Revisiting the Link between Depression Symptoms and High School Dropout:

Timing of Exposure Matters

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Abstract

Purpose: Recent reviews concluded that past depression symptoms are not independently associated with high school dropout, a conclusion that could induce schools with high dropout rates and limited resources to consider depression screening, prevention and treatment as low-priority. Even if *past* symptoms are not associated with dropout, however, it is possible that *recent* symptoms are. The goal of this study was to examine this hypothesis.

Methods: In 12 disadvantaged high schools in Montreal (Canada), all students at least 14 years of age were first screened between 2012 and 2015 ($N_{screened}$ = 6,773). Students who dropped out of school afterwards (according to school records) were then invited for interviews about their mental health in the past year. Also interviewed were matched controls with similar risk profiles but who remained in school, along with average not-at-risk schoolmates ($N_{interviewed}$ = 545). Interviews were conducted by trained graduate students.

Results: Almost one dropout out of four had clinically significant depressive symptoms in the three months before leaving school. Adolescents with recent symptoms had an odd of dropping out more than twice as high as their peers without such symptoms (adjusted OR = 2.17; 95% CI = 1.14-4.12). In line with previous findings, adolescents who had recovered from earlier symptoms were not particularly at risk.

Conclusions: These findings suggest that to improve disadvantaged youths' educational outcomes, investments in comprehensive mental health services are needed in schools struggling with high dropout rates, the very places where adolescents with unmet mental health needs tend to concentrate.

Key words: depression symptoms, high school dropout, late adolescence

Implications and contributions

Recent reviews concluded that *past* symptoms of depression are not independently associated with high school dropout. Results of the present study find that *recent* symptoms are, thus underscoring the potential of school-based mental health programs to hit two targets with one shot, by improving adolescent mental health and educational/vocational outcomes.

Adolescents should be a priority target for screening, prevention and treatment of mental health problems.[1,2] First, adolescence is a critical developmental period during which many common mental health problems emerge.[3] For instance, among 15-16 years old, about one out of six adolescents experience major depression.[4] Second, untreated mental health problems during adolescence can lead to poor health and social outcomes throughout adulthood.[5] Third, compulsory schooling ends after high school; thus adolescence represent a final opportunity to reach, via school-based programs, virtually every individual in a given cohort.[2]

In practice, however, implementing mental-health programs in high schools is a challenge, especially in disadvantaged contexts where these programs are most needed.[5-7] A main barrier is the fact that "achieving health outcomes is not the core business of schools".[6] Rather, high schools' first mandate is to bring as many students as possible to graduation. If mental health programs do not clearly contribute to this primary goal, school personnel under pressure to improve substandard graduation rates may hesitate to channel scarce resources towards such programs.[2,8] As such, health workers need to reconcile their priorities with those of educational workers and decision makers to achieve better collaboration and, ultimately, better outcomes.[9]

A key way to promote such collaboration is to demonstrate that mental health problems are strongly associated with high school dropout, and that mental health prevention programs have the potential to improve graduation rates.[2] Such strong associations exist for one class of mental health problems, externalizing behaviors, most notably attention-deficit/hyperactivity disorders (ADHD) and conduct disorders (CD).[10,11] Evaluation studies show that school-based programs reducing these problems also

prevent dropout.[10] From school personnel's viewpoint, these programs hit two high value targets with one shot: they reduce troublesome behaviors that are very disruptive for classroom functioning and improve graduation rates.

In contrast, the link between high school dropout and internalizing problems, first and foremost depression, is much less clear. Logically, depressed adolescents should be at risk of abandoning school, as a core symptom of depression is of a lack of energy and interest to carry out daily activities like attending school. This potential risk, however, is often overlooked because depression symptoms are not overtly visible and often go unnoticed by teachers.[12] Even when manifest, they are often seen as less urgent because unlike externalizing behaviors, they typically do not interfere with classroom activities.[13] Such perceptions are reinforced by recent reviews concluding that depressive symptoms are not linked with dropout once accounting for externalizing problems.[11,14,15]

Rather, this null finding may reflect suboptimal timing of depression assessments in existing studies. Depression tends to be episodic: Most adolescents who experience an episode of depression at some point recover within a few months, and subsequently remain free of clinically significant symptoms for extended periods.[16-18] Such episodic mental health problems are more subject to underreporting than stable problems like ADHD or CD, especially when measured retrospectively years after the fact.[19] Underreporting could have influenced the results of studies linking depression and dropout, as most are retrospective and based on information obtained years or even decades after participants were out of high school.[11]

Another timing problem shared by all existing studies, including the few prospective ones, is their focus on depressive symptoms present during childhood or

early- to mid-adolescence, that is many years before dropout becomes legally possible (i.e. at age 16 or 17 in most jurisdictions). With this time frame, it is not surprising that depression symptoms were only weakly associated with dropout, if at all. Theoretically, it is clear why a 17 year-old struggling with depression may be at risk of acting on his or her legal prerogative to drop out, but it is unclear why a classmate who had a bout with depression some years before and is fully recovered (with no relapse) should be particularly at risk.

Empirically, some studies not explicitly addressing the link between depression and dropout still provide suggestive evidence that timing matters, and that late adolescence is a key period. Among adolescents, the prevalence of depression peaks around 17 years old.[20] Moreover, it is around that age that adolescents are most likely to engage, when under pressure, in risk behaviors like dropping out that confer short-term relief at the potential cost of lasting negative consequences.[21] In addition, a recent meta-analysis of studies examining the link between depression and academic grades, an outcome related to dropout, found effect sizes that were almost three times larger when depression symptoms were measured in late rather than early adolescence.[22] Finally, exposure to severely stressful (and depressogenic) life events in late adolescence is associated with a three-fold increase in the risk of dropping out shortly following exposure.[23]

The goal of this study was to examine whether the presence of clinically significant depression symptoms during late adolescence would be associated with high school dropout, after accounting for externalizing ADHD and CD symptoms, as well as for other important family and school-related background characteristics.

METHODS

Sample

The project was approved by appropriate IRBs at the University and School Board levels. The recruitment procedure is described in detail elsewhere.[23] Broadly, 12 francophone public high schools with high dropout rates ($M = 36\%$, a rate more than twice the provincial average) in and around the city of Montreal, Canada, participated between 2012 and 2015. In each school, students were administered, early in the school year, a short screening questionnaire that measured their initial risk for dropout, as well as basic sociodemographics (see Measures). All students of at least 14 years of age were invited to participate, and the vast majority (97%) provided written consent and participated ($N_{screened} = 6,773$).

In a second phase, a selected subset of students was invited to participate in face-to-face interviews during which they were asked about their experiences in the last 12-month period, notably in terms of mental health ($N_{interviewed} = 545$). For the interviews, a participation rate of 70% was obtained, a comparatively high rate given the overrepresentation of socioeconomically disadvantaged, academically vulnerable adolescents.[24] The interviews were conducted by trained graduate students in clinical/educational psychology and related disciplines.

The interviewed participants fell into three categories. First, all students who dropped out of school in the year following the initial screening were invited. School staff informed the research team as soon as a student dropped out, and meetings were quickly arranged for those who consented to be interviewed. Second, following a matched case-control logic, after each completed interview with a recent dropout, a second interview

was conducted with a persevering student from the same school, the same program, the same sex, and with a similar individual risk for dropout according to a risk index administered during the screening phase (see Measures). To the extent possible, matched students were also similar to dropouts in terms of family background. Third, schoolmates with scores on the risk index that were close to their school's average were invited to participate to form a second, not-at-risk or "average" comparison group.

Measures

Descriptive statistics for each measure are presented in Table 1. Separate estimates are shown for the three groups of participants.

Background. During the screening phase, participants completed a brief questionnaire booklet. They reported on their *sociodemographic background* including their sex, age, visible minority (i.e., non-White) and immigrant (i.e., at least one parent born outside Canada) status, as well as their family structure and their parents' employment status and level of education.

The booklet also included two self-reported measures assessing students' initial *individual risk profile*. First, a validated risk index captured participants' general propensity for dropout based on seven questions about grade retention, appreciation of school, importance of grades, academic aspirations, perceptions of grades, and language art and math grades.[25] In the current sample, this index showed good predictive validity (with an area under the ROC curve = 0.81), and predicted dropout more accurately than administrative data about failure, truancy and disciplinary suspensions.[26] Second, students reported on enrollment in special education either because of learning or conduct/emotional problems, another key marker of risk. These measures indirectly

tapped relevant externalizing symptoms,[27] but additional steps were taken during the interviews to assess ADHD and CD symptoms more directly, as described in the next section.

Mental health symptoms. To maximize participation in this high risk population, efforts were made to keep the mental health interviews relatively short. For participants still in school (i.e., matched at-risk and not-at-risk schoolmates), interviews were conducted during lunch hour, so as to avoid interfering with regular instruction and bus transport. In the restricted time available, it was not possible to assess mental health symptoms using a full version of commonly used interview schedules like the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I).[28,29] Thus, a shortened procedure approximating that of the SCID-I was devised.

To assess *clinically significant depression symptoms*, interviewers asked participants about whether they had, in the past year, an episode of at least two weeks during which they felt depressed, had lost interest or pleasure in, or capacity to carry out their daily activities. For adolescents who did, more questions were asked to determine when this period started and ended, using life-history calendar techniques such as visual cues to facilitate recall. They were also asked about other symptoms related to changes in sleep patterns, appetite, energy, concentration, guilt feelings and suicidal thoughts or attempts, broadly following formulations found in the SCID-I. After each interview, the interviewers wrote short descriptions of the symptoms for each reported episode, using notes and audio-recordings. Then, based on these descriptions, two other RAs also trained in mental health and blinded to the status of the participant (dropout or not) independently rated the number of symptoms that reached clinical significance according to SCID-I

criteria (ICC = .84). Discrepancies between raters were resolved in team meetings. Overall, 23% of participants exhibited at least some clinically significant symptoms of depression at some point in the past year, a number on par with other yearly prevalence estimates [4]. Adolescents with recent symptoms (i.e., in most recent three months) were distinguished from those who reported earlier symptoms from which they had recovered. This three-month threshold was selected based on previous theoretical and empirical work.[24]

To check the validity of our shortened procedure, about two weeks after the initial interview a subsample of dropouts and matched at-risk students (n = 126) was contacted by phone by a different interviewer who did not know participants' mental health or dropout status. At this time, the depression module of the SCID-I (current or past, with a focus on the last twelve-month period) was administered in full. The correspondence between the maximum number of depression symptoms present at any time during the past year measured with the two procedures was good, with an ICC coefficient of .73, comparable to ICCs reported in other studies assessing, in analogous conditions, the test-retest reliability of the SCID's depression scores or other similar interview-based measures of depression.[29,30] In addition, the correlation between depression symptoms and dropout was the same with both assessment methods.

Interviewers assessed *ADHD and CD symptoms* in a similar manner. They asked participants about whether they had, in the past year, exhibited core symptoms of ADHD (trouble paying attention in class, sitting still) or CD (fighting with teachers, truancy). Then, they wrote summaries of reported symptoms and their consequences on daily life. Using these reports, two blinded raters independently coded the number of clinically

significant symptoms (based on DSM-IV rules) present in the past year (ICC = .81 and .80 respectively). Overall, 24.0% and 7.7% of the sample had at least some clinically significant ADHD or CD symptoms respectively.

Again, to assess validity, the subsample who was administered the SCID-I depression module by phone was also screened for ADHD and CD using relevant modules from the Kid-SCID battery.[31] In this case, the correspondence was modest, with ICCs of .46 and .53, mainly because with the Kid-SCID, more participants exhibited at least one clinically significant symptom of ADHD (66.4%) or of CD (32.8%) than with the shortened assessment. To rule out the possibility that these discrepancies could lead to biased conclusions, the robustness of key results were probed by replicating the main analysis in the subsample reassessed by phone with full-length instruments, while controlling for the alternative Kid-SCID ADHD and CD symptom counts (see Results).

High school dropout. Adolescents were considered to have dropped out when they met at least one of three conditions according to school records. First, they could have filed an official notice of schooling termination before obtaining a diploma. Second, they could have asked for a transfer to the adult sector (GED equivalent). These students are typically considered as non-graduates because GED graduates are more similar to dropouts than to high school graduates on a number of outcomes.[32] Third, adolescents could have stopped attending school for at least a month without justification.

RESULTS

Bivariate Analyses

First, ANOVAs and χ2 tests (for continuous and dichotomous variables respectively) were conducted to examine differences between dropouts, matched-at-risk and no-at-risk schoolmates. The results, presented in Table 1, show that about a quarter of dropouts reported recent clinically significant symptoms of depression in the few months before quitting (23.5%), a percentage twice that of matched at-risk students and average, not at-risk students (11.5% and 9.5% respectively). However, dropouts did not significantly differ from the two other groups in terms of past symptoms.

With respect to background characteristics, the results show that dropouts were more disadvantaged than not-at-risk students on a number of key measures. As expected, they had higher dropout risk scores than not-at-risk students. In contrast, dropouts and matched at-risk students were, by design, similar in terms of dropout risk, enrollment in special education, and most background characteristics, but some significant differences still existed between the two groups. Notably, dropouts reported more CD symptoms than matched at-risk students. Thus, it was necessary to test whether between-group differences in recent depression symptoms would remain after accounting for differences on these other variables.

Multiple Logistic Regressions

Logistic regressions predicting dropout and incorporating the full set of control variables were conducted using the SAS SURVEYLOGISTIC procedure with the "cluster" option to account for the nested structure of the data (students within schools). As in previously published results based on this sample,[23] logistic regressions focused on

dropouts and matched-at-risk students. Average adolescents who were recruited to provide a normative benchmark were too different from dropouts to represent an adequately matched comparison group.

Results presented in Table 2 show that in the full models, as in the bivariate analyses, previous depression symptoms were not associated with adolescents' odds of dropout (Model 1), whereas recent depression symptoms were, whether measured in a continuous (number of recent symptoms, Model 2), or binary (at least one recent symptom, Model 3) manner. In terms of effect size, the odds of dropping out were more than twice as high among adolescents with some recent symptoms of depression compared with adolescents without such symptoms (see Model 3).

Robustness Checks

Two additional steps were taken to probe the robustness of the main findings (shown in Model 3), and to reduce the possibility that the observed associations would solely reflect selection issues. First, following a procedure described in detail elsewhere,[23] propensity scores representing each participant's likelihood of reporting recent depression symptoms, given his or her background, were computed. These propensity scores were computed using all of the background variables listed in Table 1, as well as the individual items comprising the dropout risk index. Then, the scores were transformed into inverse probability of treatment weights (IPTW).[33] The main model (Model 3) was rerun while applying these weights, to estimate the association between recent depression symptoms and adolescents' odds of dropout out while accounting for individual differences in terms of propensity for developing depression symptoms. The results, presented in the last columns of Table 2 (Model 4), suggest the association between recent depression

symptoms and adolescents' chances of dropout remained significant, and the effect size and significance levels were even potentially slightly larger after accounting for the depression propensity

Second, the main model was rerun, this time in a subsample of dropouts and matched-at-risk students (n = 126, about evenly distributed between the two groups) who were administered the Kid-SCID ADHD and CD modules. The results, presented in Table 3, again show that current depression symptoms remains significantly associated with adolescents' odds of high school dropout after accounting for externalizing symptoms as measured with the Kid-SKID, again with a potentially larger effect sizes than models not factoring in these differences.

DISCUSSION

Overall, the results were consistent with our hypothesis that recent symptoms of depression would be associated with adolescents dropping out. Simple descriptive findings indicated that almost a quarter of youth who drop out of high school experience clinically significant depression symptoms in the few months before quitting, a rate more than twice that observed among similar peers who remained in school. Results based on more complex logistic regression models indicated that after accounting for crucial risk factors for high school dropout, these differences remained significant and substantial, with the odds of dropping out at least twice as high among adolescents recently affected by such symptoms than among those not affected. This central result proved stable across a series of robustness checks. Moreover, the results indicated that adolescents who had recovered from previous symptoms were no more at risk of dropping out than peers who reported no depressive symptoms at all. Thus, depression symptoms were associated with

an increased risk of dropout while they were present and shortly thereafter, but this risk receded once adolescents were symptom-free for at least a few months.

According to these results, the role of depression in the decision to drop out is underestimated in previous studies, likely because timing issues were not properly considered.[11] Past studies did not capture the temporal co-occurrence of depression and dropout as depression symptoms were measured prospectively years *before* dropout occurred, or retrospectively, years or even decades *after* dropout took place, providing crude estimates of the timing of depression symptoms in relation to dropout. In the present study, retrospective accounts were obtained immediately after youth's departure from school, facilitating recall of recent symptoms and more precise estimates of the timing of onset and recovery. Moreover, in previous studies, dropout status and/or timing was self-reported, whereas it was determined based on administrative data in this study, reducing potential shared-method variance bias.

The present study is not without its own limitations. The design mitigated some of the main problems of retrospective assessments, via interviews that were conducted right after dropout occurred, that limited recall to the past 12 months, and that were conducted by graduate students with relevant training and experience, rather than by lay interviewers. Nevertheless, the limitations of retrospective assessments (e.g., memory decay) still apply to some extent. In addition, because of time constraints, mental health was evaluated with shortened adaptations of standard instruments. Steps were taken to ensure the validity of the shortened procedures, but nevertheless, results should be replicated using intensive prospective designs with full-length assessments. In addition, experimental studies are needed to examine whether the link between depression in late

adolescence and dropout is causal. Finally, because of power limitations, it was not possible to incorporate interactions for addressing issues related to comorbidity (e.g., between externalizing and internalizing symptoms) for instance.

In terms of practical and policy implications, the findings suggest that school-based screening, prevention and treatment of depression have the potential to reduce not only depression problems, but also to improve graduation rates in disadvantaged schools where many students dropout. This situation may be particularly true if universal screening and prevention programs are combined with rapid intervention. Specifically, the development and evaluation of just-in-time adaptive interventions taking advantage of new technologies and data systems may prove useful to support adolescents in a timely manner when they are most in need.[34] For instance, as grades are an indicator of both academic and social functioning, systems allowing for a rapid detection of declining grades may help to identify students with underlying depression symptoms.[35]

The results have the potential to support school and health professionals seeking to screen, prevent and treat adolescent depression symptoms with school-based initiatives. Implementing mental health initiatives in disadvantaged schools is a challenge because these schools often have insufficient resources to address students' most pressing needs related to learning and behavioral problems.[36] Yet, the result of this study reinforce the notion that to reduce high school dropout, it is necessary to address the full spectrum of disadvantaged students' needs in an integrated manner.[37] Findings of this sort may convince policy makers and funders interested in reducing high school dropout that investments in integrated approaches with strong mental health components are a worthwhile endeavor. Investments in services with the potential to reduce both adolescent

mental health problems and low-educational attainment, two key drivers of health

inequities, are especially important in the current context where health and educational

gaps between rich and poor are widening.[38,39]

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Table 1 *Sample Characteristics*

	Dropouts (n = 183)		Matched at-risk (n = 183)		Not-at-risk (n = 179)		
	M/%	*SD*	*M/%*	*SD*	*M/%*	*SD*	F/χ2
BACKGROUND							
Sociodemographics							
Male (%)	54.1		54.1		48.6		1.5
Age	16.5_a	0.9	16.4_b	1.0	$16.0_{a,b}$	0.8	14.0***
Immigrant status (%)	32.8		35.0		36.3		0.5
Visible minority (%)	19.1		24.0		26.8		3.1
Parental education[1]	2.5_a	1.0	2.6	0.9	2.7_a	1.0	2.6†
Maternal employment (%)	69.4		70.5		69.8		0.1
Paternal employment (%)	69.4_a		80.3_a		78.2		6.7*
Separated/divorced parents (%)	$69.9_{a,b}$		53.6_a		50.8_b		16.0***
Individual risk profile (academic and behavioral)							
Dropout risk index	1.1_a	2.1	1.3_b	1.9	$-0.6_{a,b}$	0.5	72.6***
Special education (%)	42.6_a		45.9_b		$4.5_{a,b}$		89.1***
CD sx[2, 3]	$0.39_{a,b}$	1.0	0.09_a	0.6	0.07_b	0.5	11.2***
ADHD sx[2, 3]	0.75_a	1.4	0.54	1.1	0.36_a	1.0	5.3**
DEPRESSION SYMPTOMS IN PAST YEAR							
Number of past sx (cases in recovery)[2, 4]	0.31	1.0	0.21	0.8	0.18	0.8	1.1
Number of recent sx (current cases)[2, 5]	$0.81_{a,b}$	1.7	0.39_a	1.1	0.25_b	0.9	8.5***
At least one recent clinically significant sx (%)[2, 5]	$23.5_{a,b}$		11.5_a		9.5_b		16.5***

Note. CD = Conduct disorder. ADHD = Attention-deficit/hyperactivity disorder. Sx = symptoms. Means and percentages sharing subscripts in each row differ significantly at *p* < .05, based on ANOVAs (for means) or χ2 tests (for percentages). [1] Maximum level of education attained by one parent; 1 = primary to 4 = university. [2]Based on the shortened researcher-developed mental health assessment protocol. [3]Number of symptoms present in the past year. [4]Number of symptoms present at some point in the past year but no longer active in the three months prior to dropout (or prior to the interview for non-dropouts). [5]Symptoms still active in the past three months prior to dropout (or prior to interview for non-dropouts).
† *p* < .10. **p* < .05. ** *p* < .01. ***p* < .001.

Table 2 *Multiple Logistic Regressions Predicting Dropout from Background Characteristics and Depression Symptoms among Dropouts and Matched At-Risk Students (n = 366)*

	Model 1		Model 2		Model 3		Model 4 (with IPTW)	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
BACKGROUND								
Sociodemographics								
Male	0.98	0.82-1.16	1.00	0.81-1.23	1.00	0.81-1.23	1.32	0.97-1.80
Age	1.30**	1.08-1.55	1.33**	1.11-1.60	1.33**	1.11-1.59	1.29†	0.91-1.83
Immigrant status	1.10	0.73-1.64	1.10	0.74-1.63	1.12	0.76-1.65	0.92	0.46-1.83
Visible minority	0.74	0.43-1.27	0.69	0.36-1.31	0.70	0.38-1.31	0.73	0.35-1.53
Parental education	0.92	0.70-1.21	0.91	0.70-1.18	0.90	0.69-1.18	0.95	0.74-1.22
Maternal employment	0.95	0.64-1.41	0.94	0.63-1.39	0.95	0.62-1.45	0.85	0.50-1.44
Paternal employment	0.53*	0.30-0.93	0.55*	0.32-0.97	0.56†	0.31-1.00	0.88	0.49-1.57
Separated parents	2.01***	1.41-2.86	2.00***	1.44-2.78	1.97***	1.43-2.71	1.51	0.86-2.65
Individual risk profile								
Dropout risk index	0.91**	0.85-0.98	0.93†	0.87-1.01	0.93*	0.87-0.99	0.88*	0.79-0.97
Special education	0.93	0.66-1.31	0.92	0.65-1.32	0.93	0.65-1.31	1.17	0.59-2.33
CD sx[1,2]	1.86*	1.05-3.30	1.85†	0.99-3.47	1.84†	0.98-3.44	1.46	0.71-3.01
ADHD sx[1,2]	1.16	0.96-1.41	1.16	0.94-1.42	1.16	0.95-1.43	0.99	0.82-1.19
DEPRESSION SX								
Number of past sx[1,3]	1.10	0.88-1.37						
Number of recent sx[1,4]			1.23*	1.03-1.47				
At least one recent sx[1,4]					2.17*	1.14-4.12	2.40**	1.29-4.47

Note. CD = Conduct disorder. ADHD = Attention-deficit/hyperactivity disorder. Sx = symptoms. IPTW = inverse probability of treatment weights. Regressions conducted using SAS SURVEYLOGISTIC procedure; "cluster" option used to account for clustering of students within schools. [1]Based on the shortened researcher-developed mental health assessment protocol. [2]Number of symptoms present in the past year. [3]Number of symptoms present at some point in the past year but no longer active in the three months prior to dropout (or prior to the interview for non-dropouts). [4]Recent symptoms still active in the past three months prior to dropout (or prior to interview for non-dropouts).

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3 *Multiple Logistic Regressions Predicting Dropout from Background Characteristics and Active Depression Symptoms among Dropouts and Matched At-Risk Students, using Kid-SCID CD and ADHD Symptom Counts (n = 126)*

	OR	95% CI
BACKGROUND		
Sociodemographics		
Male	0.92	0.58-1.45
Age	2.21***	1.57-3.12
Immigrant status	1.74	0.75-4.03
Visible minority	0.53	0.21-1.37
Parental education	0.89	0.67-1.20
Maternal employment	0.51	0.20-1.27
Paternal employment	0.59	0.23-1.51
Separated/divorced parents	1.90	0.75-4.82
Individual risk profile		
Dropout risk index	1.05	0.83-1.33
Special education	0.95	0.35-2.63
Kid-SCID CD symptoms[1]	1.53†	0.93-2.51
Kid-SCID ADHD symptoms[1]	1.02	0.94-1.11
DEPRESSION SYMPTOMS		
At least one recent sx[2]	5.13*	1.01-26.11

Note. Regressions conducted using SAS SURVEYLOGISTIC procedure; "cluster" option used to account for clustering of students within schools. [1]Number of symptoms present in the past year [2]Recent symptoms still active in the past three months prior to dropout (or prior to interview for non-dropouts), based on the shortened researcher-developed mental health assessment protocol.
† $p < .10$. *$p < .05$. **$p < .01$.