

Table SI. Variable description

Variable	Original question with response
Difficulties keeping up with school education?	“Do you have difficulties keeping up with school education?” Response: yes in every subject; yes in most subjects; yes in one or two subjects; no. The responses were categorized into yes in every subject/yes in most subjects and yes in one or two subjects/no.
Sex	Are you a boy or a girl? Response: boy; girl
Family structure	Do you live with both your mother and father? Responses: Yes; No, I live alone with my mom; No, I live alone with my dad; I mostly live with my mother and sometimes I live at my dad’s; I mostly live with my dad and sometimes I live at my mother; I live almost as much with my father and mother (e.g., one week I live with my father, the other of the mother); During the school weeks, I live neither together with mom or dad; I never live together with neither mom or dad. The responses were categorized into living with both parents or not (yes versus all other)
Maternal and paternal employment	What does your mother do?/ What does your father do? Response: working full time; Working part time; Unemployed; Studying; Maternity leave/ housewife; Is long time sick Is retired/on disability. The responses were categorized into unemployed, long-term sick leave and early retirement.
Sleeping problems	Have you during this school year...had sleeping problems? Response: often; always; never; seldom. The responses were categorized into often/always=yes, and never, seldom=no
ADHD	Do you have any of these disabilities/physical illnesses? ADHD Response: yes; no

Eczema	Do you have any of these disabilities/physical illnesses? eczema Response: yes; no
Allergy	Have you during this school year felt bothered by allergies? Response: often; always; sometimes; seldom; never. The responses were categorized into often/always/sometimes=yes, and never/seldom=no
Rhinitis	Do you have any of these disabilities/physical illnesses? Allergic runny nose Response: yes; no
Asthma	Do you have any of these disabilities/physical illnesses? Asthma Response: yes; no
Alcohol consumption	How often, during this school year, have you been drinking strong alcohol, wine or spirits? None; Once a week; Twice a week; Every other day; Each day. Responses categorized into Once a week or more versus all other

Table SII. Logistic regression showing the association (odds ratio, and confidence intervals within parentheses) between eczema and school education among 15 years old pupils stratified for boys and girls.

Model 1: adjusted by SES.	Adjusted odds ratio (95% CI) for difficulties keeping up with school education		
	Eczema (ref. no eczema)	Boys (n =1,204)	Girls (n= 1,228)
		3.63 (1.89 - 7.01)	1.59 (0.88 - 2.88)

Note: Abbreviations: SES: family structure, living with one parent vs. all other

Table SIII. Logistic regression showing the association (odds ratio, and confidence intervals within parentheses) between eczema and keep up with school education among 15 years old pupils stratified for

	Adjusted odds ratio (95% CI) for difficulties keeping up with school education and eczema					
Model 1: adjusted by sex and SES.	With asthma (n=339)	No asthma (n=2,075)	With allergy (n=159)	No allergy (n=2,263)	With rhinitis (n=431)	No rhinitis (n=1,976)
	3.09 (1.50 - 6.59)	1.57 (0.86 - 2.89)	1.79 (0.55 - 5.86)	2.14 (1.32 - 3.47)	2.59 (1.16 - 5.80)	2.01 (1.15 - 3.54)

Note: Abbreviations: SES: family structure, living with one parent vs. all other. Allergy measured by: Have you during this school year felt bothered by allergies?

Table SIV. Logistic regression showing the association (odds ratio, and confidence intervals within parentheses) between eczema and school education among 15 years old pupils, adjusted for unemployment of the mother and father

Odds ratio (95% CI) for difficulties keeping up with school education and eczema		
	No eczema	With eczema
Crude:	1.00 (reference)	2.28 (1.41 - 3.71)
Model 1: adjusted for sex and SES*	1.00 (reference)	2.16 (1.32 - 3.52)
Model 2: Adjusted for sex and SES and further adjusting for ADHD, sleeplessness	1.00 (reference)	2.00 (1.20 – 1.27)
Model 3: Adjusted for sex and SES and further adjusting for ADHD, sleeplessness and further alcohol consumption*	1.00 (reference)	1.93 (1.13 - 3.30)

*Abbreviations: SES: unemployment of the mother and father, alcohol: consuming alcohol at least once/week.

Observations: n=1,683

Table SV. Logistic regression showing the association (odds ratio, and confidence intervals within parentheses) between eczema and difficulties keeping up with school education among 15 years old pupils, without alcohol covariate

Adjusted odds ratio (95% CI) for difficulties keeping up with school education		
Model	No eczema	With eczema
Crude:	1.00(reference)	2.20 (1.37-3.54)
Model 1: adjusted for sex and SES*	1.00(reference)	2.23 (1.43 – 3.50)
Model 2: Adjusted for sex and SES and further adjusting for ADHD, sleeplessness	1.00(reference)	1.84 (1.15 – 2.96)
Model 3: Adjusted for sex and SES, ADHD and, sleeplessness	1.00(reference)	1.84 (1.14 – 2.96)

*Abbreviations: SES: family structure, living with one parent vs all others.

Observations: n= 2,386