per subscale. Responses are given on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). This scale has been widely used in psychological research and adapted for Iranian adolescents with good psychometric properties (Cronbach's alpha in the present study = 0.84).

Procedure

The study was approved by the Ethics Committee of the Islamic Azad University. After obtaining necessary permissions from the Education Department of Ahvaz, the researchers coordinated with school counselors and administrators for data collection. Questionnaires were administered in classrooms during regular school hours by trained research assistants. Students were briefed on the objectives of the study and assured that their responses would be confidential and used solely for research purposes.

The data were analyzed using Structural Equation Modeling (SEM) to test the hypothesized model, which posited that psychological well-being mediates the relationship between student-teacher relationships and academic engagement. The SEM analyses were conducted using AMOS version 24. Model fit was evaluated using several fit indices, including:

- Chi-square (χ^2) and degrees of freedom
- Comparative Fit Index (CFI $\geq$ 0.90)
- Root Mean Square Error of Approximation (RMSEA $\leq$ 0.08)
- Standardized Root Mean Square Residual (SRMR $\leq$ 0.08)

Prior to SEM, data screening procedures were conducted to check for missing values, outliers, and normality. No major violations were found. The bootstrap method (n = 5,000 resamples) was used to test the significance of indirect effects in the mediation analysis.

Results

Descriptive Statistics and Correlations

Table 1 displays the means, standard deviations, and Pearson correlation coefficients for all study variables. The results indicated significant positive correlations among student-teacher relationship quality, psychological well-being, and academic engagement.

Table 1. Descriptive Statistics and Correlations (N = 380)

Variable	M	SD	1	2	3
Student-Teacher Relationship	3.72	0.68	---		
Psychological Well-Being	4.01	0.59	.53**	---	
Academic Engagement	3.85	0.62	.47**	.59**	---

****p < .01**

Assumptions of SEM

Prior to testing the structural model, the assumptions of SEM were evaluated:

Normality: Skewness and kurtosis values for all variables were within ±1, indicating acceptable univariate normality.

Multicollinearity: VIF values ranged between 1.21 and 2.13, indicating no serious multicollinearity issues.

Linearity and homoscedasticity: Visual inspection of residual plots supported these assumptions.

No significant outliers were detected, and missing data were less than 5% and handled using expectation-maximization imputation.

Measurement Model Evaluation

A Confirmatory Factor Analysis (CFA) was conducted to assess the measurement model, including the latent constructs: student-teacher relationship, psychological well-being, and academic engagement. All factor loadings were above .50 and statistically significant ($p < .001$), supporting convergent validity. The model fit indices for the measurement model were acceptable:

- $\chi^2(132) = 271.34$, $p < .001$
- CFI = 0.94
- RMSEA = 0.052 [90% CI: 0.043–0.061]
- SRMR = 0.045

These indices indicate a good model fit according to Hu & Bentler's (1999) recommendations.

Structural Model and Hypothesis Testing

The hypothesized model included a direct path from student-teacher relationship to academic engagement, and an indirect path mediated by psychological well-being. The model showed a good fit to the data:

- $\chi^2(134) = 279.12$, $p < .001$
- CFI = 0.93
- RMSEA = 0.053
- SRMR = 0.047

Figure 1 illustrates the standardized path coefficients in the structural model.

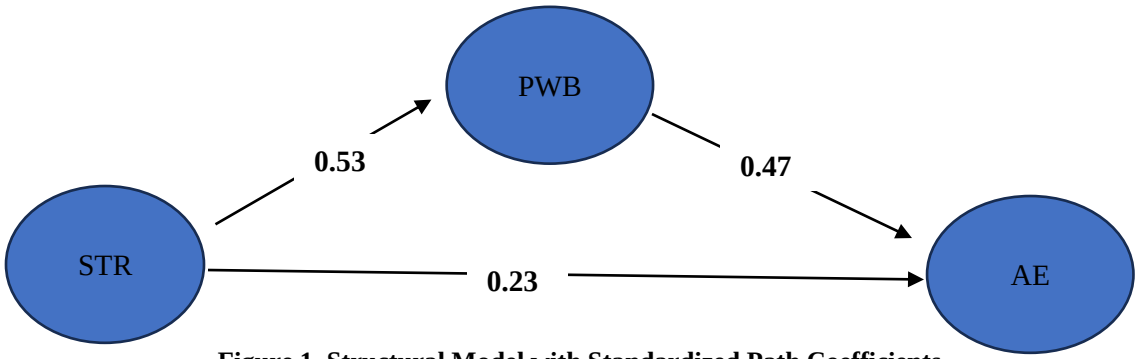

Figure 1. Structural Model with Standardized Path Coefficients

Table 2. Standardized Path Coefficients

Pathway	Standardized β	SE	p-value
Student-Teacher Relationship → Psychological Well-Being	0.53	.04	<.001
Psychological Well-Being → Academic Engagement	0.47	.05	<.001
Student-Teacher Relationship → Academic Engagement	0.23	.06	<.01

The indirect effect of student-teacher relationships on academic engagement via psychological well-being was tested using bootstrapping (5000 resamples). The indirect effect was significant:

Indirect effect = 0.25, 95% CI [0.17, 0.34], $p < .001$. Since both direct and indirect effects were significant, partial mediation was supported. These results support the hypothesized model and indicate that nurturing student-teacher connections may enhance student engagement by improving their psychological well-being.

Discussion & Conclusion

The present study investigated the direct and indirect relationships between student-teacher relationships, psychological well-being, and academic engagement among high school students in Ahvaz, Iran. The results supported the hypothesized model, indicating that psychological well-being partially mediates the effect of student-teacher relationships on academic engagement. These findings carry both theoretical and practical implications and align well with previous research while contributing uniquely to the educational context of Iranian adolescents.

The significant association between positive student-teacher relationships and academic engagement is consistent with prior literature (Roorda et al., 2011; Wang & Eccles, 2013), which emphasizes that emotionally supportive and respectful interactions with teachers foster students' motivation and participation in academic tasks. The findings also echo the work of Hamre et al. (2012), who noted that students who perceive their teachers as caring and trustworthy tend to engage more actively in school activities.

Moreover, this study extends prior findings by identifying psychological well-being as a key mediator. This is consistent with Ryff and Singer (2008), who argue that emotional and psychological health enhances individuals' capacity to persist, concentrate, and find meaning in their efforts—factors crucial for academic engagement. Fredricks et al. (2005) similarly argue that students' emotional and cognitive well-being are foundational to their behavioral engagement in learning contexts.

Our results also align with studies showing that student-teacher connectedness predicts positive affect and reduces symptoms of anxiety and depression (Longobardi et al., 2016; Suldo et al., 2009). Given that well-being contributes to adaptive behaviors such as persistence and attention, it logically supports the pathway linking teacher support to student engagement through psychological well-being (Zhou et al., 2022).

Psychological well-being appears to serve as a psychological resource that facilitates student engagement. When students feel respected, understood, and supported by their teachers, they are more likely to develop a sense of purpose, autonomy, and confidence—components of Ryff and Singer (2006) well-being model. These attributes, in turn, energize them to invest effort and persist in academic tasks, even when faced with challenges.

The partial mediation found suggests that while psychological well-being explains a significant portion of the relationship between student-teacher interactions and engagement, the student-teacher relationship itself also has a direct influence. This implies that simply fostering positive emotional ties with students may independently contribute to greater academic participation, regardless of internal psychological states.

Despite these meaningful insights, the study has several limitations. First, the cross-sectional design restricts causal inferences. Longitudinal data would allow a more robust examination of temporal relationships

among the variables. Second, all measures were based on self-reports, which may be subject to social desirability and response biases. Multi-informant assessments, including teacher ratings or observational data, could enhance validity. Third, cultural specificity may limit generalizability. The findings are drawn from a sample of Iranian adolescents, and cultural values regarding teacher authority and emotional expression may influence responses. Replication in other cultural contexts would be beneficial.

Future studies should employ longitudinal or experimental designs to clarify causality and track changes over time. Researchers could also explore moderating variables, such as gender, grade level, or socioeconomic background, to examine for whom and under what conditions student-teacher relationships are most impactful. Moreover, examining other potential mediators—such as motivation, school climate, or academic self-efficacy—could enrich our understanding of the mechanisms behind student engagement. Additionally, qualitative research might provide deeper insights into how students subjectively interpret and experience teacher support and psychological well-being.

The findings suggest that educational practitioners should focus on cultivating emotionally responsive teacher-student relationships. Training teachers in emotional intelligence, empathy, and communication strategies may enhance their ability to connect with students in ways that promote both well-being and academic involvement. School counselors and psychologists might also consider targeted interventions to improve psychological well-being, including mindfulness programs, self-esteem workshops, and resilience training, as a means of supporting engagement.

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