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The links between SES, academic motivation and achievement in high-school: A motivational advantage of high-SES students?

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Background



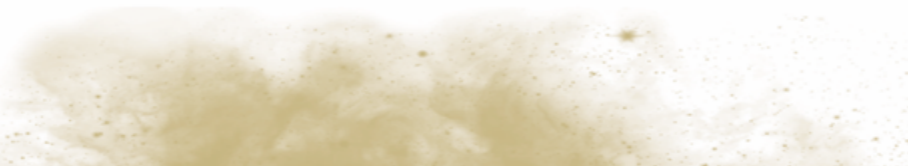
- Studies reveal a number of **adverse effects of low family SES on adolescent developmental outcomes**, including achievement.

(Bradley & Corwyn, 2002; Chmielevski, 2019; Masarik & Conger, 2017)

- Relatively little is known about the **internal psychological processes, such as achievement motivation**, in relation to SES effects on achievement.



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Motivational SES effects?



Previous studies indicate that some aspects central for achievement motivation differ by SES and may mediate SES-achievement link, e.g.:

- **Mindset:** higher SES was associated with lower fixed mindset beliefs, which partly mediated SES-achievement link (Destin et al., 2019).
- **Goal orientations:** first-generation college students endorsed performance avoidance goals more than their peers, the difference increasing with the academic level (Jury et al., 2015).
- **Future-oriented perceptions:** social mobility beliefs (Browman et al., 2017), financial aid expectations (Destin, 2016) motivate students to set higher educational aspirations.



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Achievement goal orientations



AG are a person's internal theory of own qualities, abilities, and achievements (Nicholls, 1989), which shapes achievement behaviours, reactions to feedback, achievement levels, etc.

- **mastery-approach** goals refer to the students' intent to acquire and master the content of learning material
- **mastery-avoidance** goals relate to the desire to avoid failure mastering the content of learning material
- **performance-approach** goals pertain to the desire to outperform other students or peers
- **performance-avoidance** goals refer to the intent to avoid being outperformed by classmates or other students

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Study goal and hypotheses



Our goal was to explore if adolescent achievement goal orientations were related to family SES and if these effects could explain SES-achievement links.

Hypotheses:

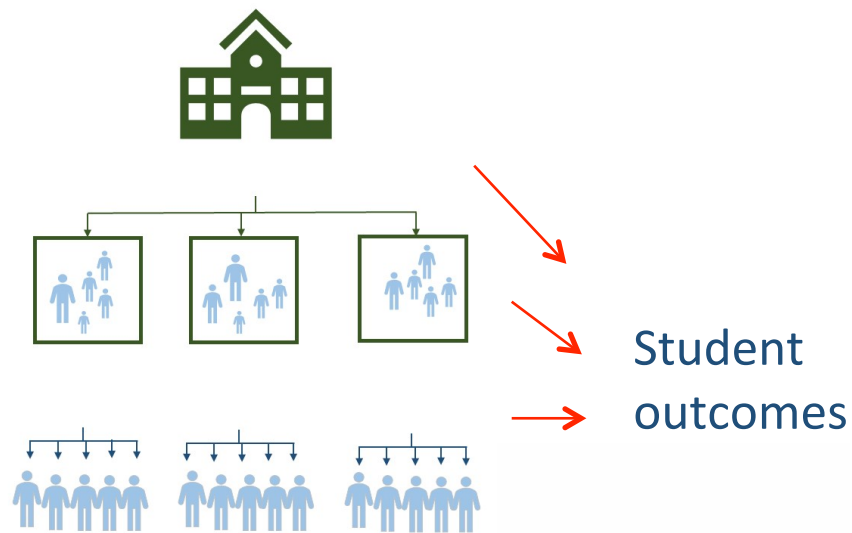
1. Higher SES is related to stronger achievement goal orientations.
2. Achievement goal orientations partly mediate SES-achievement link.

We controlled for **perceived class goal structures** (mastery and performance) to rule out that SES effects could be explained by perceived classroom expectations for students from different SES.



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Hierarchical nature of school-based data



SES, grades, goal orientations and perceptions as:

- Individual characteristics
- School/ class characteristics

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Study participants



- **1268** adolescents (51,7% females) in **76** classes from 36 gymnasiums
- Age 14 - 16 (M = 14.87 SD = 0.39)
- Diverse family and socio-economic background:
 - 67% live with two parents; 22% parental divorce, 4% parental loss, 4% migration
 - 12.9% receive social support (free nutrition at school) (on a national level – 13.7%)
- Homogenous ethnically (> 98% Lithuanian)



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Instruments 1



Achievement goals orientations (AGQ-R) (Elliot & Murayama, 2008)	Items	Cronbach's alpha
Mastery approach	3	.83
Mastery avoidance	3	.76
Performance approach	3	.83
Performance avoidance	3	.78
Perceived School Goal Structures (Park et al., 2018)		
Mastery structure	6	.81
Performance structure	5	.82

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Instruments 2



Socio-economic background (SES) (based on Family Affluence Scale, Hobza et al., 2017)	Items	Comp. reliability
Home possessions, trips abroad, free meals	5	.60
Academic achievement		
Running semester GPA	1	-



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Analyses



- Multi-level path analysis carried out with Mplus 8.6
- Students nested within classes
- MLR estimator was used



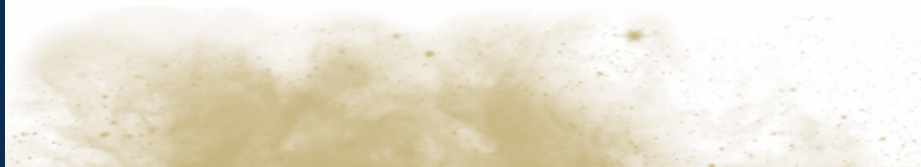
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Descriptives



<i>Study variables</i>	1	2	3	4	5	6	7	8
1. Academic achievement	.26	.49***	.65***	-.29*	.77***	.86***	.33	.72***
2. SES	.04	.11	-.06	.07	.13	.31	.34	.41
3. Mastery structure	.16***	-.03	.08	-.68***	.71***	.73***	.37	.65**
4. Performance structure	-.07*	.09**	-.23***	.13	-.19	-.17	.00	-.24
5. AGO: Mastery approach	.30***	.07**	.41***	-.08**	.03	.88***	.49*	.74***
6. AGO: Mastery avoidance	.25***	.05	.22***	.01	.51***	.05	.36	.70***
7. AGO: Performance approach	.17***	.10***	.13***	.13***	.37***	.39***	.06	.76***
8. AGO: Performance avoidance	.16***	.07*	.13***	.11***	.34***	.48***	.74***	.03
M (at student level)	7.71	.52	.38	.29	3.95	3.55	3.37	3.58
SD (at student level)	1.29	0.50	0.76	0.93	1.04	0.94	0.85	0.98

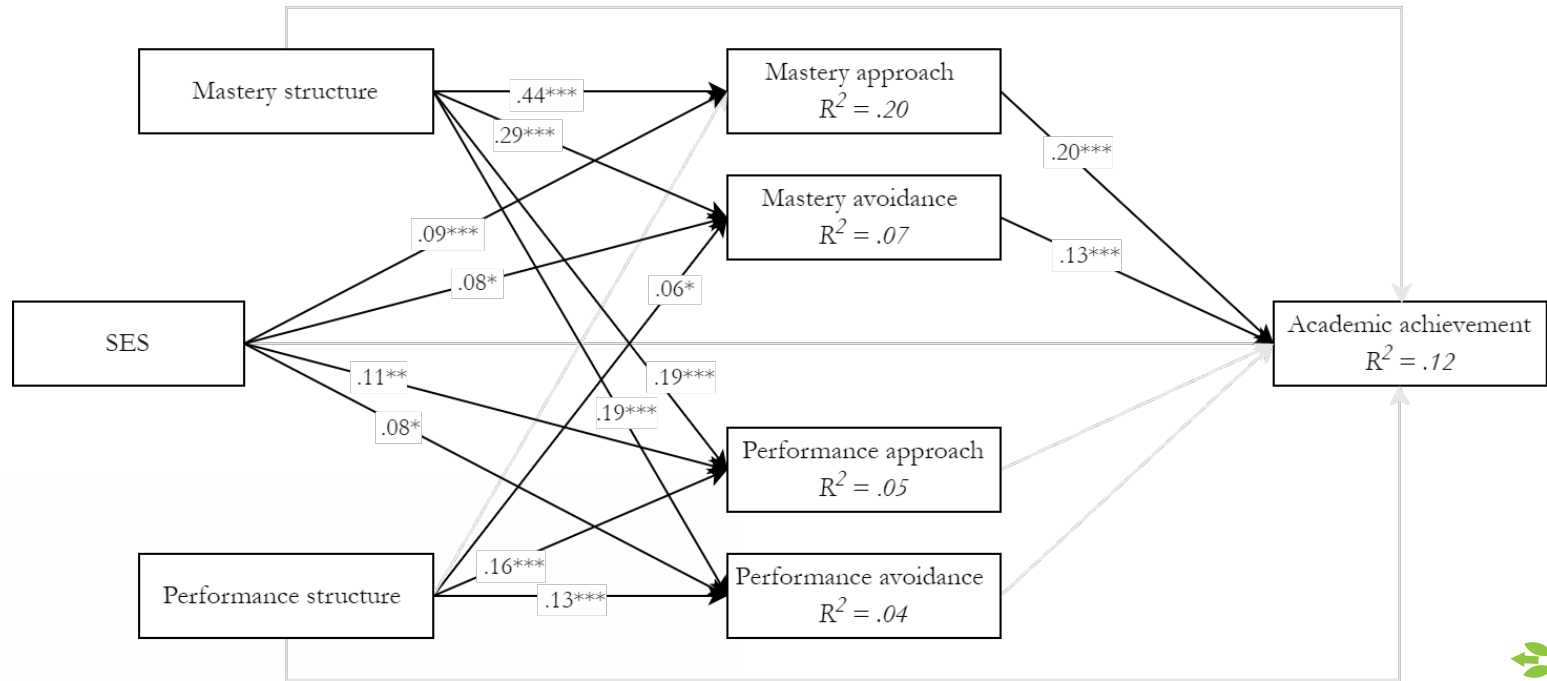


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Results 1

Individual (within) level



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Results 1: Summary



On an individual (within class) level:

- Higher student SES is related to higher scores on **all aspects of achievement goals orientations** (mastery-approach, mastery-avoidance, performance approach, performance-avoidance).
- BUT no direct SES link to achievement.
- Two significant, but very small mediational paths were identified from SES to achievement through mastery approach (effect .01, $p < .05$) and mastery avoidance (effect .02, $p < .01$) orientation.

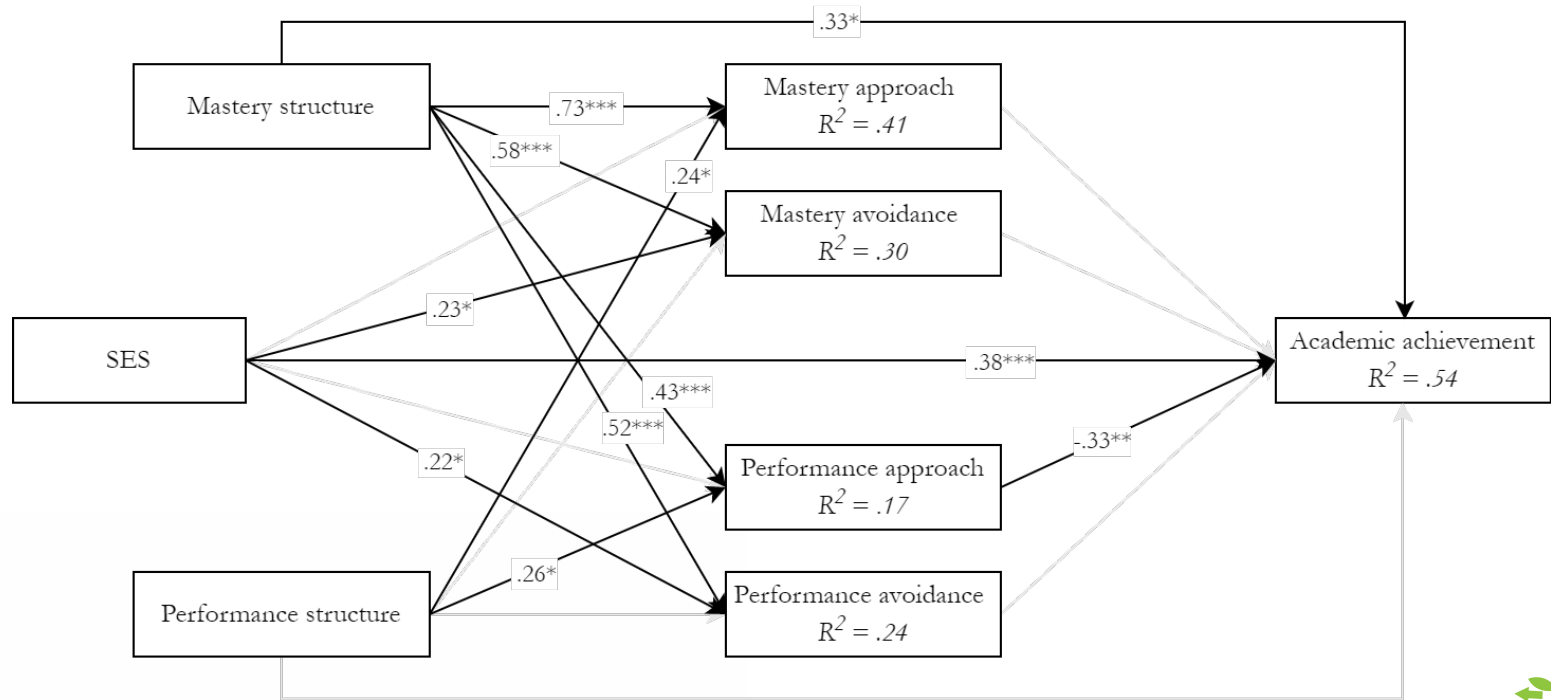


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Results 2



Class (between) level



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Results 2: Summary



On an classroom (between classes) level:

- Higher SES in a classroom is related to higher student scores on **avoidance goal orientations** (mastery-avoidance, performance-avoidance).
- SES has a strong, but only direct, link to achievement – higher SES in a classroom is linked to higher student achievement.



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Conclusions



So is higher SES related to a motivational advantage in achievement?

- Higher-SES students have higher scores on all achievement goal orientations.
- Achievement goal orientations have incremental mediational effects on SES-achievement link and only on an individual level.
- Classes with higher average student SES report higher avoidance goal orientations.
- Classes with higher average student SES have substantially higher achievement.



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Implications for research



We need to understand better:

- What happens differently in classes/ schools with different student SES composition.
- Directional effects between SES-motivation-achievement.

We need to include in research:

- A broader concept of SEC (social-economic-cultural) background into the analyses on academic motivation.
- Other outcomes along with achievement – at least aspects of well-being, emotional.



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Message for policy



Our findings point to the structural SES effects on achievement, perpetuated through the school system.

- SES links to achievement on a classroom level point to **SES-related classroom segregation** effects, which are probably not related to achievement, but driven by other factors in schools and families.
- Educational resources, teaching practices, educational transitions and many more factors require attention of researchers and policy makers.



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Acknowledgements

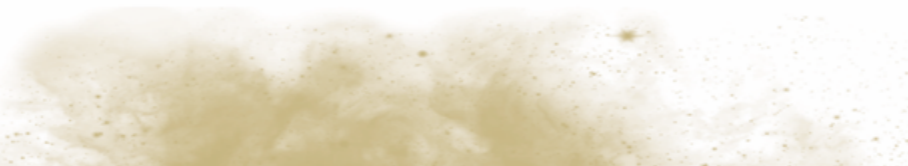


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Thank you!

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