



# **The Mechanism of Adolescent Depressive Symptoms Affecting Academic Engagement: The Mediating Effect of Teacher-Student Relationship and Its Temporal Characteristics**

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## **Abstract**

This longitudinal study investigates the mediating role of teacher-student relationships in the link between depression and academic engagement among adolescents. A sample of 726 adolescents (mean age = 13.6 years) was assessed across two time points to examine short-term and long-term effects. The results revealed that depressive symptoms significantly and negatively predicted academic engagement both in the short-term ( $\beta = -0.49, p < 0.001$ ) and long-term ( $\beta = -0.36, p < 0.001$ ), although the long-term effect was weaker. Teacher-student relationships were found to be a partial mediator. The short-term indirect effect ( $\beta = -0.12, 95\% \text{ CI } [-0.19, -0.07]$ ) accounted for 19.9% of the total effect, which was substantially larger than the negligible long-term indirect effect ( $\beta = -0.02, 95\% \text{ CI } [-0.04, 0.00]$ ). Prior academic engagement positively predicted subsequent engagement. These findings indicate that depression impairs academic engagement both directly and indirectly by damaging teacher-student relationships, with this mediation being more pronounced in the short term. This highlights the need for educational interventions focused on fostering positive teacher-student relationships to mitigate the academic impacts of adolescent depression.

**Keywords:** Adolescent Depression, Academic Engagement, Teacher-Student Relationship, Mediating Effect, Longitudinal Study