Original Article

Academic Stress and Adolescents Mental Health: A Multilevel Structural Equation Modeling (MSEM) Study in Northwest of Iran

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ABSTRACT

Background: We aimed to determine the relation of different sources of academic stress and adolescents´ mental health through mediator variables on the student and school levels.

Study design: A cross-sectional study.

Methods: Overall, 1724 students aged 12-19 yr were selected from 53 high schools in Qazvin City, northwest instead of central Iran through stratified cluster sampling. The sources of academic stress include family conditions, education system, future concerns, academic competitions, interaction with teachers, school disciplines, peer pressure, parental involvement, and financial problems. Academic self-efficacy and self-concept were the mediator constructs. The students and schools´ information were considered on levels 1 and 2, respectively. A Multilevel Structural Equation Modeling (MSEM) analysis was done.

Results: High value of academic stress was associated with reduction of mental health. On the student level, the academic stress caused by the families 0.31 (95% CI: 0.28, 0.34), peers 0.29 (95% CI: 0.27, 0.32), and the education system 0.21 (95% CI: 0.18, 0.24) had the highest impact on the adolescents´ mental health, respectively. There was a direct and indirect relation between academic stress and mental health through the self-concept. On the school level, only family conditions stress had a relation with mental health (P=0.015, b=1.08). Academic self-efficacy showed no significant relation in the model.

Conclusion: The stress from the family is the most important source of stress associated with adolescent mental health. Self-concept unlike academic self-efficacy had an important mediating role in the relation between different sources of academic stress and adolescents' mental health.

Introduction

Adolescent mental health is linked to psychophysical and behavioral changes of adolescence [1]. Now mental health disorders are considered newly emerging problems in the low and middle-income countries [2]. Since adolescents have spent most of their time at schools, so academic stress is considered as one of the major risk factor to their mental health [3]. In some communities, the only task of the adolescents is having excellent academic performance, so, the educational related issues can severely affect their health [4].

In the Iranian education system, the most important source of the academic stress is participating to university entrance national exam (Konkour) [5]. In a qualitative study on 450 Iranian high school students, who were willing to enter university, the academic stress had been caused by different sources [6]. The research on other societies has similarly unveiled the different sources of adolescence stress [7-9]. Hence, determining the relation of different sources of academic stress with adolescents mental health is important, but it has been overlooked in studies and it is necessary to explore the role of personality traits and mediator variables in this process. In this regard, two important mediator constructs involved in adolescents mental health, are self-concept and self-efficacy. Self-efficacy is the individual´s belief in his abilities to succeed in the given situation [10].

One of these situations is education, associated with academic self-efficacy [11, 12]. Self-concept is the set of personal attitudes, feelings, and knowledge of one´s abilities and skills that can significantly improve people´s lives [13]. Since, adolescents´ health in many societies is affected by the popular culture and the education system, so it is not possible to decide on the effect of the education systems of other societies based on the findings from the aforesaid research. Certainly, it is not