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Does socioeconomic status moderate the relationships between school connectedness with psychological distress, suicidal ideation and attempts in adolescents?

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ABSTRACT

Objective. Research has indicated that school connectedness acts as a buffer against depressive symptoms and suicidality. However, little is known about the role of socioeconomic status (SES) on these links. The present study examined the moderating role of subjective SES and parental education on the relationships between school connectedness and psychological distress, suicidal ideation and suicide attempts.

Methods. Data were gathered from 4955 participants within the 2013 cycle of the Ontario Students Drug Use and Health Survey, a province-wide repeated school-based survey of students in grade 7 to 12 across Ontario, Canada.

Results. Results indicated that higher subjective SES is associated with high levels of school connectedness. Subjective SES is also a significant moderator of the association between school connectedness and psychological distress, but not between school connectedness and suicidal ideation or attempts. At low subjective SES, there was no difference in risk of psychological distress between students with high and low levels of school connectedness. However, at higher subjective SES, students with high levels of school connectedness have lower odds of psychological distress than those with low levels of school connectedness. The associations between school connectedness and each of the mental health outcomes did not significantly vary with parental education.

Conclusions. These findings suggest that the beneficial effects of school connectedness on mental health problems may be more strongly related to adolescents' status beliefs rather than parental education. Future research is needed to better understand the mechanism through which subjective SES and school connectedness influence psychological distress.

Introduction

School connectedness, also known as school attachment, school climate or school bonding, is the belief among students that teachers and other adults within the school care about them as individuals and care about their learning (Wingspread Declaration on School Connections, 2004). Research studies have shown that students who feel connected to school are more likely to have a number of positive health and academic outcomes (Bond et al., 2007; Dornbusch et al., 2001; Resnick et al., 1993; Shochet et al., 2007). School connectedness has also been shown to be a key protective factor that lowers the risk of engaging in health-compromising behavior in youth. For example, Dornbusch et al. (2001) prospectively showed that higher levels of school connectedness were strongly associated with students' delayed initiation of tobacco, alcohol and cannabis use, delinquency, and violent behavior after a 1-year follow-up. School connectedness is grounded within attachment theory and such models as the Social Development Model (Berkman et al., 2000; J., 1980). Attachment theory argues that psychological and social development is based on secure emotional bonds with important persons such as parents or other adults (Bowlby, 2005). Such bonds help with positive development and buffer the effects of negative experiences. The Social Development Model builds on attachment theory and suggests that school connectedness is based on students' sense of attachment and commitment to school as well as their involvement in school (Catalano et al., 2004). According to the model, patterns of behavior are learned from the social environment and when there is consistency in the socializing process, a social bond is formed between individuals and others within the social environment. As schools are primary socializing units or agents, social bonds that reflect attachment and commitment between an individual student and others within the school could develop. Once secure, such school bonding would inhibit beliefs and behaviors inconsistent with the norms and values of the school.

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The possible role of school connectedness in preventing depression and suicide and related behaviors has received considerable attention in the last decade. Research has shown that higher levels of school connectedness are linked with reduced depressive symptoms and suicidal behavior in children and adolescents (Resnick et al., 1997; Whitlock et al., 2014; Logan, 2009; Langille et al., 2012; Shochet et al., 2006). Likewise, longitudinal studies have shown that lower levels of school connectedness are associated with depressive symptoms among adolescents (Shochet et al., 2006; Lester et al., 2013; Costello et al., 2008). Studies using samples of Canadian middle and high school students have also reported similar results. For example, Langille et al. (2012, 2015) documented the inverse associations of school connectedness with depressive symptoms and suicidality. Fostering school connectedness has therefore been considered as a practical evidence-based strategy for mental health promotion. For instance, the Centers for Disease Control and Prevention (2008) (CDC) has made connectedness promotion the central focus of their suicide-prevention efforts. However, little is known about circumstances where the protective effects of school connectedness against mental health problems are most potent.

Among various factors influencing school connectedness in adolescents, the role of socio-economic status has received very little attention. Some research suggests that low SES negatively influences school connectedness (Bonny et al., 2000; Felner et al., 1995; Ingersoll, 1999; Lee and Croninger, 1994). For example, studies utilizing more objective SES measures have found that adolescents from low SES families or of low-educated parents have lower levels of school connectedness compared to their peers from middle and upper SES families (Bonny et al., 2000; Felner et al., 1995). Studies have further shown that students in low-income schools are more disadvantaged than those in high-income schools, as they have less qualified teachers and less parental involvement (Ingersoll, 1999; Lee and Croninger, 1994). In the face of greater disadvantage, encouragements and attachments within schools may be particularly protective. In contrast to school connectedness, much research has examined the association between SES and mental health problems. Some research has indicated that adolescents from low SES families or with low-educated parents are more likely to have higher risk of psychological distress and suicidal behavior compared to those from high SES families or with highly-educated parents (Aschan et al., 2013; Dubow et al., 1989). There is a lack of research, however, on whether the protective effects of school connectedness on psychological problems are similar across diverse levels of SES.

Research has shown that both objective measures of SES (e.g., income, parental education) and subjective measures that reflect an individual's perceptions of family SES are related to aspects of adolescent health and health-related behavior (Hamilton et al., 2014; Gong et al., 2012; Hamilton et al., 2009; Hanson and Chen, 2007; Jeon et al., 2013). There are suggestions that the importance of more objective aspects of SES becomes reduced during adolescent development because of their exposure to a wider diversity of individuals and experiences (West, 1997). Among adolescents, subjective assessments of SES may reflect their beliefs or perceptions of their social deprivation and life chances relative to others, including educational expectations and lifestyle choices (McCulloch et al., 2006; Ridgeway et al., 1998). The objective of the present study is to examine the moderating role of subjective socioeconomic status (SES) and parental education on the relationships between school connectedness and psychological distress, suicidal ideation and attempts in a large and diverse sample of middle and high school students. It is hypothesized that the protective effect of school connectedness against mental health problems will vary by SES status. School connectedness may have a greater association with mental health among students of lower SES. In environments of lower SES where there may be fewer resources and opportunities, supports from adults within schools and a sense of belonging in schools may have a more positive influence on mental health. Research has shown that even small changes in school connectedness are associated with improved health outcomes (Resnick et al., 1997). It is also hypothesized that the significance of objective and subjective SES may differ among this population. The influence of SES may be greater for subjective SES given research suggesting that, compared to parental education, subjective SES tends to be more associated with internalizing behaviors (Hamilton et al., 2009).

Methods

Data source and study population

Data were obtained from the 2013 cycle of the Ontario Student Drug Use and Health Survey (OSDUHS), a province-wide repeated cross-sectional school based survey of students in grades 7 through 12 (Boak et al., 2013). The OSDUHS, the longest ongoing school survey in Canada, started in 1977. It uses a two-stage (school, class) stratified (region and school type) cluster sample design. The self-administered, anonymous survey takes approximately 30 min to complete during one class. Active parental consent was sought for the students' participation. The 2013 total sample was 10,272 students from 42 school boards, 198 schools, and 671 classrooms. The student response rate was 63%, which is above average for a survey of students that requires active parental consent (Courser et al., 2009). Absenteeism (11%) and lack of parental consent (26%) were the reasons for non-response. Analyses were restricted to the random half sample of students ($N = 5478$) who completed Form A of the questionnaire, which included a measure of mental health problems. The study design and methods are described in more detail elsewhere (Boak et al., 2013). Ethics approval was obtained from the Research Ethics Boards of the Centre for Addiction and Mental Health, York University, and the school boards.

Measures

School connectedness

School connectedness was measured based on students' agreement with the following 3 statements: "I feel close to people at this school", "I feel like I am part of this school", and "I feel safe in my school." These items are part of a measure of social belonging developed by Bollen and Hoyle, (1990). Response options ranged from strongly agree (Wingspread Declaration on School Connections, 2004) to strongly disagree (Resnick et al., 1993). The responses were reverse coded, summed and dichotomized, with scores less than or equal to one standard deviation below the mean classified as disconnected to school and higher scores classified as connected to school (Bonny et al., 2000; Faulkner et al., 2009). The index showed a good internal reliability with a Cronbach's alpha of 0.71.

Psychological distress

The Kessler Psychological Distress Scale (K-10) is a screening tool used to detect nonspecific psychological distress (symptoms of anxiety and depression) occurring over the most recent 4-week period (Kessler et al., 2002; Kessler et al., 2003). This well-validated, 10-item questionnaire has been widely used in community and clinical settings and has been applied to a range of diagnoses and clinical presentations in adolescent and adult populations (Chan and Fung, 2014; Huang et al., 2009). Each item had five response categories: "none of the time," "a little of the time," "some of the time," "most of the time," and "all of the time." The responses were scored on a 5-point Likert scale and summed to generate a total score ranging from 10 to 50, with higher scores indicating greater psychological distress. A score of ≥22 was used to define moderate to high psychological distress (Boak et al., 2014). Validity tests have indicated that a score of 22 or higher is associated with a high likelihood of having a mental disorder (Slade et al., 2011). The index showed a very good internal reliability with a Cronbach's alpha of 0.92.