Scientific Research

Grade Retention and Seventh-Grade Depression Symptoms in the Course of School Dropout among High-Risk Adolescents[*]

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The relationship between grade retention and adolescent depression in the course of school dropout is poorly understood. Improving knowledge of the mechanisms involving these variables would shed light on at-risk youth development. This study examines whether depression in adolescence moderates the relationship between grade retention and school dropout in a high-risk sample. Seventh-grade students (n = 453) from two low-SES secondary schools in Montreal (Quebec, Canada) were followed from 2000 to 2006. Self-reported lifetime and seventh-grade depression were measured with the Inventory to Diagnose Depression. Primary school grade retention, and secondary school dropout status was obtained through the Ministry of Education of Quebec registries. Sixteen percent of participants reported lifetime depression, and 13% reported depression in seventh-grade. Nearly one third (32%) of the sample dropped out of school. Logistic regression models were used to estimate moderation effects predicting school dropout six years later. Findings indicated that students with grade retention were 5.54 times more likely to drop out of school. Depression in seventh grade increased by 2.75 times the likelihood of school dropout. The probability of dropping out for adolescents combining both grade retention and seventh-grade depression was 7.26 times higher than it was for those reporting grade retention only. The moderating effect of depression was similar for boys and girls. Depression is a significant vulnerability factor of low educational attainment aggravating the risk associated with grade retention. Experiencing depression at the beginning of secondary school can interfere with school perseverance particularly for students who experienced early academic failure.

Keywords: Depression; School Dropout; Grade Retention; Risk Factor; Moderation Effect; Adolescent Development

Introduction

Adolescents who present combined symptoms of depression and school problems are among those facing the worst academic outcomes (Roeser, Eccles, & Sameroff, 1998). Yet we know relatively little about the mechanisms implicating depression in the course of school dropout. Although adolescents with mental health problems attain lower levels of education (Best, Hauser, Gralinski-Bakker, Allen, & Crowell, 2004; Kessler, Foster, Saunders, & Stang, 1995; Vander Stoep et al., 2000; Vander Stoep, Weiss, Kuo, Cheney, & Cohen, 2003), up until now most research on school dropout predictors has concentrated on behavioral problems such as aggression, delinquency, or substance use (Janosz, Le Blanc, Boulerice, & Tremblay, 2000; Newcomb et al., 2002; Rumberger, 2011). Far less attention has been devoted to problems like depression although one study reported that depression was predictive of school dropout (Vander Stoep, Weiss, McKnight, Beresford, & Cohen, 2002), others have shown its direct effect was small (Quiroga & Janosz, 2008) or confounded by other factors (Fergusson & Woodward, 2002; Miech, Caspi, Moffitt, Wright, & Silva,

1999). These inconsistent findings are surprising considering the large body of knowledge indicating that depression often co-occurs with academic difficulties (Fleming et al., 2005; Storvoll, Wichstrom, & Pape, 2003). The relationship between depression and grade retention (Asarnow et al., 2005; Fiske & Neuharth-Pritchett, 2007; Resnick et al., 1997), a serious risk factor of school dropout (Alexander, Entwisle, & Kabbani, 2001; Jimerson, Anderson, & Whipple, 2002; Pagani et al., 2008), is particularly noteworthy as it could help explain why children who face these issues are at increased risk for dropout. This study aims at understanding the relationship between depression and grade retention in the course of dropout

Emotional distress and depression in adolescence are known to be associated with grade retention (Asarnow et al., 2005; Fiske & Neuharth-Pritchett, 2007; Resnick et al., 1997), one of the most important risk factors for school dropout. The effect of retention on dropout has been found to be very persistent and generally outweighing other risks (Alexander et al., 2001; Jimerson et al., 2002; Pagani et al., 2008). Children and adolescents who have been held behind present multiple risk behaviors, including emotional distress, that require a closer examination (Resnick et al., 1997). For instance, grade retention commonly coincides with special education, and among special needs students those with emotional problems are the most

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at-risk for dropping out (Wagner, 1995). It appears these students accumulate many risk factors (Blackorby, Cohorst, Garza, & Guzman, 2003; Krezmien, Leone, & Achilles, 2006; Reschly & Christenson, 2006) leading to academic disengagement and dropout (Roeser, Strobel, & Quihuis, 2002; Roeser, van der Wolf, & Strobel, 2001). They are also likely to experience the significant stigma and stress associated with school failure (Anderson, Jimerson, & Whipple, 2005). These early experiences may have a direct bearing on adolescent well-being as perceived school stress could influence adolescent emotional development and increase the risk for depression (Hankin, Mermelstein, & Roesch, 2007).

Depression can have damaging effects on adolescent social and cognitive functioning (Kovacs & Goldstone, 1991). Declining concentration and attention for instance, can undermine academic achievement and increase the risk of school failure. This may pose an even greater threat to students with a history of grade retention who are already more susceptible to academic difficulties. Thus, research suggests that depression may play a part in the school dropout process by precipitating dropout for students who are more vulnerable to academic problems. One possibility that has yet to be investigated is whether the effect of depression on school dropout is independent from the effect of other risk factors, such as grade retention, or whether its effect is multiplicative, acting as a vulnerability factor that increases the risk associated with grade retention.

This study aims to verify whether depression moderates the relationship between grade retention and school dropout after taking into account known risk factors of school dropout (i.e. academic competence, educational tracking, school rebelliousness, etc.). As such, we expected depression to predict school dropout not only in itself, but by interacting with grade retention. We hypothesized that depression in the seventh grade constitutes a vulnerability factor of dropout partly by aggravating the risk associated with earlier grade retention. Accounting for gender differences in depression, we also proposed an interaction between gender and depression considering boys greater emotional responsiveness to school-related problems (Rudolph, 2004) and girls higher sensitivity to interpersonal issues (Sund, Larsson, & Wichstrom, 2003). Further, an interaction between grade retention and gender was anticipated as studies have shown that being held behind is more frequent among boys (Byrd & Weitzman, 1994; Frey, 2005; Guèvremont, Roos, & Brownell, 2007; McCoy & Reynolds, 1999). Finally, we proposed a three-way interaction involving gender, grade retention and depression.

Methods

Participants

This study draws on data from a high-risk longitudinal sample (2000-2006) of French-speaking adolescents from Montreal (Quebec, Canada). Participants were recruited from two low-SES secondary schools. The schools were ranked by the Ministry of Education of Quebec (MEQ) in the three lowest deciles of SES based on maternal education and the proportion of unemployed parents. In 2000, students in seventh grade were invited to voluntarily participate in the study at the beginning of the school year. From an initial 602 students, we obtained parental consent for 496 students (82.4%). Of these, we excluded 43 cases that failed to complete the depression inventories. We verified potential bias due to missing data by comparing the

characteristics of respondents and non-respondents. There was a larger proportion of school dropouts among non-respondents compared to respondents, x^2 (1) = 8.09, $p < .01$. No other difference was found. The final sample comprised 453 participants. We followed this cohort during 6 years to identify participants who withdrew from school.

Data

Self-reported questionnaires were administered to participants in class by trained research assistants three times during the seventh grade. Wave I occurred at the beginning of the school year, wave II was in February, and wave III was in May. Self-reported lifetime depression was measured at wave I, and seventh-grade depression at wave III. Unless otherwise specified, control variables were measured at waves I, II, and III, and the results collected at each wave were averaged out to obtain a global score reflecting student experience in the seventh-grade. Gender and parental education were measured at wave I. Grade retention and school dropout status were obtained through MEQ's registry.

Measures

Moderating Variable—Depression. Self-reported depression symptoms were measured with the French version of the Inventory to Diagnose Depression (IDD; Pariente, Smith, & Guelfi, 1989; Zimmerman & Coryell, 1987a). This 22-item instrument covers the main symptoms of depression according to *DSM-IV-TR* criteria (American Psychiatric Association, 2000). Each item is rated using a five-point scale from 0 to 4, denoting increasing severity. A threshold is applied on each symptom to determine clinical severity: a score of 0 indicates no disturbance, a score of 1 indicates only subclinical severity, while a score ≥ 2 indicates clinical severity. Depression was determined when participant reported severe anhedonia or depressive mood, one symptom in at least four of the other symptom groups, and did not meet the criteria for bereavement, bipolar disorder, or depression-like health problems (e.g. thyroid dysfunction). No depression was coded 0 and depression was coded 1. The lifetime IDD was administered at wave I to control for history of depression, and the annual IDD was used in wave III to assess the severity of depression symptoms in seventh grade. Although the retrospective nature of the IDD could introduce bias, studies have shown that recall of depression in childhood and adolescence is reliable (Masia et al., 2003). Both versions present remarkably strong psychometric properties (α = .90 to .92) across cultures and populations with adolescents and adults (Ackerson, Weigman Dick, Manson, & Baron, 1990; Ruggero, Johnson, & Cuellar, 2004; Sakado, Sato, Uehara, Sato, & Kameda, 1996). More specifically, IDD cases show a 91% convergence with Diagnostic Interview Schedule (Robins, Hlezer, Croughan, & Ratcliff, 1981), with a sensitivity of 74% and a specificity of 93% (Zimmerman & Coryell, 1987b). Our sample yielded Cronbach's alphas ranging from .90 - .93.

Focal Variable—Grade retention. We measured participant history of grade retention in primary school with two categories: never retained (0) and retained (1).

Outcome Variable—Dropout Status. We followed participants during six years, from the 7th grade until one year beyond expected graduation year, to determine their dropout status through the MEQ databank. The MEQ monitors student enrollment across the province, including school transfers, voca-

tional and adult education. We considered students who were continuously enrolled or had obtained secondary education certification as non-dropouts. Students who were not enrolled a particular year and had not obtained a diploma were considered as dropouts. Non-dropout was the reference group.

Control Variables—Sociodemographic Variables. We controlled for *gender* and *parental education*. Parental education was measured by calculating the mean of mother and father educational attainment (1 = incomplete secondary education, 2 = completed secondary education, 3 = post-secondary enrollment, 4 = university enrollment) reported by participants.

Academic Experience. Seventh-grade *educational tracking* had two categories: special education and general education. Student *academic competence* (LeBlanc, 1998) was measured with a 4-item Likert type scale (rated from 1 to 4) that was adapted in French from Skinner's questionnaire (Skinner, 1995) and assesses self-perceived competency and control in school (α = .74). To assess student *academic achievement* we used the mean of self-reported performance in two basic subjects, Language arts and mathematic, on a scale ranging from 0 - 100.

Socioemotional Problems. Self-reported *anxiety* was assessed with the French version of the Beck Anxiety Inventory (Beck & Steer, 1993; Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994). This 21-item instrument measures the main symptoms of anxiety which are rated according to the degree of disturbance felt in the last seven days on a 4-point (0 to 3) Likert scale (α = .91). Student *school rebelliousness* (LeBlanc, 1998) was assessed with a 6-item scale measuring the frequency of self-reported misbehavior in school such as classroom disruption, cheating on tests or truancy (α = .79). The answers (ranging from 0 to 3) were then recoded into two categories (0, and $\geq$1) and added up on a scale ranging from 0 to 6 reflecting the variety of inappropriate behavior. *Friends school engagement* (Le Blanc, 1998) was assessed with three items (rated on a 1 to 4 Likert-type scale) asking students to evaluate the attitudes of their closest friends toward school failure and dropout (α = .74). *Student-teacher conflict* was measured using the 7-item French adaptation (Fallu & Janosz, 2003) of Pianta's Student-Teacher Relationship Scale (Pianta & Steinberg, 1992) (α = .85). This instrument asks participants to assess, on a 5-point Likert scale whether they experience conflict with their teachers.

Statistical Analysis

Data analysis began with the examination of correlations among study variables. The main hypotheses were tested with multivariate logistic regressions. Continuous predictors were standardized to facilitate the interpretation of odds ratios (OR) across variables. ORs can thus be interpreted as the expected change in outcome when the predictor changes by 1 standard deviation. For dichotomous predictors, the expected change in outcome is in comparison to the reference group. We first tested the simple effects of all predictors and then built multivariate hierarchical models. Sociodemographic, academic experience, socioemotional problems, lifetime and seventh-grade depression variables were entered first in the model, followed by grade retention. Next, two- and three-way interactions between grade retention, depression, and gender were tested. Moderation is established when the interaction term contributes to the model over and above the main effects of the variables involved in the interaction (Hosmer & Lemeshow, 2000). The results reported are for the final model and include only statistically significant interactions.

Results

Table 1 shows the characteristics of the sample. The average age of participants was 12.53 years old (SD = .73), and 48% were female. Almost 16% of participants reported lifetime depression symptoms, and 13% reported depression symptoms in the seventh grade. There was a significant effect of gender for lifetime depression, x^2 = 21.05 (1), p < .000, and for seventh grade depression, x^2 = 11.25 (1), p < .001, with more girls reporting depression symptoms at both times. Overall, 25% of students had a history of grade retention, 40% received special education, and 32% dropped out of school. Correlations among study variables are presented in **Table 2**.

Unadjusted Effects Predicting Dropping Out

Table 3 reports odds ratios and 95% confidence intervals (95% CI) of unadjusted effects for school dropout. The results show that students who repeated a grade in primary school were 4.40 times more likely to dropout of school than their counterparts. Students in special education were 3.52 times more likely to dropout. As expected, depressed students in seventh grade were almost twice as likely to discontinue their education (OR = 1.97). School rebelliousness, friends' school engagement, and student-teacher conflict were also significant risk factors of

Table 1.
Characteristics of participants.

Characteristics	All participants (n = 453)
Age, mean (SD), y	12.53 (.73)
Parental education, mean (SD)	2.2 (1.0)
Gender, No. (%)	
Girls	215 (47.5)
Boys	238 (52.5)
Lifetime depression, No. (%)	
No depression	381 (84.1)
Depression	72 (15.9)
Seventh-grade depression, No. (%)	
No depression	394 (87.0)
Depression	59 (13.0)
Grade retention, No. (%)	
No retention	340 (75.1)
Retention	113 (24.9)
Educational tracking, No. (%)	
General education	274 (60.5)
Special education	179 (39.5)
Academic competence, mean (SD)	3.3 (.5)
Academic achievement, mean (SD)	72.9 (8.8)
Anxiety, mean (SD)	8.9 (8.3)
School rebelliousness, mean (SD)	2.2 (1.5)
Friends school engagement, mean (SD)	1.7 (.6)
Student-teacher conflict, mean (SD)	2.3 (.9)
Dropout, No. (%)	
No	308 (68.0)
Yes	145 (32.0)

Table 2.
Correlations among variables in the study.

Variables	1	2	3	4	5	6	7	8	9	10
1. Parental education	-									
2. Educational tracking	$-.113^*$	-								
3. Grade retention	$-.104^*$	$.358^{***}$	-							
4. Academic competence	$.100^*$	$-.198^{***}$	$-.208^{***}$	-						
5. Achievement	$.212^{***}$	$-.265^{***}$	$-.178^{***}$	$.420^{***}$	-					
6. Lifetime depression	-0.04	-0.003	0.073	$-.118^*$	$-.028$	-				
7. Seventh-grade depression	$-.071$	0.051	$.139^{**}$	$-.235^{***}$	$-.102^*$	$.514^{***}$	-			
8. Anxiety	$-.028$	0.037	$.129^{**}$	$-.210^{***}$	$-.019$	$.451^{***}$	$.511^{***}$	-		
9. School rebelliousness	$-.139^{**}$	$.276^{***}$	$.158^{**}$	$-.364^{***}$	$-.368^{***}$	$.223^{***}$	$.290^{***}$	$.236^{***}$	-	
10. Friends school engagement	$.195^{***}$	$-.314^{***}$	$-.185^{***}$	$.382^{***}$	$.391^{***}$	$-.094^*$	$-.157^{**}$	$-.113^*$	$-.496^{***}$	-
11. Student-teacher conflict	$-.116^*$	0.001	0.003	$-.264^{***}$	$-.212^{***}$	$.211^{***}$	$.236^{***}$	$.207^{***}$	$.481^{***}$	$-.339^{***}$

Note: $^{***}p < .000$. $^{**}p < .01$. $^*p < .05$.

Table 3.
Summary of simple and multiple logistic regression analysis for variables predicting school dropout.

Variable	Unadjusted	Adjusted[a]
	OR (95% CI)	OR (95% CI)
Parental education	$.73 (.59 - .90)^*$	$.87 (.68 - 1.10)$
Gender	$1.22 (.82 - 1.81)$	$.99 (.61 - 1.62)$
Educational tracking	$3.52 (2.33 - 5.32)^{***}$	$1.78 (1.08 - 2.92)^*$
Academic competence	$.63 (.51 - .77)^{***}$	$.97 (.75 - 1.25)$
Achievement	$.57 (.46 - .71)^{***}$	$.82 (.63 - 1.08)$
Anxiety	$1.20 (.99 - 1.46)$	$.91 (.70 - 1.18)$
School rebelliousness	$1.98 (1.60 - 2.44)^{***}$	$1.46 (1.10 - 1.94)^{**}$
Friends school engagement	$2.07 (1.66 - 2.57)^{***}$	$1.45 (1.12 - 1.87)^{**}$
Student-teacher conflict	$1.40 (1.15 - 1.71)^{**}$	$1.07 (.82 - 1.39)$
Lifetime depression	$.92 (.54 - 1.59)$	$.62 (.31 - 1.26)$
Seventh-grade depression	$1.97 (1.13 - 3.44)^*$	$2.75 (1.18 - 6.42)^*$
Grade retention	$4.40 (2.81 - 6.90)^{***}$	$5.54 (2.46 - 12.46)^{***}$
Grade retention X seventhgrade depression		$7.26 (1.46 - 36.17)^*$

Note: [a]Odds ratios reported are for the final model with interaction and are adjusted for all other variables included. $^{***}p < .000$. $^{**}p < .001$. $^*p < .01$.

dropout. Parental education, academic competence, and achievement on the other hand diminished the risk of dropping out. Gender, anxiety, and lifetime depression symptoms were not related to dropout.

Adjusted Models Testing the Moderation Effect of Depression

Adjusted ORs for the final model are also displayed in **Table 3**. The results show that students who had repeated a grade in primary school were 5.54 times more likely to be in the dropout group. Depression symptoms in the seventh grade were also associated with a 2.75 higher risk of dropping out with results indicating the likelihood of dropout for an adolescent reporting depression during the first year of secondary school could be as low as 1.18 or as high as 6.42 (according to 95% CI). Students receiving special education (OR = 1.78), showing rebellious behavior (OR = 1.46) or affiliating with academically disen-

gaged peers (OR = 1.45) also presented a higher probability of dropping out of school. Parental education, gender, academic competence, achievement, anxiety, student-teacher conflict and lifetime depression symptoms did not significantly predict dropout when adjusting for other variables.

Consistent with our hypothesis, there was a significant interaction between grade retention and seventh-grade depression symptoms. The interaction term in the logistic regression equation significantly improved the overall model, $x^2 = 6.84 (1)$, $p < .00$. The interaction confirmed that depression amplified the effect of the focal variable, grade retention, on school dropout. The likelihood of dropping out for students with a history of grade retention that also reported depression symptoms in seventh grade was 7.26 times higher than for those who did not report depression (**Table 3**). However, none of the two- or three-way interactions involving gender were significant. These additional effects were thus excluded from the final model. The chi-square for the final model was $x^2 = 112.4 (13)$, $p < .000$.

Discussion

We examined the moderating effect of seventh-grade depression symptoms on the relation between grade retention and dropout up to six years later. Our results indicated that depression is a vulnerability factor considerably aggravating the pre-existing risk of dropping out associated with early grade retention. Previous studies have reported limited direct effect of depression on dropout (Fergusson & Woodward, 2002; Miech et al., 1999). However, focusing on the multiplicative relation between depression symptoms and grade retention yielded highly different results. It is essential, when studying vulnerability (and protection) effects, to "unpack" the underlying processes that explain the relation between risk factors (Luthar, Sawyer, & Brown, 2006). Research has suggested a number of mechanisms through which grade retention and depression might become linked in the prediction of school dropout. It may be that children who face academic failure and grade retention feel confused about their situation and interpret grade retention as a punishment for their lack of success; they could also begin to doubt their own ability and give up on their schooling. This puts them at-risk of developing low self-perceived academic competence, decreased perseverance in academic tasks, and adolescent depression by the time they transition into secondary

school (Cole, Martin, & Powers, 1997; Nolen-Hoeksema, Girgus, & Seligman, 1992). During adolescence, students who present multiple-risk factors, like school problems and emotional distress, are increasingly likely to face academic self-regulation problems (Roeser et al., 2002), helpless school behavior (Nolen-Hoeksema et al., 1992) and academic disengagement (Roeser et al., 2001). According to Anderson (Anderson et al., 2005), as children transition into adolescence they become increasingly concerned about doing well in school. As such, they rate grade retention as one the most stressful life events they can experience. Coping with this stress is likely to present a serious challenge for depressed students who have been held behind, as they may feel stigmatized by teachers and peers, and experience social and cognitive impairment (Kovacs & Goldstone, 1991) that could result in further academic failure. Thus the current findings are consistent with reports of depression symptoms in high-risk students undermining academic success and demonstrate its effect on school dropout.

Academic Experience and Socioemotional Predictors of Dropout

The third most important risk factor for dropping out in this high-risk sample was educational tracking. Others have reported that 30% of special education students leave school before graduation, and when emotional disturbance is involved dropout nears 50% (Wagner, Kutash, Duchnowski, Epstein, & Sumi, 2005). Generally, special education students cumulate multiple risk factors for dropout, showing lower performance (Blackorby et al., 2003), motivation, academic engagement (Reschly & Christenson, 2006), and receiving more disciplinary sanctions (Krezmien et al., 2006) than those in the general population. Consistent with research on the role of behavior problems in early school leaving, school rebelliousness and friends' school engagement also predicted dropout, indicating that adolescents who adhere to more deviant behavior are more likely to leave school without qualification (Loeber, Pardini, Stouthamer-Loeber, & Raine, 2007; Newcomb et al., 2002).

Gender Differences

The gap in the prevalence of depression between girls and boys did not translate into an incremental risk for dropout suggesting that gender differences are not involved in the complex relationship linking grade retention, depression and dropout. While it has been argued that boys are more reactive to school-related stressors (Rudolph, 2002), and girls exhibit more depression when facing interpersonal stressors (Sund et al., 2003), others have found no gender differences in reactivity to school stressors (Hankin et al., 2007; Shih, Eberhart, Hammen, & Brennan, 2006). Our findings are consistent with this and indicate that intervention for students with depression symptoms should target boys and girls equally.

Implications for Research and Intervention

This study demonstrates that depression symptoms play an important role in the process of dropping out of school for high-risk youth. Results underscore the necessity to integrate the study of mental health and schooling to promote positive development and improve intervention (Adelman & Taylor, 2010; Aviles, Anderson, & Davila, 2006; Becker & Luthar, 2002; Roeser et al., 1998). Prevention and intervention target-

ing adolescents at-risk for depression would benefit both short-term mental health and long-term school perseverance. Yet, in the current context of school reform students' emotional needs are seldom addressed. Instead most school-based interventions focus on increasing academic performance or reducing problematic behavior (Becker & Luthar, 2002; Jimerson et al., 2006). Efforts to promote school success must include interventions that target emotional wellbeing.

This research also builds on a large body of knowledge showing the deleterious consequences of primary-school grade retention persist into late adolescence (Alexander et al., 2001; Jimerson et al., 2002; Pagani et al., 2008). The practical implications of these findings for high-risk children and adolescents are very significant. Grade retention has often been used as the first type of intervention for children later diagnosed with learning difficulties or emotional disturbance (Barnett, Clarizio, & Payette, 1996; Mattison, 2000). The present results clearly show that this form of intervention, particularly when used among depressive youth, does not yield the expected benefits. Children that have been held back in grade should be thoroughly screened for depression symptoms and provided appropriate care when indicated.

Limitations

Limitations of this study should be mentioned. Our findings rely on a sample of adolescents from low-SES schools with a high rate of special education. Generalization is restricted to high-risk students. Future research should extend these results to the general population. We also had limited information about participant characteristics at the time of grade retention. To account for family SES, we adjusted for parental education, and can only presume that this had remained unchanged for most participants since grade retention. We also adjusted for participant prior history of depression. But other indicators of family and individual adversity could help understand the present results, such as family income, welfare, or learning disabilities. Despite these limitations, this study encompasses several strengths. It is based on a 6-year prospective design that allowed conclusions about the long-term impact of adolescent depression and academic experience on educational attainment. Whereas previous research on depression and dropout relied on observations in middle adolescence (Fergusson & Woodward, 2002; Miech et al., 1999), we investigated outcomes of depression based on information gathered at 12-years-old thus shedding light on the consequences of early adolescent experience on schooling.

Conclusion

An important contribution of this study is to demonstrate adolescent depression symptoms' strong relation to grade retention in predicting school dropout. Depression proved to be a notable vulnerability factor during the adolescent transition considerably increasing the risk associated with grade retention in primary school. Implications for practice and policy are significant and point to the consequences of depression for high-risk adolescents and to the long-term effect associated with the practice of grade retention on dropout. Findings underscore the relevance of integrating the study of mental health and schooling. Future studies should investigate processes that will improve our understanding of adolescent depression among high-risk students.

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