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Burned out to drop out: Exploring the relationship between school burnout and school dropout

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Abstract This paper examines the development of school burnout among Finnish youth aged 16–18, specifically with regard to the following three components: a cynical attitude toward the school, feelings of inadequacy as a student, and exhaustion at school. There is evidence of an increase in all three components over time, but only among students on the academic track. There appear to be differences in burnout levels between those who drop out from school and those who do not, and the risk of an individual with high levels of cynicism or feelings of inadequacy dropping out is clearly higher than among those who score low on these two components. When various explanatory variables are controlled for, cynicism still remains a significant factor explaining drop out, and a low grade point average appears to be a major explanatory variable for school dropout. This study is especially interesting in the context of Finland, known for its equality-striving and high-quality educational system. Finnish youth, compared with youth in many other countries, nevertheless have a low level of in-school well-being. We use the Finnish Educational Transitions data (N=878) collected in four waves, the first three on an annual basis and the fourth 5 years after the first one.

Keywords Academic track · Longitudinal · School burnout · School dropout · Vocational track

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Introduction

Finnish students at junior high school have continuously been identified as top scorers in the OECD's Programme for International Student Assessment (PISA) studies (OECD 2009). However, international comparisons have revealed a major discrepancy between Finnish students' academic success and their well-being at school (OECD 2009). Finland is positioned in first place with regard to educational achievement but as low as 18th in terms of well-being, measured by the quality of school life. Its position was even lower (26th) concerning risk behaviors including smoking, drunkenness, and teenage pregnancy.

The Nordic model of comprehensive education is, at least by international comparison, striving for equality and to produce low social inequalities (Antikainen 2006). Comprehensive schooling in Finland has succeeded in combining high quality achievement with equality in educational outcomes. There is, particularly in primary and special education, a commitment to the idea of "no child left behind" (Simola 2005). However, the discrepancy between students' achievements and well-being at school is larger in Finland than in any other OECD country. This raises the question of whether school burnout is the price to be paid for high achievement. This diffuse picture of equality in educational outcomes, high achievement but poor well-being is an interesting combination that deserves closer scrutiny.

The major part of sociological studies on school dropout deals with structural explanations on dropout. Therefore, in our view, it is especially interesting to study the role of behavioral characteristics in a context where the performance in schooling is exceptionally high.

The aim in this paper is thus to examine the development of school burnout in youth, and to analyze the relation between burnout and dropout. Our aim naturally involves taking into account the basic social and demographic characteristics, but the main emphasis will be to scrutinize the connection between school burnout and school dropout. The source material comprises Finnish Educational Transitions (FinEdu) data.

The case of Finland

The Finnish schooling system works as follows. Compulsory education starts when the child turns 7, before which there is the option of a preschool year. Compulsory schooling lasts for 9 years, thus ending when the young people turn 16. The options after compulsory school include continuing on a vocational track, or joining the academic track at senior high school, which leads to the matriculation examination. Both tracks involve 3 to 4 years of study. After that, there is the possibility to continue to university or a polytechnic. Education in Finland is tuition free (Ministry of Education, National Board of Education).

Practically, all Finnish youth complete their comprehensive education: annually, only about 300 (0.5 %) pupils are not awarded a diploma (Ministry of Education 2007). On the upper-secondary level (matriculation examination), about 90 % of those who started senior high school in 2001 finished it by 2007, and the respective pass rate for vocational schools was 73 %. Followed over a shorter period of time (3.5 years), the respective percentages were almost 80 and 62 %. Boys are more likely to drop out than girls in all educational sectors (Statistics Finland 2009).

As already mentioned, Finnish students at junior high school have continuously been identified as top scorers in the PISA studies, and the common belief in Finland why their students are so successful is threefold. Firstly, the Finns share a high belief in schooling in general. Secondly, teaching as a profession is very highly regarded. Finally, the Finnish comprehensive school is highly trusted among parents, authorities, and politicians in Finland (Simola and Rinne 2011).

School burnout during adolescence

Adolescence is characterized by a variety of physical, psychological, social and sociocultural changes, and transitions (Caspi 2002). Even though the vast majority of young people manage without severe problems, some have difficulties in adapting to the transitions and changes. The number of negative and stressful life events rises dramatically during adolescent years (Hankin and Abramson 2001; Rutter et al. 1986).

Burnout is generally regarded as a work-related disorder, but it is also a useful construct in education in that school is a context in which students work. Although students are neither employed nor hold jobs, their core activities could be considered "work." They attend classes and carry out assignments in order to pass exams and acquire a qualification. School burnout would appear to comprise exhaustion due to school demands, a cynical and detached attitude towards the school, and feelings of inadequacy as a student (Salmela-Aro et al. 2009).

Adolescents on an academic track experience more exhaustion than their counterparts on a vocational track. One reason for this is that the academic demands students face both at the end of comprehensive school and in senior high school are typically higher than in vocational schools. For example, the matriculation examination that takes place at the end of senior high school may be a major stress factor for students in the academic track. Feelings of cynicism and inadequacy appear to increase among students on the academic track, and overall burnout to be more frequent among girls than boys (Salmela-Aro et al. 2008).

Moreover, there seems to be peer influence with regard to school burnout. High levels of depressive symptoms in youth are connected with high levels of exhaustion, cynicism, and feelings of inadequacy. School burnout and academic achievement are connected in that low levels of achievement and school engagement are more likely to foster cynicism and feelings of inadequacy (Kiuru et al. 2008; Salmela-Aro et al. 2008). However, these studies exclude school dropouts and cover a shorter period of time. It is therefore interesting to scrutinize the development and levels of burnout in the context of school dropout.

Adolescents on an academic track often have a strong orientation towards school and value academic tasks, which might pre-dispose them to exhaustion and tiredness (Roderick and Camburn 1999). A vocational track, on the other hand, may be an attractive option for students with average or below average academic achievement before the transition. Being able to select an area of study that suits their interests and knowing that it will lead to an occupational qualification may also be motivating factors and explain the observed decrease in student exhaustion following the move to vocational education after the more theory-based comprehensive school. The possibility of having more control over their lives may also increase the well-being of these young people (Eccles et al. 1993).

Structural factors, schooling, and school dropout

International studies show that school dropout has long-term consequences in terms of employment and earning opportunities later in life (Murnane et al. 1995; Rumberger 1987). The rationale behind it operates on different levels. There is a vast amount of literature with different explanations, investigating the role of individual, family, school, and neighborhood characteristics as well as the macro-level conditions in society. For instance, on the micro level aspects such as family cohesiveness, adult support and peer groups have been shown to be related to school dropout rates among the young (Ferreira et al. 2007; Lagana 2004). The relationships between the micro and macro level effects are often complicated, and the different structural conditions may have divergent effects on individuals.

It has been shown, for instance, that parental socioeconomic status (SES) functions as a stratifying aspect on both the micro and the macro level. High SES parents are more likely to be involved in their children's education and in their schooling (Rowan-Kenyon et al. 2008). They are also more likely to use their time with their children pursuing activities that develop various skills. Parents may affect their children's aspirations and motivation in many other ways, and good parenting and communication between parents and children positively influence how well the children do at school. It has also been reported that parental involvement has an effect on teachers (Jeynes 2005). The teacher has an important role in terms of grading and rating the students, and it is therefore also likely that parental involvement will influence the teachers' perceptions and grading. Consequently, high grades may reflect the good connection that exists between the parent and the teacher, and the feeling of team spirit.

On the immediate contextual level it has been shown that the role of the family is important. Rumberger et al. (1990) found that school dropouts were more likely to come from families in which the parents give a high level of freedom to their children and allow them to make their own decisions. They also report that dropout children are more likely to have parents who react negatively to their children's performance at school in terms of imposing sanctions and using harsh words. Finally, they found that school dropout was more common in cases in which the parents showed less interest in their children's education, and this held even after controlling for the basic demographic and grade variables. Moreover, parental style and expectations have been shown to have a strong effect on students' general academic success. Thus, family support and parental involvement are important aspects of educational success (Jeynes 2005).

On the somewhat wider contextual level a neighborhood effect on school dropout has been identified. Harding (2003) reports that young people who grow up in a high-poverty neighborhood are more likely to drop out than those who reach adulthood in low-poverty neighborhoods. This conclusion was made by comparing groups that were the same at age 10 concerning the observed variables (such as family income, family type, parental education, and welfare receipt) but experienced different neighborhood contexts during adolescence.

The current macro-level conditions in a society also have an effect on school dropout rates. Dropout increases in conditions of economic expansion and low unemployment due to the increase in employment opportunities. Previous research has shown that the effect of macro conditions is not equally distributed among young people: parents with a higher education are more likely to emphasize the importance of schooling to their children. Furthermore, children from lower socio-economic classes are more likely to take the opportunity to earn money earlier, even if their lack of education will reduce their potential earning power (Raftery and Hout 1993; Shanahan et al. 1998).

As in many other countries, parental socioeconomic and educational background has been shown to be a significant predictor of disadvantage among Finnish youth. It has been found that young Finns who are both outside the labor market and do not study are more likely to come from low-income families in which parental education and occupational status are lower than the national average. On the other hand, the risk of falling outside the labor market and education is clearly lower for the children of highly educated white-collar parents (Jahnukainen 2007; Jahnukainen and Järvinen 2005; Vanttaja 2005).

As Bourdieu expresses it, inequality may be passed on from parents to their children in the form of economic, cultural or social capital. Cultural capital refers to the social status that accompanies the acquisition of education, skills and knowledge. Parents pass on their attitudes and knowledge to their children, and thereby give them the cultural capital they need in order to succeed in the educational system. Social capital comprises the resources that come from group memberships, relationships and networks of support (Bourdieu 1973; Bourdieu and Passeron 1977).

Entwisle et al. (2005) showed in a North American context that children's socioeconomic and personal resources at an early age matter greatly for their cognitive development and schooling. Specifically, 1st-grade children's social contexts and personal resources predict their educational attainment in early adulthood. Furthermore, the family's SES is a strong predictor of parental educational expectations and of the children's factual years of schooling. Finally, parental psychological support and the child's own temperament have extensive effects on academic outcomes in the 1st grade.

A study with Swedish longitudinal data showed that the family's SES and the parental educational expectations in middle adolescence predicted middle adult educational attainment. In the 6th grade, the family's SES is the strongest predictor of parental educational expectations. Also, parental educational expectations in adolescence remained important to educational attainment in adulthood, even when several other important predictors such as parents' educational attainment, family income, child/adolescent mental ability, and prior academic performance were considered (Bask et al. 2011).

Economic capital may be of less significance in upper-secondary education, at least in the Finnish case, but it may play a major role in the transition to tertiary education. The transition to tertiary education, and especially to universities, involves much more optional expense (books, travel to, and preparatory courses for the entrance exams) that in all probability increase the chances of admission to a university. Therefore, it is very likely that students with high economic capital benefit in this transition even if the system itself is tuition free.

Purpose

The aim of this study was to scrutinize the relationship between school burnout and school dropout in the Finnish context. More specifically, we wanted to find out whether the burnout trajectories and levels differed between young people who dropped out of school later on and those who did not. We also examined whether background variables such as grade point average (GPA), gender, family type, and parental occupational status were related to school dropout in our sample. There are many studies focusing on the relationship between these background variables and school dropout, but to our knowledge none that scrutinizes its relationship with school burnout. Furthermore, our students faced a major transition in schooling between the first and second measurement points, when they chose to continue on either an academic or a vocational track. We therefore also analyzed the difference in burnout development between these two tracks.

Participants and procedure

We used the FinEdu survey data in the analysis. The data collection started in 2004, the population comprising all pupils in the 9th grade in one of Finland's bigger cities. Follow-up studies were conducted in 2005 and 2006, and the most recent collection was done in 2009 when the young people were in their early twenties. The subjects were therefore aged approximately 16, 17, 18, and 21 in the four waves used in the analysis (N=878). Panel attrition may result in a sample when the remaining participants differ in crucial ways from those who have dropped out. Our analysis of attrition bias showed that boys were more likely than girls to drop out of the study, but no significant difference was found regarding the burnout components or paternal occupational status. The total retention rate between the first and last measurement points was 77.8 %.

Measurements

School burnout

School burnout comprises three dimensions: feelings of inadequacy as a student, cynicism towards school, and exhaustion at school (Salmela-Aro et al. 2009). The response alternatives for all the survey questions concerning burnout were on a scale ranging from one to six, one meaning that the respondent completely agrees and six that he or she completely disagrees with the statement. On all three dimensions there are three different items that constitute the measure for each of the burnout types.

Exhaustion at school

The level of exhaustion was taken as the mean value of three different items measuring the respondent's relation to the school and to work at school, such as *I feel overwhelmed by my schoolwork* (Salmela-Aro et al. 2009). We then computed the mean value of these three aspects, which became the variable. Theoretically, the value could vary between one and six. Cronbach's α of exhaustion at school was 0.60, 0.77, and 0.75 at t1, t2, and t3, respectively.

Cynicism towards school

The level of cynicism was also taken as the mean value of responses to three different items including *I feel lack of motivation in my schoolwork and often think of giving up* (Salmela-Aro et al. 2009). We then computed the mean value of these three aspects, which became the variable cynicism towards school. Theoretically, the value could vary between one and six. Cronbach's α of cynicism towards school was 0.82, 0.87, and 0.86 at t1, t2, and t3, respectively.

Feelings of inadequacy as a student

We measured feelings of inadequacy on three items, such as *I often have feelings of inadequacy in my schoolwork* (Salmela-Aro et al. 2009). Otherwise the procedure for constructing the variable was the same as in the case of exhaustion and cynicism. Theoretically, the value could vary between one and six. Cronbach's α at t1, t2, and t3 was 0.76, 0.77, and 0.77, respectively.

Educational track

Track information was obtained from a question concerning the school the respondent was attending at the time of the third measurement, when they had all made their choice of track. There are several options within the academic and the vocational tracks. Of those who answered this question, 474 were on an academic track, and somewhat fewer, 281, on a vocational track.

School dropout

In order to measure dropout the respondents were asked whether they had ever dropped out of an educational program that they had started, the response alternatives being yes or no. This variable is from the last round of data collection (t4), and therefore captures all those who had dropped out of school between the ages 16 and 21. We do not know whether these students, later on, have continued their studies in the same or in another field. We only have

the information that they, at some occasion, have dropped out from their educational program. The total number of dropouts was 116, of which of 73 were girls and 43 were boys.

The background variables

GPA

The grade point average is a continuous variable. The marks in specific subjects vary between 4 and 10, which therefore constitute the theoretical minimum and maximum, respectively. The average GPA in our sample was 8.02, the minimum 5.5 and the maximum 9.8. The information was obtained at the first measurement point, i.e., when the respondents were in the 9th grade at junior high school.

Gender

Information on gender was included in every questionnaire and therefore covered all the respondents in the dataset. Girls were coded 1 and boys 2.

Parental occupational class

Different questions covered maternal and paternal occupational class. We dichotomized these variables so that white-collar parents comprised one group and the remaining categories, including workers, students, entrepreneurs and the retired the other one. The original coding of this variable was somewhat problematic given the potential heterogeneity among the retired and entrepreneurs. Entrepreneurs may run big and profitable corporations or small companies with very low profit. Similarly, pensioners may be retired from a high-income job, in early retirement, or retired from a low-income job. We were therefore not able to identify the effects of parental occupational status in as much detail as we would have liked. The information was collected at the first measurement point.

Family type

Information on family type was gathered by asking the respondents with whom they were living. We differentiated two groups in the coding: Nuclear family meaning that the respondent was living with two parents, and other meaning that he or she was living with a single mother or father or with someone else. In creating this variable, we used information collected at the first measurement point.

Method

We modeled latent growth curves (LGC) in order to estimate the development of components of school burnout in youth (Muthén and Muthén 1998–2010). We also conducted a LGC multiple group analysis to find out whether there were differences in burnout trajectories between students who at the last time point, when they were aged 21, had dropped out of school and those who had not, and between those who had chosen an academic versus a vocational track. In the final analysis, we used binary logistic regression analysis in order to test which other aspects, apart from the burnout components, could be related to the experience of school dropout.

Results

The development of school burnout in youth

We conducted a LGC analysis in order to describe the development of exhaustion at school, cynicism toward school, and feelings of inadequacy as a student among our population of Finnish youth. The unrestricted models for all of the burnout components showed a satisfactory fit. The intercept (i.e., the estimated mean level) was, 2.697 for exhaustion, 2.261 for cynicism, and 2.422 for inadequacy. The estimated slope (i.e., the development over time) turned out to be significant for cynicism at the 10 % level, and for the components of exhaustion and inadequacy on a more conservative level. Figure 1 shows the school burnout trajectories. Detailed results are shown in Table 3 in the Appendix.

The covariance between the intercept and the slope turned out to be significant and negative (−0.072) for cynicism, meaning that its development levels off over time: high levels decrease and low levels increase. The intercept-slope covariance was not significant regarding the other components of burnout.

Both the intercept and the slope variances were significant in the case of a cynical attitude toward the school, exhaustion at school, and feelings of inadequacy as a student (in the last case at the 10 % level for the slope). We can therefore assume that there are differences in burnout development between the different groups in the dataset.

School burnout and track

As mentioned earlier, previous research suggests that school burnout is more common on the academic than on the vocational track. The data used for this paper, however, extend 1 year further than the data referred to earlier, and we think it is appropriate to run a multigroup analysis to find out whether there are differences in burnout development between the tracks. Figure 2 shows the LGC for students on the academic versus the vocational track. Detailed results of the multigroup analysis are shown in Table 4 in the Appendix.

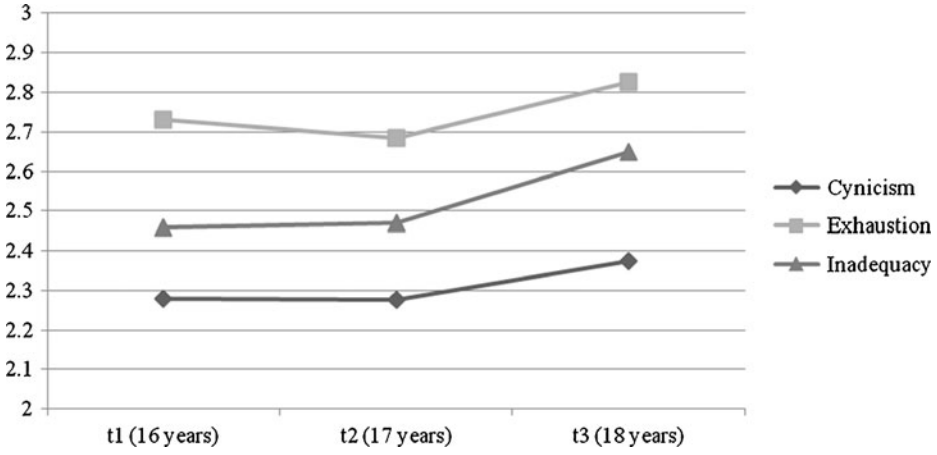

Fig. 1 The development of school burnout among young people: estimated mean values

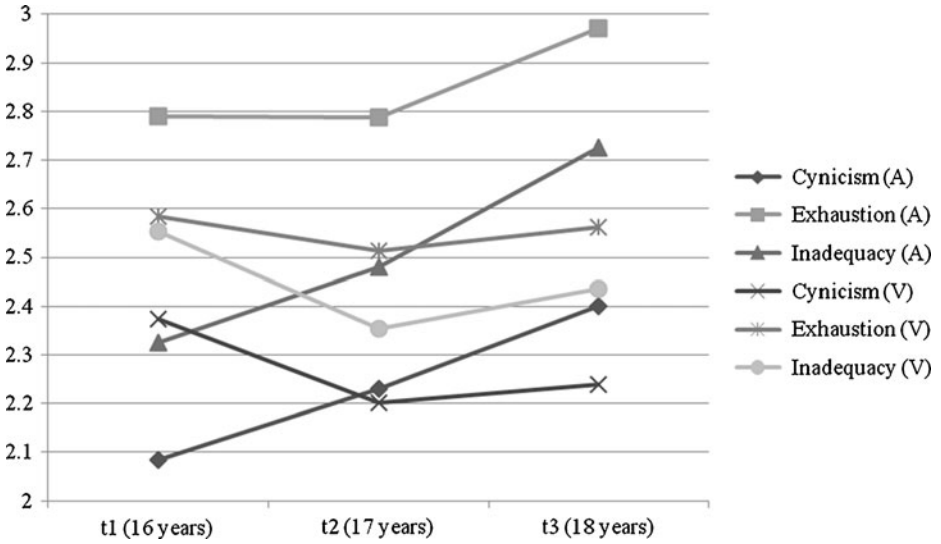

Fig. 2 School burnout trajectories for the academic (*A*) and the vocational (*V*) track

As the table shows, the slopes are significant and positive for all burnout components on the academic track, but not for any of the components on the vocational track. We could therefore conclude that the increasing school burnout is not a general trend but rather occurs among those at the academic track.

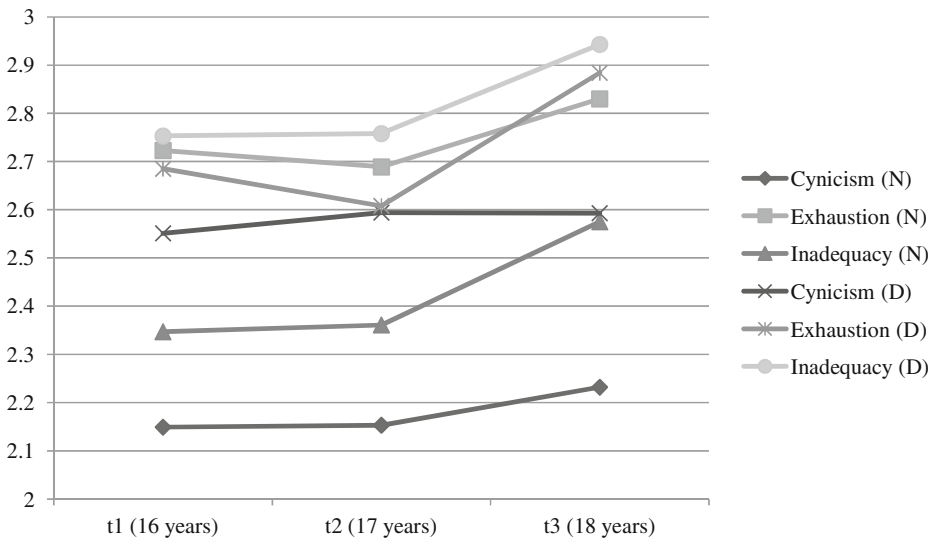

Fig. 3 School burnout trajectories for dropouts (*D*) and non-dropouts (*N*)

Is school burnout related to school dropout?

Our main research objective was to scrutinize the relationship between school burnout and school dropout. We therefore ran a multigroup LGC analysis in order to find out how the components of school burnout related to school dropout. Figure 3 shows the LGC for the different burnout components grouped by the dropout experience. A mere glance at the figure is enough to see that the inadequacy dropouts feel is the highest trajectory, and that the cynicism level of non-dropouts seems to be very low by comparison. Detailed results of the multigroup analysis are shown in Table 5 in the Appendix.

In order to assess the significance of the differences in burnout development between the dropouts and non-dropouts, we conducted a χ^2 test of indifference on the intercepts and slopes of the respective burnout components. We found a significant difference in two cases. More specifically, the intercepts differed on the components of cynicism and inadequacy (the p values for both were below 0.001). Thus, individuals with high levels of cynicism and inadequacy seem to be more prone to dropout from school than those with low levels.

Furthermore, we ran a logistic regression analysis in order to express the odds ratios among those with high burnout levels compared with those with low levels. We used the burnout components from the first data-collection point, dividing them into percentiles and coding the variables so as to identify the groups with the lowest and highest percentiles. The results thus show the effect of burnout in the 9th grade on dropout later on. There are studies showing that slightly more than 10 % of Finnish pupils suffer from school burnout, and the 10 % limit seemed therefore a natural threshold (Luopa et al. 2006).

Exhaustion at school turned out to be the burnout component with the highest levels in general, but it did not significantly differentiate between those who would drop out later on and those who would not. More specifically, no differences were found in dropout probability between the students scoring low and high on exhaustion. Table 1 gives the regression estimates and p values.

We found that those with a high level of cynicism were clearly more susceptible to dropout than those with a low level. More specifically, the odds for the highest 10th percentile were 3.885 times those for the lowest 10th percentile. Feelings of inadequacy were also a significant predictor of dropout: those belonging to the highest 10th percentile on this component were 2.773 times more likely to drop out than those in the lowest 10th percentile group.

The role of the background variables in school dropout

Finally, we conducted three different logistic regression analyses incorporating each of the burnout components in turn and maintaining dropout as the dependent variable. We also

Table 1 School burnout components and school dropout

	Odds ratio	p value
Exhaustion	0.981	0.967
Cynicism	3.885	0.001
Inadequacy	2.773	0.019

Odds ratios for the highest 10 % to experience dropout compared with the lowest 10 %

controlled for some central background variables in this context. Table 2 shows the odds ratios and *p* values.

As we predicted, based on earlier evidence, exhaustion at school was not related to dropout at all. Cynicism towards the school was still a significant explanatory variable even when GPA, gender, family type, and parental occupational status were controlled for, for instance, and even the GPA was a significant predictor of dropout in this model. There was a significant effect for feelings of inadequacy in the first model. However, when we included the GPA the effect of inadequacy disappeared. It thus seems that, not surprisingly, feelings of inadequacy at school are related to a low GPA. The explanatory power of these models was not that high, thus it is quite likely that some unobserved characteristics or life situations are significant explanatory factors in terms of school dropout.

Discussion

Adolescence involves several life-course transitions. Young people move from school to work, become independent of their parents and start a family of their own. These transitions are of significance for the later life course of these individuals. Marginalization from society is a major problem for the people concerned as well as for the welfare state, and its roots can often be traced to childhood and adolescence. International studies have found that school dropout may have major consequences for the later life course of those affected. Successful transition from compulsory education to further education and the subsequent acquisition of competences needed in the labor market are therefore essential.

There is a vast amount of literature explaining school dropout on different levels. It has been shown that the individual, the family, school and neighborhood characteristics, and macro-level conditions in society all play an important role. For example, on the immediate contextual level, dropout has been shown to be related to peer groups, family cohesiveness, and support from adults (Lagana 2004).

Furthermore, we know that school dropout rates increase in times of economic boom when there are job opportunities even for unskilled workers. The relationships between the effects functioning at different levels are often complicated, and the different macro conditions may have different effects on different kinds of individuals. Children from families where education is viewed as less important may be more prone to drop out from school and choose to work, even if this may lead to a lower life time income. Accordingly, the role of social-background variables is important in this context (Lareau 1987).

This paper focuses on the development of school burnout in youth, as well as on the association between burnout and school dropout, drawing on longitudinal data collected from a Finnish sample. To our knowledge, there are no previous studies examining the connection between school burnout and school dropout. The contribution of this paper is thus to show the relevance of behavioral aspects in a unique macro-level context. Finland is known for its equality-striving and high-quality educational system. Nevertheless, Finnish youth are less likely than young people in many other countries to like school, and in-school well-being, measured in terms of the quality of school life, is low and risk behavior is high.

Table 2 School burnout components and covariates explaining school dropout: odds ratios and *p* values

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Exhaustion	0.810 (0.154)	0.840 (0.242)	0.786 (0.121)	0.787 (0.123)	0.790 (0.128)	0.793 (0.137)
GPA		0.506 (0.000)	0.480 (0.000)	0.488 (0.000)	0.466 (0.000)	0.450 (0.000)
Gender			0.584 (0.064)	0.586 (0.066)	0.586 (0.066)	0.562 (0.051)
Family type				1.137 (0.666)	1.183 (0.574)	1.217 (0.515)
Mother's occupation					0.625 (0.150)	0.654 (0.202)
Father's occupation						0.784 (0.413)
Nagelkerke R2	0.009	0.078	0.092	0.093	0.102	0.104
Cynicism	1.402 (0.005)	1.309 (0.029)	1.294 (0.036)	1.300 (0.034)	1.302 (0.034)	1.296 (0.038)
GPA		0.555 (0.001)	0.526 (0.000)	0.537 (0.001)	0.516 (0.000)	0.505 (0.000)
Gender			0.662 (0.154)	0.664 (0.157)	0.665 (0.160)	0.648 (0.143)
Family type				1.147 (0.656)	1.189 (0.574)	1.205 (0.547)
Mother's occupation					0.667 (0.218)	0.683 (0.254)
Father's occupation						0.875 (0.662)
Nagelkerke R2	0.034	0.083	0.091	0.092	0.099	0.100
Inadequacy	1.365 (0.032)	1.232 (0.169)	1.212 (0.208)	1.211 (0.211)	1.205 (0.222)	1.200 (0.234)
GPA		0.483 (0.000)	0.459 (0.000)	0.472 (0.000)	0.459 (0.000)	0.451 (0.000)
Gender			0.673 (0.185)	0.679 (0.195)	0.680 (0.196)	0.666 (0.180)
Family type				1.228 (0.506)	1.264 (0.449)	1.286 (0.422)
Mother's occupation					0.731 (0.357)	0.748 (0.401)
Father's occupation						0.884 (0.692)
Nagelkerke R2	0.021	0.093	0.101	0.103	0.107	0.107

We have shown that experiences of school burnout are increasing among the population of Finnish youth that we scrutinized. It seems, however, that this increase only occurs among those who choose the academic track. When we compared the burnout trajectories between those who would drop out and those who would not, we found a significant difference in the intercepts of cynicism and inadequacy, but the slopes of the trajectories were not significantly different.

We continued our analysis by contrasting the extreme cases, and compared those scoring high and low on burnout. We found that those with a high level of cynicism toward the school were almost four times more likely to drop out than those with a low level of cynicism, and those with high feelings of inadequacy as a student were almost three times more likely to drop out than those with a low level of such feelings.

When we extended the analysis and included some of the main explanatory variables, we found that parental occupational status, gender or family type were not significant predictors of school dropout, but that GPA seemed to be a major factor. It should nevertheless be borne in mind that a weakness in our data is the somewhat crude measures for parental occupational status, and that our study population comprised just one cohort. It may be that a different pattern of school dropout would arise in different economic conditions, and parental occupational status could be significant. Our results are nevertheless interesting in that, to our knowledge, no previous studies have scrutinized the relationship between school burnout and school dropout in high-achievement, equal-access schooling systems.

Consequently, the contribution of our study is threefold. Firstly, we have shown that young people on the academic track at senior high school face an increasing risk of school burnout. More specifically, there is an increase in all of the three components of burnout—cynicism, exhaustion, and a sense of inadequacy as a student—over time among these students. Secondly, we have identified differences in the levels of two of the burnout components between those who drop out of school later on and those who do not. Finally, when we controlled for several explanatory variables, we found that cynicism was still a significant explanatory factor with regard to school dropout.

Thus, our major finding is that when the main socioeconomic variables are controlled for, one of the burnout components, cynicism toward the school, remains a significant predictor of dropout. We cannot be certain why cynicism remains as a significant factor predicting school dropout whilst the other burnout components do not. One possible explanation is that exhaustion and feelings of inadequacy can be viewed as moods that an individual have in a passive, internalized way, whereas a cynical attitude is a mood actively directed towards the school. It is therefore natural that individuals with a cynical attitude also take action and leave the school.

Contrary to many other studies, we do not find parental occupational status to be related to school dropout. The reason could be that the welfare-state context, together with the high-quality schooling system, constitutes a protective factor and reduces the effects of risk factors such as low parental occupational status and family type that other studies have reported. Therefore, if we can identify students in the 9th grade who are at a greater risk of dropout, we could direct more attention to them in the form of extra counseling regarding their choice of educational track, for example. It is reasonable to believe that students with a low GPA fail to secure a place on their program of choice and are forced to accept programs or schools that are their second choice, and are therefore more prone to drop out. Some of these students

continue on other programs but for others the consequences of dropout are more severe.

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Appendix

Table 3 LGC parameter estimates for three components of school burnout

Growth parameters		
	Est.	SE
	Exhaustion	
Mean of growth factors		
Intercept growth factor	2.697***	0.036
Slope growth factor	0.017*	0.008
Variance of growth factors		
Intercept growth factor	0.515***	0.077
Slope growth factor	0.011*	0.005
Covariance		
Intercept and slope	−0.003	0.015
	Cynicism	
Mean of growth factors		
Intercept growth factor	2.261***	0.041
Slope growth factor	0.017†	0.009
Variance of growth factors		
Intercept growth factor	0.765***	0.103
Slope growth factor	0.031***	0.006
Covariance		
Intercept and slope	−0.072***	0.021
	Inadequacy	
Mean of growth factors		
Intercept growth factor	2.422***	0.037
Slope growth factor	0.034***	0.008
Variance of growth factors		
Intercept growth factor	0.395***	0.084
Slope growth factor	0.009†	0.005
Covariance		
Intercept and slope	0.004	0.018

Exhaustion: $\chi^2(1)=7.963$, $p=0.005$, CFI=0.983, and RMSEA=0.090. Cynicism: $\chi^2(1)=1.932$, $p=0.165$, CFI=0.997, and RMSEA=0.033. Inadequacy: $\chi^2(1)=5.547$, $p=0.018$, CFI=0.983, and RMSEA=0.073

† $p\leq0.1$; * $p\leq0.05$; ** $p\leq0.01$; *** $p\leq0.001$

Table 4 Multigroup analysis comparing the academic and the vocational track

Growth parameters	Exhaustion–academic track		Exhaustion–vocational track		Cynicism–academic track		Cynicism–vocational track		Inadequacy–academic track		Inadequacy–vocational track	
	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE
Mean of growth factors												
Intercept growth factor	2.753***	0.047	2.565***	0.061								
Slope growth factor	0.032***	0.009	−0.002	0.013								
Variance of growth factors												
Intercept growth factor	0.559***	0.089	0.391**	0.141								
Slope growth factor	0.009†	0.005	0.015†	0.008								
Covariance												
Intercept and slope	−0.011	0.017	0.007	0.027								
Mean of growth factors												
Intercept growth factor					2.080***	0.051	2.344***	0.068				
Slope growth factor					0.053***	0.011	−0.022	0.016				
Variance of growth factors												
Intercept growth factor					0.697***	0.112	0.557***	0.168				
Slope growth factor					0.030***	0.006	0.027**	0.010				
Covariance												
Intercept and slope					−0.061**	0.022	−0.053	0.035				
Mean of growth factors												
Intercept growth factor									2.305***	0.047	2.490***	0.067
Slope growth factor									0.068***	0.010	−0.015	0.014
Variance of growth factors												
Intercept growth factor									0.347***	0.096	0.350*	0.141
Slope growth factor									0.008	0.006	0.009	0.009
Covariance												
Intercept and slope									0.007	0.020	0.012	0.028

Exhaustion: $\chi^2(2)=6.298$, $p=0.043$, CFI=0.989, and RMSEA=0.076. Cynicism: $\chi^2(2)=2.301$, $p=0.316$, CFI=0.999, and RMSEA=0.020. Inadequacy: $\chi^2(2)=5.502$, $p=0.064$, CFI=0.987, and RMSEA=0.068

† $p \leq 0.1$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Table 5 Multigroup analysis comparing the dropouts and non-dropouts

Growth parameters	Exhaustion–non-dropout		Exhaustion–dropout		Cynicism–non-dropout		Cynicism–dropout		Inadequacy–non-dropout		Inadequacy–dropout	
	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE
Mean of growth factors												
Intercept growth factor	2.695***	0.046	2.636***	0.086								
Slope growth factor	0.019*	0.009	0.030	0.023								
Variance of growth factors												
Intercept growth factor	0.550***	0.090	0.173	0.209								
Slope growth factor	0.014**	0.005	0.010	0.014								
Covariance												
Intercept and slope	−0.016	0.017	0.004	0.046								
Mean of growth factors												
Intercept growth factor					2.137***	0.051	2.557***	0.107				
Slope growth factor					0.015	0.011	0.007	0.030				
Variance of growth factors												
Intercept growth factor					0.793***	0.109	0.144	0.308				
Slope growth factor					0.033***	0.006	0.009	0.025				
Covariance												
Intercept and slope					−0.087***	0.021	0.035	0.070				
Mean of growth factors												
Intercept growth factor									2.306***	0.047	2.708***	0.097
Slope growth factor									0.041***	0.010	0.034	0.026
Variance of growth factors												
Intercept growth factor									0.445***	0.091	−0.095	0.233
Slope growth factor									0.015**	0.005	−0.003	0.017
Covariance												
Intercept and slope									−0.017	0.018	0.083	0.051

Exhaustion: $\chi^2(2)=7.239$, $p=0.027$, CFI=0.982, and RMSEA=0.094. Cynicism: $\chi^2(2)=0.862$, $p=0.650$, CFI=1.000, and RMSEA=0.000. Inadequacy: $\chi^2(2)=6.129$, $p=0.047$, CFI=0.981, and RMSEA=0.084

$^{\dagger}p\leq0.1$; $^{*}p\leq0.05$; $^{**}p\leq0.01$; $^{***}p\leq0.001$

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Adolescent externalizing behavior. Cumulative (dis)advantage processes. Matthew effect. Social stratification and inequality.

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