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## The role of mental health, academic stress, academic achievement, and physical activity on self-rated health among adolescents in Iran: A multilevel analysis

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## **Abstract**

**BACKGROUND:** Health promotion of adolescents requires appropriate evidences of its determinants. The aim of this study was to investigate predictors of self-rated health (SRH) among adolescents in Qazvin, Iran.

MATERIALS AND METHODS: In this descriptive cross-sectional study, with a multistage sampling method, we recruited 1740 adolescents aged 12–19 years from 53 schools in Qazvin, Iran (2018). We used the Strengths and Diffculties Questionnaire and Adolescents' Academic Stress Questionnaire for data collection. The analysis was conducted using a multilevel logistic regression model. Gender, educational period, and socioeconomic status were considered as confounders.

**RESULTS:** Almost 21% of the adolescents reported their SRH suboptimal. Suboptimal SRH was higher in girls and older adolescents. Mental health disorders and academic stress had a positive association with SRH. However, this association was negative for academic achievement and physical activity. The interaction between mental health disorders and academic stress with SRH had a significant association in a crud regression model.

**CONCLUSION:** Mental health, academic stress, academic achievement, and physical activity were important predictors for SRH. Interventions that focus on promoting mental health,

academic stress, academic achievement, and physical activity such as physical activity for 1 h and each day for 3 days per week can improve SRH in adolescents. Hence, policymakers should pay more attention to this issue in health promotion programs of adolescents.

**Keywords:** Academic achievement, academic stress, adolescents, Iran, mental health, physical activity, selfrated health