



Contents lists available at [ScienceDirect](#)

Journal of Adolescence

journal homepage: [www.elsevier.com/locate/jado](http://www.elsevier.com/locate/jado)



## Co-occurrences between adolescent substance use and academic performance: School context influences a multilevel-longitudinal perspective



Fernando H. Andrade\*

*School of Social Work, University of Michigan, 2846 Verle Av., Ann Arbor, MI 48109, USA*

### A B S T R A C T

#### Keywords:

Substance use  
Academic performance  
Adolescents  
Co-occurrences  
School context  
Multilevel longitudinal

A growing body of literature has linked substance use and academic performance exploring substance use as a predictor of academic performance or vice versa. This study uses a different approach conceptualizing substance use and academic performance as parallel outcomes and exploring two topics: its multilevel-longitudinal association and school contextual effects on both outcomes. Using multilevel Confirmatory Factor Analysis and multilevel-longitudinal analyses, the empirical estimates relied on 7843 students nested in 114 schools (Add Health study). The main finding suggests that the correlation between substance use and academic performance was positive at the school level in contraposition to the negative relationship at the individual level. Additional findings suggest a positive effect of a school risk factor on substance use and a positive effect of academic pressure on academic performance. These findings represent a contribution to our understanding of how schools could affect the relationship between academic performance and substance use.

© 2014 The Foundation for Professionals in Services for Adolescents. Published by Elsevier Ltd. All rights reserved.

### Introduction

The contextual influences that affect adolescents well-being can range from macro social influences such as culture to micro social influences such as family, friends and schools. Among all these micro contextual influences, the school stands out as one of the most important contexts besides the family (Meece & Schaefer, 2010, pp. 3–5). Schools are pivotal environments fostering most adolescents in several areas of their development; however, school environments could expose adolescents to at-risk behaviors –violence, ganging and bullying, early sex initiation and substance use–; which could substantially affect their development.

Besides the benefits of formal education, schools also have an informal component that traditionally has been studied under the well-established idea of the “hidden curriculum” (Dewey, 1916; Freire, 1972). More recently, Haralambos, Holborn, and Heald (2008) defined the hidden curriculum as those “things” –not intended or stated as educational objectives– that students learn by attending schools. This idea provides a general conceptual justification to address issues such as school effects on non-educational outcomes.

\* Tel.: +1 734 709 4684.

E-mail address: [fandrade@umich.edu](mailto:fandrade@umich.edu).

Among non-educational outcomes, disrupting experiences such as substance use have been linked to academic performance. Research linking them typically suggests that as levels of substance use increase academic performance could decrease. In opposition, as academic performance improves, adolescents might be less likely to consume drugs (Bachman et al., 2008; Brook, Stimmel, Zhang, & Brook, 2008; Crosnoe, 2006; Newcomb & Bentler, 1986).

However, by the time adolescents are attending high schools, substance use might not be an isolated phenomenon presiding academic performance or vice versa; an alternative perspective suggests that substance use and academic performance became a correlated phenomenon such that it is difficult to distinguish between cause and effect. Under this perspective substance use and academic performance are conceptualized as co-occurrences (i.e. parallel outcomes interacting across time). This conceptualization is different from the conventional way where substance use presides academic performance or vice versa.

In addition, research addressing the relationship between substance use and academic performance has mainly focused on individual characteristics that condition this relationship. Despite the growing interest in exploring school effects on non-educational outcomes, few studies have integrated school- context predictors; which might modify the substance use-academic performance relationship. Thus, this study integrates the school component as another relevant set of factors that could explain the co-occurrences between substance use and academic performance.

#### *School effects on education and substance use*

There is only a handful of studies that sought to examine if, and how, the school context may have an effect on the substance use-academic performance relationship. It is key to make a distinction between two types of literature related to school research. One type of research uses “individual-level school-related exposure” measurements as described by Fletcher, Bonell, and Hargreaves (2008), which mainly refer to the use of the students perceptions, attitudes, feelings and ideas related to his or her school, see for example, Bryant, Schulenberg, O'Malley, Bachman, and Johnston (2003) and Bryant and Zimmerman (2002). Although, school related measurements are used, this literature focuses on the individual rather than school characteristics.

The second type of research is more scant outside the educational realm and explores how school-level characteristics may influence the relationship between academic performance and substance use. These few studies suggests that schools can affect simultaneously both outcomes. For example, Crosnoe (2006) found that adolescents attending schools with higher rates of academic failure were more likely to drink more and fail in grades. The author also found that school rates of teacher-bonding and school attachment served as protective factors against academic failure and alcohol use.

Thus, this study searches for empirical evidence that could account for school contextual effects on the co-occurrence between substance use and academic performance. The empirical question guiding the study is: does the school context influence the co-occurrence between academic performance and substance use?

#### *School context framework and rationale*

To address this research question, this study is informed by a theoretical framework derived from the ecological model (Bronfenbrenner, 2005, 1979). Based on this model, Eccles and Roeser (2011, pp. 6–22) proposed a school model to frame research that accounts for school effects in several domains of adolescent and children experiences. The authors understand the context of schooling as the process where the social and macro levels come together with the middle and micro levels. At the micro levels the schools are conceptualized as hierarchical organizations, e.g. students nested in schools (Eccles & Roeser, 2010, pp. 6–22; 1999, pp. 503–554).

However, this theoretical perspective does not specify details on how the school context could affect both substance use and academic performance. In fact, research in education faces a similar challenge in explaining how the school context translates into higher or lower levels of academic performance. For instance, Sørensen and Morgan (2000) highlighted that a basic flaw in most school effects research is that there is not enough conceptualization of how the school and students interact in the learning process. Given the absence of a comprehensive theoretical framework to study school effects on non-academic outcomes; an efficient way to proceed is to generate parsimonious rationales that could explain how the school context might affect the co-occurrence between substance use and academic performance.

To outline these rationales, the school context is defined as a construct, which is not directly observable with three dimensions: (a) school risk factor, (b) school academic and social problems and (c) school academic pressure.

#### *School risk factor and school social/academic problems*

These two school context dimensions are based on the fact that schools are socially composed mainly by students who come to schools with a set of attributes such as skills, beliefs, attitudes and problems. Based on possible problems that adolescents bring to school, it could be assumed the existence of a general school risk factor reflecting on levels of school delinquent behaviors, rates of mental health, low levels of self-esteem, student–school bonding. It also could be assumed the existence of social and academic problems at schools reflecting on how teacher and students relate.

These two factors might represent a ‘risk and problematic atmosphere’ which could affect student substance use and academic performance. This atmosphere would be similar to the concept of “herd immunity or community immunity”

Download English Version:

<https://daneshyari.com/en/article/880737>

Download Persian Version:

<https://daneshyari.com/article/880737>

[Daneshyari.com](https://daneshyari.com)