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Extracurricular activities and educational ouctomes: evidence from high-performing schools in St Petersburg, Russia

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ABSTRACT

This article is based on a survey carried out among 2,428 ninth-graders from 64 high-performing schools in St. Petersburg, Russia. In the study, we examine the relationships between socioeconomic background, extracurricular participation, and educational outcomes. The findings demonstrate high levels of participation in out-of-school, compared to school-based, extracurricular activities. Extracurricular participation was also shown to be associated with better grades and, to some extent, with higher levels of university aspirations. The relatively small estimate sizes indicate, however, that extracurricular participation is not a major factor in differences in educational outcomes. Nevertheless, since participation was higher among socioeconomically more advantaged students, and grades and/or levels of university aspirations were higher among those who participated, we argue that extracurricular participation should be understood as part of social reproduction in Russia.

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Introduction

Participation in extracurricular activities has generally been shown to be beneficial for young people's educational outcomes (Farb & Matjasko, 2012; Snellman et al., 2015). Identified as a 'practical' aspect of cultural capital (Jæger, 2011, p. 295), it is conducive to the acquisition of cognitive abilities, normative orientations, and cultural codes that are recognized and rewarded in formal education (Barone, 2006; Kaufman & Gabler, 2004; Tramonte & Willms, 2010). Researchers have consequently suggested that

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extracurricular participation contributes to the reproduction of social inequalities, since participation is more common among students from socioeconomically advantaged homes (Carolan & Wasserman, 2015; Cheadle, 2008).

However, our understanding of how extracurricular participation relates to social reproduction is limited by the fact that previous studies have been conducted largely in Western capitalist countries. It should therefore not be assumed that research in post-socialist countries, where the processes of social reproduction might be different, will yield similar results (Bodovski et al., 2017). Research has shown extensive educational inequalities in post-socialist Eastern European countries (Amini & Nivorozhkin, 2015; Kosaretskii et al., 2016; Matěakejů & Straková, 2005). However, due to the history of far-reaching state interventions in the distribution of resources by communist regimes – sometimes including confiscation of property and the outlawing of cultural practices – there is ongoing debate on the nature of this inequality. Considerations include whether the reproduction of advantages and disadvantages in the generations under communism was based on status or economic resources (Kordonsky, 2016), which categories were most privileged (Tomusk, 2000; Wong, 1998), and what legacy remains. Because of this, the relative role of cultural, social, and economic capital in social reproduction in post-socialist countries merits special attention.

In this article, we contribute to the existing literature by examining the relationships between socioeconomic background, extracurricular participation, and educational outcomes among ninth-graders in high-performing schools in St. Petersburg, Russia. Previous research has suggested large social and spatial differences in the availability, content, and quality of extracurricular activities in Russia, which might affect their role in the reproduction of inequalities (Aleksandrov et al., 2017). Because of this, we limited our study to students in high-performing schools in a metropolitan area with broad access to high-quality extracurricular activities.

This study addresses two questions:

(1) To what extent does socioeconomic background predict extracurricular participation among students in high-performing schools in St. Petersburg?
(2) What relationships are present among participation in extracurricular activities, grades[1], and educational aspirations?

Theoretical background

Students from socioeconomically advantaged families generally do better in school and have higher levels of educational aspirations than students from disadvantaged families (DiMaggio, 1982; Dumais, 2002; Farkas et al., 1990;

Jæger & Holm, 2007; Sirin, 2005; Sullivan, 2001). An important reason for this is that socioeconomically advantaged parents have more time and resources to invest in their children's education and are more familiar with abstraction and cultural codes, which is highly valued in school. This mastery of the theoretical and symbolic aspect of skills is what Bourdieu called cultural capital (Bourdieu & Passeron, 1990).

The unequal distribution of economic, social, and cultural capital between advantaged and disadvantaged families also manifests in children's unequal extracurricular participation, since socioeconomically advantaged parents are typically more involved in their children's out-of-school time and have better access to resources that facilitate enrollment (Lareau, 2011; Weininger et al., 2015). As a result, extracurricular participation is typically higher among students from advantaged backgrounds (An & Western, 2019; Covay & Carbonaro, 2010; Farb & Matjasko, 2012).

Participation in organized extracurricular activities can, in turn, lead to better educational outcomes for young people. There are two reasons for this: first, taking part in extracurricular activities helps develop various skills and dispositions that make studying easier. These include cognitive skills beyond those included in typical school curricula (Forneris et al., 2015) as well as attitudes and non-cognitive skills, such as self-esteem (Broh, 2002; Vandell et al., 2015). Second, organized activities put students into contact with peers and mentors who can provide information, help, and resources, which also makes studying easier (Jarrett et al., 2005; Sabirova & Zinoviev, 2016). Exposure to academically oriented adults and peer groups shapes young people's plans and decisions, which tend to become more academically oriented (Gabay-Egozi et al., 2015). Extracurricular activities also provide an outlet for expressive action, enabling participants to explore their personal talents and interests and formulate their identities (Dworkin et al., 2003). The broadening of social networks also creates a sense of belonging to socially recognized and valued groups (Eccles et al., 2003). Participation in extracurricular activities can consequently be expected to improve educational outcomes through the accumulation of both cultural capital – skills and dispositions – and social capital, or contact networks (cf. Bourdieu, 1986).

Scholars have, however, noted that social reproduction can vary between countries with different institutions and norms. The prizing of non-cognitive skills might, for example, decline when tests are more standardized, and the premium on information gleaned from networks might diminish if private tutoring in school subjects were the norm (Byun et al., 2012). When education is particularly competitive, participation in non-academic extracurricular activities may even be negatively associated with

educational outcomes since it takes time away from other beneficial activities (Schmidt, 1983). The educational benefits of extracurricular participation should therefore not be assumed to be universal.

An important question thus remains open: To what extent do Western theories of social reproduction apply to non-Western contexts, such as that of post-socialist Eastern Europe (Bodovski et al., 2017)? In the present study, we address this question by focusing on extracurricular participation and outcomes in Russia, an educational context that is somewhat understudied. In the next section, we discuss the role of extracurricular activities in the Russian educational system in order to highlight the unique features of the national context.

Schooling and extracurricular activities in Russia

In Russia, a child's compulsory state-funded education starts at the age of seven and consists of three to four years of primary education and five years of general education, following which students may opt for upper secondary education or vocational training or enter the labor market. Whereas a standardized curriculum is in place for general education, some schools may be licensed to offer intensive programs in specific subjects in the humanities and/or natural sciences. Grammar schools (*gimnazii*) usually follow even more enhanced curricula in both the humanities and the natural sciences and matriculate children after primary school. Matriculation into lyceums (*litsei*) usually occurs in eighth or ninth grade, with advanced learning in natural and applied sciences (often even preparing students for specific occupations). Standardized written exams are administered as a prerequisite for completion of general education (administered since 2014) and upper secondary education (administered since 2009).

Extracurricular activities were introduced in Russia soon after the October Revolution. Initially focusing on supplementary education for adults (*dopolnitel'noe obrazovanie*), initiatives for school-age children appeared in 1919, aiming to contribute to the inculcation of worthwhile knowledge (*obrazovanie*) and general moral development (*vospitanie*) (Deich, 2011; Krivykh, 2011). The goal was to reduce inequalities in educational performance by compensating for unsupervised or family-based upbringing as well as to prevent juvenile delinquency, child neglect and homelessness (Kupriianov, 2016). The term 'out-of-school upbringing' was officially adopted during the 1930s. Over the following decades, the field was gradually professionalized (Tikhomirova, 2014) and increasingly tightly administered by the state (Gerber, 2003).

After the collapse of the Soviet regime, the Russian educational system underwent marketization and decentralization (Kolin, 1997; Ziiatdinova, 2006). This cemented already existing segmentation and segregation

(Gerber, 2003) while also increasing inequalities in access and outcomes (Roshchina et al., 2006; Shkaratan & Iastrebov, 2012). Over two decades, the number of public organizations providing extracurricular activities, the extent of public funding for such activities, and rates of enrollment in all types of extracurricular education dropped substantially (Zolotareva, 2005). This decreasing trend was not reversed until 2012, when enrollment rates began to climb again; enrollment reached 68% of all children aged between five and 18 years by 2015 (Kosaretskii et al., 2017, p. 6).

Institutions offering extracurricular activities in Russia range from schools to public and private out-of-school organizations; generally, the latter are also integrated into the public education system, either directly or by means of licensing[2] (Ivaniushina & Aleksandrov, 2015). Activities are largely supported by state subsidies, with only a small proportion of their incomes coming from participation fees (Kupriyanov et al., 2015). However, participation can still entail substantial costs in the form of materials or equipment that families are expected to provide for their children.

Although extracurricular participation is regarded as a necessary instrument of socialization, secondary school teachers do not take into account extracurricular activities when they set their grades, while higher education institutions do not award merit for extracurricular participation when making determinations about matriculation. Moreover, Russian education professionals and consumers rarely consider extracurricular activities as having an effect on curriculum-related performance (Kupriianov, 2015, p. 114).

Understanding the institutional context as both highly standardized and strongly differentiated (Bodovski et al., 2019, p. 394) informs our analytical strategy and our interpretation of the results of this study. In the following section, we focus on the existing research on the association between extracurricular activities and school achievement.

Earlier research on extracurricular activities and academic performance

Students from socioeconomically advantaged homes tend to participate in extracurricular activities more often than students from disadvantaged homes (Snellman et al., 2015). One of the main reasons for this is inequality of access. Socioeconomically advantaged families also have cultural, social, and economic resources that help them obtain information about high-quality extracurricular education, pay fees and related costs, and make long-term commitments (Lareau, 2011).

Research has generally found that extracurricular participation is associated with better cognitive abilities, higher school grades and higher educational aspirations (Bodovski, 2010; Covay & Carbonaro, 2010; Snellman et al., 2015). However, researchers have also noted that not all participation in extracurricular activities is beneficial for educational outcomes (Mahoney

et al., 2005). Rather, the association between participation and educational outcomes tends to vary with the type of activity; it is also substantially more positive for academic activities such as extracurricular classes in math (Knopf et al., 2015) or reading (Ciocanel et al., 2017). A particular concern is the potential trade-off between time spent on extracurricular activities and time spent on homework, recreation, and other beneficial activities outside of school (Schmidt, 1983). This trade-off is important since both access to high-quality extracurricular activities and availability of alternative pastimes can vary between student groups. As a result, the benefits from extracurricular participation are sometimes found to differ among students with different socioeconomic backgrounds (Burgess & Umaña-Aponte, 2011; Jæger, 2011; Marsh & Kleitman, 2002; Peck et al., 2008).

In Russia, earlier studies have found significant variation in extracurricular participation across the country. Students who participate in extracurricular activities typically do so in their own neighborhoods, meaning that participation rates are higher in larger cities due to better access (Kosaretskii et al., 2016). Children from advantaged families begin extracurricular education early and engage in several types of activities at the same time, including extracurricular training in foreign languages and other school subjects. Most commonly, young people engage in sports (ca. 50%), foreign languages (ca. 20%), arts (35%), and school subjects that follow the curriculum or extend beyond it (15%) (Aleksandrov et al., 2017, p. 231). Most participants engage in their extracurricular activities long-term, with most organizations offering programs that run for a period of more than three years (Kosaretskii et al., 2016). 'Shadow education', or supplementary private tutoring in core subjects such as the national language or mathematics, is also widespread (Bodovski et al., 2019).

With regard to the association between extracurricular participation and academic performance, studies performed in Russia do not always support the results of U.S. and western European research. For example, Bodovski et al. (2019) found a positive association between Russian language tutoring and test scores, but no positive association between mathematics tutoring and test scores. Moreover, their study showed no association between sports – and arts-related extracurricular activities and academic performance and showed attending arts classes to have a negative effect on the likelihood of matriculation into a selective university. This casts doubt on the benefits of participation in extracurricular activities for educational outcomes in general, since tutoring is a type of extracurricular activity explicitly intended to improve test scores and grades.

On the other hand, some studies have found a positive association between extracurricular participation and school grades (e.g. Polivanova et al., 2016). Aleksandrov et al. (2017) also suggested that the engagement with peers, parents, and other adults is more important than the content of

extracurricular activities. However, they found socio-spatial stratification in the effect of extracurricular participation: the study indicated that where diverse and high-quality activities are accessible to most students (e.g. in metropolitan areas), the effect on academic performance is weaker than in geographical areas with much more limited availability and, therefore, lower levels of participation (Aleksandrov et al., 2017).

It is also possible that extracurricular activities are only beneficial for academic outcomes to the extent that young people participate in activities catering to their particular needs and that the benefits depend on the quality of activities. Studying shadow education in Russia, Loyalka and Zakharov (2016) found that, due to differences in the quality of activities, participation had a positive impact on the educational outcomes of already high-achieving students but not on those of previously low-achieving students.

Previous results, then, point to important differences between contexts and categories of students. In this study, we contribute to the existing research by focusing on a single context within Russia in order to study extracurricular participation and educational outcomes among students in high-performing schools in St. Petersburg.

Data and measures

The data for this study come from a survey administered among ninth-graders (students approximately 15–16 years old) in the Russian city of St. Petersburg in September and October of 2015. Earlier research has shown that St. Petersburg is similar to other large cities in Russia with regards to the availability of and participation in extracurricular activities (Ivaniushina & Aleksandrov, 2015) and can therefore be considered representative of metropolitan areas in Russia. The sample targeted only high-performing schools, identified through data on average scores from the unified state examination for eleventh-graders (*edinyi gosudarstvennyi ekzamen, EGE*).[3] These data were retrieved from an online database (Shkoly Sankt Peterburga, 2018) and obtained from official reports on school performance from 2010 and 2014 (not publicly available). From 728 upper secondary schools in St. Petersburg, we selected those with the highest average EGE scores in the five previous years.

The survey was administered by the Center for Youth Studies, Higher School of Economics, St. Petersburg branch. The schedule and access to the schools were coordinated with the educational authorities at the city and municipal district level; the authorities, however, had no influence on the sampling procedure. By means of newsletters or announcements on school websites, each school administration informed students and their parents in advance about the purpose of the survey, its voluntary nature, and the

confidentiality of participation. Over a period of three weeks, three to four schools were visited daily by a team of at least two interviewers who conducted the survey in no more than two classes per school. This was done during regular lessons and without the presence of teachers or school administrators.

The final sample included 2,607 observations (2,119 after listwise deletion of missing responses) from 64 schools with average EGE scores ranging from 47.8 to 77.9 points. Three types of educational institutions were included: 41 standard curriculum secondary schools (*obshcheobrazovatel'nye*), 12 grammar schools (*gimnazii*), and 11 lyceums (*litsei*).[3] Although not representative of the distribution of schools across the city (Pöder et al., 2016), this sampling gives us an opportunity to distinguish between the three major educational tracks that exist at the secondary level. It also allows us to capture the socioeconomic inequality embedded in the educational system in St. Petersburg, as parental choice of school type, alongside the choice of school within school type, largely determines levels of school segregation (Ivaniushina et al. , 2019). All schools included in the study were public, non-denominational, state-funded and state-controlled, either by the City Administration directly or by educational authorities at the city-district level. All schools offered school-based extracurricular activities of various kinds, both academic and non-academic.

Variables

Two outcome variables were used in the analysis as indicators of educational outcomes: grades and university aspirations. Higher grades indicate more advanced academic skills and a higher likelihood of passing entrance exams for further education, while university aspirations indicate a preference for further education. Both indicators are potentially important for social reproduction, since students from socioeconomically advantaged families are more likely to make educational transitions than students from disadvantaged families with similar grades (Boudon, 1974). Russian grades range from 1 through 5, where higher is better and a grade of 3 is needed to pass. In the survey, students were asked what grades they were mostly getting (cf. Aleksandrov et al., 2017). From these answers, we created the variable *grades*, ranging from 5 (for a student who was only receiving top marks) through 1 for students who were failing all subjects. *University aspirations*, in turn, were coded 1 for students who replied that they aspired to complete a university education, and 0 otherwise.

In the survey, students were asked about their participation in various extracurricular activities. Among school-based activities, we separated between arts classes, science classes and language classes. Out-of-school activities were classified by the type of organization providing the activity,

distinguishing between sports clubs and youth clubs (including several categories such as *doma detskogo tvorchestva, podrostkovye kluby*, and *doma kul'tury*). Based on earlier studies (e.g. Kupriianov, 2015), we assumed activities in sport clubs to be primarily non-academic and activities in youth clubs to include arts and crafts as well as tutoring in foreign languages and natural sciences. Response options were coded based on frequency of attendance: never (0), once per week (1), more than once per week (2), and almost every day (4).

To operationalize students' socioeconomic backgrounds, we used information on parents' educational levels and occupations. Students were asked to report their mothers' and fathers' levels of education, ranging from none through MA or above. We coded each parent's level of education as the number of years normally required to reach that particular level and subsequently calculated the average to create the variable *parents' years of schooling*. Parents' occupations were based on the parent with the more prestigious occupation. We coded the variable 1 if at least one parent had an occupation classified as managerial or professional in the ISCO-08 scheme and 0 otherwise. The variable is listed in tables as *parent in managerial/professional occupation*. Finally, control variables for gender and school type were included.

Method

The data were analyzed using ordinary least squares (OLS) and linear probability model (LPM) regressions, with robust standard errors clustered by school to account for correlation in error terms. The analysis proceeded in two steps: we first estimated the predictors of extracurricular participation, and then the associations between extracurricular participation and grades and university aspirations.

Results

Descriptive statistics for the variables used are presented in Table 1. The overwhelming majority of respondents (80.9%) aspired to complete a university education, and the average respondent also reported having high grades (3.78). As expected from the sampling, parents were well-educated and often employed in prestigious occupations. The average student had parents with more than 13 years of schooling, that is, at least some tertiary education. More than two-thirds of students also had at least one parent in a managerial or professional occupation (ISCO-08 classifications 1 and 2). Most students in the sample consequently came from advantaged socioeconomic backgrounds. Boys and girls were represented almost equally, and most attended standard curriculum secondary schools.

Table 1. Descriptive statistics for sample of youth in high-performing secondary schools in St. Petersburg, Russia. N = 2119.

	Mean (sd)/%
University aspirations	80.9%
Grades (1–5)	3.78 (0.53)
Parents' years of schooling	13.33 (1.34)
Parental occupation	
Managerial/professional	69.0%
Other	31.0%
Gender	
Male	49.8%
Female	50.2%
School type	
Grammar school (gymnasium)	22.5%
Lyceum	21.9%
Secondary school	55.6%
Observations	2119

Table 2. Participation in extracurricular education. Percentage of youth in high-performing secondary schools in St. Petersburg, Russia. N = 2119.

	School-based			Outside of school		Any
	Arts	Language	Science	Sports club	Youth club	
Almost daily	5.0	5.1	1.6	9.3	7.0	19.3
Twice per week	18.6	20.8	16.8	37.1	35.1	58.2
Once per week or less	7.2	16.0	10.2	10.8	10.1	9.2
Never	69.2	58.1	71.4	42.8	47.8	13.2

The level of participation in extracurricular education, shown in Table 2, was high. Only 13.2% of the students took part in no extracurricular activities. This proportion is substantially lower than national figures (Kosaretskii et al., 2017, pp. 7–8), indicating that, compared to students in other parts of the country, students in the sample were advantaged also in terms of their access to extracurricular activities. Participation was frequent, with those participating often doing so more than once per week. In total, 58.2% reported participating twice per week in at least one type of extracurricular activity. Language classes were the most popular school-based activity. Out-of-school activities in sports and youth clubs were, however, substantially more common than school-based activities, with most students participating at least once per week.

Socioeconomic background and extracurricular participation

To explore the relation between socioeconomic background and participation in extracurricular activities, we fitted a series of OLS regressions with participation as outcome and parents' years of schooling and parents' occupation as predictors. Since schools have different foci, it is possible that certain types of activities are more common among students in particular types of schools. Due to gender norms, it is also possible that the distribution of girls and boys

Table 3. Predictors of participation in extracurricular education for youth in high-performing schools in St. Petersburg, Russia. Unstandardized coefficients from OLS regressions, with robust standard errors clustered by school in parentheses. * p < 0.05, ** p < 0.01, *** p < 0.001. N = 2119.

	Arts	Language	Science	Sports club	Youth club
Parents' years of schooling	0.06***	0.03	0.08***	0.04	0.07**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Parent in managerial/professional occupation	0.10*	0.00	0.00	0.17*	0.11
	(0.05)	(0.06)	(0.05)	(0.07)	(0.06)
Gender (female ref.)					
Male	−0.51***	0.06	−0.01	0.48***	−0.08
	(0.05)	(0.06)	(0.05)	(0.07)	(0.06)
School type (grammar school ref.)					
Lyceum	−0.19*	−0.18	0.21	−0.10	−0.04
	(0.09)	(0.09)	(0.11)	(0.11)	(0.11)
Secondary school	−0.20*	0.01	−0.13	−0.00	−0.17
	(0.09)	(0.09)	(0.09)	(0.10)	(0.11)
Constant	0.14	0.38	−0.50	0.31	0.26
	(0.22)	(0.30)	(0.28)	(0.31)	(0.32)
Observations	2119	2119	2119	2119	2119
Adjusted R^2	0.070	0.004	0.044	0.044	0.015

in particular types of schools makes certain types of activities more or less common. To account for such compositional effects, we also included gender and school type. The results are summarized in Table 3.

The results show that parents' years of schooling predicted participation in arts classes, science classes, and youth clubs, with higher participation rates among students with better-educated parents. In addition, having a parent in a managerial/professional occupation was associated with higher rates of participation in arts classes and sports clubs.

Boys were less likely to participate in arts classes but were more involved in sports. Participation in arts classes was less common in secondary schools and lyceums than in grammar schools. This reflects the differences in the paths to tertiary education embedded in schools' specializations: lyceums generally prepare students for training in applied sciences and engineering, whereas grammar schools focus on the humanities and classical arts (cf. Ivaniushina & Aleksandrov, 2015).

The regressions showed positive associations between participation and parents' years of schooling and/or occupation in four of five types of extracurricular activities, with parents' years of schooling as the most consistent predictor. However, the model fits were modest to low. This suggests that socioeconomic background is a predictor of extracurricular participation for metropolitan Russian youth, but that the differences are rather minor – possibly due to the fact that participation is widespread (cf. Aleksandrov et al., 2017).

Extracurricular activities, grades, and aspirations

Having established the association between socioeconomic background and extracurricular participation, we investigated the association between participation and educational outcomes. As mentioned above, we focused on two outcomes important for future academic success: grades and university aspirations. For both outcomes, we began by regressing the outcome on participation in the five different activities (Models 1 and 3). We then introduced control variables to see if the estimates were robust (Models 2 and 4). The results are summarized in Table 4.

The regression results show that participation in both arts classes and science classes was associated with higher grades. As shown in Model 2, the associations were robust to the inclusion of control variables, but the point estimates became smaller when the control variables were introduced. The difference in estimates was particularly large for arts classes, partly reflecting the correlation between socioeconomic background and participation in arts classes discussed above. With the inclusion of control variables, the estimate for sports club participation, however, increased and became statistically significant. An explanation for this is that boys are more likely to participate in sports clubs and have lower average grades. The association between sports club participation and grades is therefore underestimated in

Table 4. Grades (1–5) and university aspirations of youth in high-performing schools in St. Petersburg, regressed on participation in extracurricular education. Unstandardized coefficients from OLS/LPM regression, with robust standard errors clustered by school in parentheses. Full model also includes controls for gender and type of school. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. N = 2119.

	Grades (1–5), module 1	Grades (1–5), module 2	University aspirations, module 3	University aspirations, module 4
Extracurricular activities				
Arts class	**0.06*** **	**0.03** **	**0.02***	−0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Language class	**−0.02***	**−0.02***	0.01	**0.02***
	(0.01)	(0.01)	(0.01)	(0.01)
Science class	**0.05*** **	**0.04** **	**0.04*** **	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Sports club	0.02	**0.03** **	**0.02***	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Youth club	0.02	0.02	**0.03** **	**0.02***
	(0.01)	(0.01)	(0.01)	(0.01)
Parents' education (yrs)		**0.06*** **		**0.05*** **
		(0.01)		(0.01)
Parent in managerial/ professional occupation		**0.08** **		**0.06** **
		(0.03)		(0.02)
Grades (1–5)				**0.19*** **
				(0.02)
Constant	3.68***	2.93***	0.72***	−0.63***
	(0.02)	(0.12)	(0.02)	(0.15)
Adjusted R2	0.032	0.090	0.027	0.179

models that do not account for gender. Conversely, the association between arts classes and grades might be overestimated due to the large overrepresentation of girls in this type of extracurricular activity.

Somewhat surprisingly, school-based foreign language classes exhibited a negative association with grades. An explanation may lie in Russia's overall poor foreign language curricula and in the poor qualifications of schoolteachers in foreign languages (Gotlib, 2009). Language classes could, at least in part, be compensatory, and the causality between grades and participation reversed, because extracurricular language classes do not offer knowledge beyond school curricula but focus principally on helping less well-performing students to reach standard curricular goals.

In sum, the regression results showed that extracurricular participation, with the exception of participation in language classes and youth clubs, was positively associated with grades. Next, we examined the association between extracurricular education and educational aspirations. Just as with grades, we first examined the association between dependent and independent variables (Model 3) and then included control variables to see if associations were robust (Model 4). The results are summarized in Table 4.

Model 3 shows an association between extracurricular participation and university aspirations for arts classes, science classes, sports clubs, and youth clubs, but most of these associations disappear when background variables and grades are included (Model 4). The higher university aspirations among students who participated in arts classes, science classes, or sports clubs therefore seem to reflect their higher grades, and not to provide an additional benefit. By contrast, the association between youth clubs and university aspirations remained after the control variables were included. The fully controlled model also returned a statistically significant association between extracurricular participation in language classes and university aspirations. This means that all five types of extracurricular activities were positively associated with either grades, or university aspirations net of grades, indicating that extracurricular participation contributes to better educational outcomes for students in high-performing metropolitan Russian schools.

Discussion

In this study, we have contributed to the understanding of the role of extracurricular participation in social reproduction by examining the associations between socioeconomic background, extracurricular education, and academic outcomes among ninth-graders in St. Petersburg, Russia. Since previous research has suggested that the benefits of extracurricular participation vary between various groups of students and different national

contexts, we limited the study to focus only on students in high-performing schools in an area where access to high-quality extracurricular education is good. Using original survey data, we first assessed whether participation in school-based and out-of-school activities was predicted by students' socioeconomic backgrounds. We then analyzed whether extracurricular participation was associated with higher self-reported school grades and further educational aspirations, after controlling for socioeconomic background.

Our findings support previous studies demonstrating high levels of student participation in extracurricular activities (Aleksandrov et al., 2017; Ivaniushina & Aleksandrov, 2015). There was, however, a variation between different types of activities. Out-of-school activities were more popular than school-based activities, with sports clubs attracting the most attendance. Among school-based activities, participation in foreign language classes was most frequent. One possible explanation for the reported differences in participation rates is that school-based extracurricular activities might be so well integrated into the structure of formal education that they appear indistinguishable from regular curriculum-based schooling and are thus underreported. However, students in our sample still reported participation rates above the national average.

With extracurricular activities being an integral part of overall education for metropolitan Russian youth, enrollment was found to depend very little on students' socioeconomic backgrounds (cf. Aleksandrov et al., 2017). Nevertheless, participation in arts classes and youth clubs was somewhat higher among students with better-educated parents, and participation in both arts classes and sports clubs was higher among students with at least one parent in a high-status occupation.

Distinguishing between school-based and out-of-school extracurricular activities provided a more nuanced picture of the variation in structured activities. Because within-school processes are relevant to the reproduction of social and cultural inequalities (Cheadle, 2008), this distinction may be further explored in order to understand how, in a system that measures academic success through standardized testing, extracurricular activities may be recognized as a merit.

Our results also show extracurricular participation to be associated with better grades and, to some extent, with higher levels of university aspirations. This is in line with theoretical predictions but contrasts with the results of some earlier studies (e.g. Bodovski et al., 2019; Byun et al., 2012). One possible explanation is that the benefits of extracurricular participation are contingent on access to high-quality options (Loyalka & Zakharov, 2016), which are readily available in the context under study.

The estimate sizes were small overall, indicating that extracurricular participation is not a major factor for differences in educational outcomes. Still, since participation was higher among more socioeconomically

advantaged students, and grades and/or university aspirations were higher among those who participated after controlling for socioeconomic background, our results show that extracurricular participation should be understood as part of social reproduction in post-socialist countries. One important question for future research is therefore whether participation also yields other benefits – such as more successful establishment in the labor market or higher levels of well-being among participants. This is especially interesting considering that the intensity and forms of extracurricular education vary across different age groups (Kosaretskii et al., 2017, p. 10) and that benefits beyond academic achievement may also vary.

Notes

1. To distinguish grades as self-reported performance measurements from grades as levels of schooling, we consistently specify the latter (i.e. 'ninth grade').
2. Professional standards for licensed ECA organizations were introduced in 2015 and were aimed at transforming management practices prevalent in formal schooling into out-of-school extracurricular education.
3. At the moment of data collection, the exam consisted of several disciplines – two obligatory (Russian language, mathematics) and several elective (including chemistry, foreign languages and social sciences). The numbers of obligatory and elective subjects have varied over the years.

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