

SHORT COMMUNICATION

Time trends in schoolwork pressure among Dutch adolescents, 2001–2017: Gender and educational differences

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Abstract

Aims: This study investigated gender and educational differences in trends in schoolwork pressure between 2001 and 2017 in nationally representative samples of Dutch adolescents in secondary education. **Methods:** Data from five surveys of the Dutch Health Behaviour in School-aged Children study were used. **Results:** Across the surveys, an increase in perceived schoolwork pressure was observed. Girls and adolescents enrolled in the higher educational levels reported higher levels of perceived schoolwork pressure and the strongest increase in schoolwork pressure over time. Especially for girls, there was a stronger increase in schoolwork pressure for those enrolled in higher educational tracks. **Conclusions: Increases in schoolwork pressure over time were stronger among Dutch girls and students in the higher educational levels. Over time, schoolwork pressure increased most among girls in the highest educational levels. Explanations and implications for these results are discussed.**

Keywords: School stress, gender, the Netherlands, educational level differences, time trends, tracked educational system, HBSC

Introduction

Progress through secondary schooling requires adolescents to manage, among many challenges, an increase in academic demands. These demands may lead to adolescents experiencing schoolwork pressure, which in turn may negatively impact their academic achievement and mental health [1]. More than one in three European adolescents report high schoolwork pressure, with girls reporting systematically higher rates than boys [2]. Moreover, recent evidence points to an increasing trend in perceived schoolwork pressure in some countries, with one of the highest increases observed in the Netherlands [3]. Considering the potentially deteriorating consequences of this increase in schoolwork pressure for adolescent mental well-being, it is important to

investigate for which groups schoolwork pressure has increased particularly in the last decade(s). Using data from the Health Behaviour in School-Aged Children (HBSC) study, we investigated whether gender and educational differences in schoolwork pressure have increased between 2001 and 2017 in nationally representative samples of Dutch adolescents enrolled in secondary education.

The Dutch school system is stratified from age 12 onwards, with adolescents attending one of four educational levels, ranging from pre-vocational to pre-university education. Compared to the early 2000s, the number of students attending higher educational levels has increased, while those attending lower educational tracks has decreased [4]. Moreover, the requirements for graduating in the Dutch school system have become increasingly strict since 2011 [4].

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As more Dutch adolescents nowadays attend higher educational levels while school requirements have increased, schoolwork pressure may have especially increased among those adolescents in the higher educational levels. Also, girls typically report the highest levels of schoolwork pressure [5], potentially because they tend to aspire more to higher education than boys do [6,7], and are more likely to blame themselves for academic failures [8]. Moreover, the gender gap in schoolwork pressure may have increased between 2001 and 2017, as recent increases at population level in perfectionism [9] may have affected girls more than boys and investing in education may have become even more important for girls in recent years [6].

Methods

Study sample

Data from five surveys (2001, 2005, 2009, 2013 and 2017) of the nationally representative Dutch HBSC study were used. The study included data from adolescents aged 12–16 years attending the first four classes of general secondary education. Samples were obtained using a two-stage random-sampling procedure [3]. The school-level response rates ranged from 37% (2013/2017) to 48% (2009) within participating schools, and the adolescent response rate was >92% in all years. A total of 28,632 participants were included in the analysis ($M_{\text{age}}=13.82$ years, $SD=1.28$ years; 49.4% boys) of whom 23.8% were enrolled in pre-vocational training, 29.5% in the lower academic educational track, 24.7% in the higher academic educational track and 21.9% in the pre-university educational track.

Measures

Schoolwork pressure. Participants were asked ‘How pressured do you feel by the schoolwork you have to do?’. Answer categories were (1) “not at all”, (2) “a little”, (3) “some”, and (4) “a lot”.

Educational track. Participants indicated their educational track: pre-vocational education, lower academic education, higher academic education and pre-university education. Dummy variables were created with pre-vocational education set as reference.

Gender. Participants indicated whether they are a boy or a girl.

Control variables. Age and ethnicity were included as control variables [10].

Analytic strategy

Multivariate linear regression analyses were performed with participants embedded in schools. Model 1 tested the linear effect of time as a continuous variable on schoolwork pressure. Model 2 included time, gender, educational level and the control variables. Two-way interaction analyses (time×gender; time×educational level; educational level×gender) were added in models 3–5, in order to examine whether time trends differed across gender and educational level, and whether educational effects differed across gender. Finally, in model 6, three-way interactions were added (time×gender×educational level) to test whether trends in educational-level differences in schoolwork pressure varied across gender. Alternatively, we tested for quadratic effects, but these results were non-significant.

Results

A linear increase over time in perceived schoolwork pressure was observed ($B=0.027$; $p<0.001$), and girls reported higher levels of schoolwork pressure than boys did ($B=0.210$; $p<0.001$). Compared to those enrolled in pre-vocational education, adolescents in the other educational tracks reported higher levels of schoolwork pressure, with the strongest difference for students attending the pre-university track ($B=0.418$; $p<0.001$; Table I, model 2). Gender differences in schoolwork pressure increased over time ($B=0.009$; $p<0.001$; model 3), with larger increases among girls. Schoolwork pressure increased more strongly over time among adolescents in higher educational tracks compared to students in pre-vocational training ($B=0.009–0.015$; $p<0.01$; model 4). Educational differences in schoolwork pressure were stronger for girls than they were for boys (model 5). Moreover, increases over time in educational differences in schoolwork pressure were stronger for girls than they were for boys (Table II). Girls in pre-university education experienced the largest increase in schoolwork pressure over time (Figure 1).

Discussion

This study shows that increases in schoolwork pressure among Dutch secondary school students are particularly present in certain subgroups. Girls systematically reported higher levels of schoolwork pressure than boys did, and this gender gap increased over time. Similar results were found for educational level: students in the higher education levels reported more schoolwork pressure, and increases over time were stronger for students enrolled in these higher

Table I. Linear time trends in schoolwork pressure: the effect of gender and educational level.

		Schoolwork pressure	
		<i>B</i>	<i>SE</i>
Model 1	Time	0.027**	0.002
Model 2	Time	0.023**	0.001
	Gender (ref. boys)	0.210**	0.01
	Educational level (ref. pre-vocational education)		
	Pre-university education	0.418**	0.02
	Higher academic education	0.297**	0.02
	Lower academic education	0.169**	0.01
Model 3	Gender×time	0.009**	0.002
Model 4	Pre-university education×time	0.015**	0.004
	Higher academic education×time	0.009*	0.003
	Lower academic education×time	0.011**	0.003
Model 5	Pre-university education×gender	0.147**	0.03
	Higher academic education×gender	0.119**	0.03
	Lower academic education×gender	0.084*	0.03
Model 6	Pre-university education×gender×time	0.012**	0.002
	Higher academic education×gender×time	0.009**	0.002
	Lower academic education×gender×time	0.007**	0.002

Model 1: main effect bivariate association. Models 2–6 controlled for age and ethnicity. Model 2: main effect+control. Model 3: interaction effects gender×time. Model 4: educational level×time. Model 5: educational level×gender. Model 6: educational level×gender×time. ** $p < 0.001$; * $p < 0.01$.

Table II. Means for schoolwork pressure^a by year, gender and educational level.

Educational level	Boys					Girls					Overall				
	2001	2005	2009	2013	2017	2001	2005	2009	2013	2017	2001	2005	2009	2013	2017
Pre-university education	2.01	2.10	1.99	2.21	2.40	2.16	2.28	2.31	2.51	2.74	2.09	2.19	2.15	2.35	2.57
Higher academic education	1.91	1.93	1.98	2.10	2.27	2.06	2.12	2.25	2.34	2.61	1.99	2.02	2.11	2.22	2.43
Lower academic education	1.80	1.88	1.88	1.98	2.13	1.96	2.00	1.98	2.27	2.43	1.89	1.94	1.93	2.12	2.27
Pre-vocational education	1.69	1.82	1.80	1.85	1.94	1.84	1.94	1.85	1.98	2.11	1.75	1.88	1.83	1.91	2.02
Overall	1.82	1.91	1.92	2.03	2.21	1.99	2.06	2.10	2.27	2.51	1.91	1.99	2.01	2.15	2.35

^aScale 1–4, ranging from 1='no schoolwork pressure at all' to 4='a lot of schoolwork pressure'.

levels too. Whereas the increase in schoolwork pressure over time was similar across educational tracks for boys, for girls, there was a stronger increase in schoolwork pressure for those enrolled in higher educational tracks. Thus, girls in pre-university education experienced the largest increase in schoolwork pressure over time.

The general increase in schoolwork pressure between 2001 and 2017 may be explained by an overall increase in the perceived importance of succeeding academically nowadays [6,7] and the increase in Dutch students attending higher educational levels [4]. This could have then prompted higher student involvement in schoolwork [6], more pressure and also an increase in the number of students for whom schoolwork is too demanding, especially among those in higher educational levels. Increases in schoolwork pressure were stronger for girls than they were for boys, particularly for those in the highest educational levels. Potentially, girls invest more in their education [6], are more disappointed

when they (perceive to) fail at their schoolwork than boys [8] and are also more sensible to educational stressors, such as educational expansion [7,8]. Future studies are required to investigate mechanisms explaining our results.

This study has a number of strengths, such as the use of large nationally representative data sets and a standard protocol for the data collection. However, it is limited in the way in which schoolwork pressure was assessed. Multi-item questionnaires could better establish what schoolwork pressure entails specifically [11].

Conclusions

This research clearly shows that schoolwork pressure increased in the Netherlands between 2001 and 2017, particularly among girls and adolescents in the higher educational levels. As mental health consequences of high schoolwork pressure can be severe [10,11], school policies for these particular groups are needed

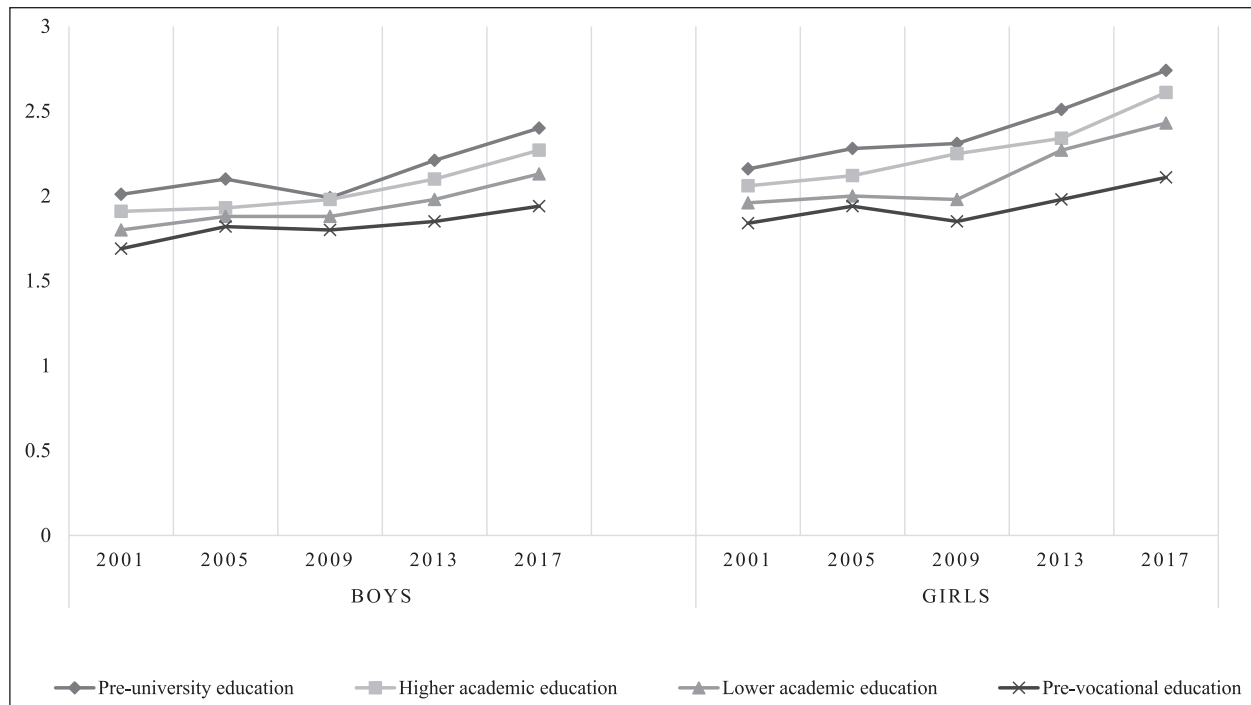


Figure 1. Time trends (2001–2017) in schoolwork pressure by gender and educational level.

to help alleviate this pressure [2]. Our findings point to a potentially risky societal development, namely increasing emphasis on being (academically) successful, which may warrant policy attention across countries with similar educational systems.

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