Journal of Youth and Adolescence (2018) 47:1299–1316
https://doi.org/10.1007/s10964-018-0838-1

EMPIRICAL RESEARCH

A Quarter Century of Participation in School-Based Extracurricular Activities: Inequalities by Race, Class, Gender and Age?

Ann Meier[1] · Benjamin Swartz Hartmann[2] · Ryan Larson[2]

Received: 6 November 2017 / Accepted: 25 February 2018 / Published online: 13 March 2018

Abstract
Extracurricular activity participation is linked to positive development, but it is also a setting for inequality. Using a quarter century of data from Monitoring the Future (N = 593,979; 51% female; 65% non-Hispanic white; 13% non-Hispanic black; 12% Hispanic; 4% non-Hispanic Asian/Pacific Islander; 7% other race), this article documents patterns and trends in school-based extracurricular participation by race, social class, gender, and age, and their links to academic and substance use outcomes. Findings reveal differences by race and confirm a division by social class that has worsened over time. Further, girls are gaining on boys and surpass them in some types of school-based activities. Participation is linked to better academic outcomes and less substance use, affirming the importance of redressing the inequalities revealed.

Keywords Extracurricular Activities · Inequality · Social Class · Well-Being

Introduction

At least since the emergence of stratification research in the 1960s, social and developmental scientists have recognized the significant role of organized, extracurricular activities for child development and social reproduction. An ever-growing body of research suggests that extracurricular participation is linked to a broad range of positive outcomes for youth including socialization (Mahoney 2000), school performance (Roeser and Peck 2003), avoidance of violence (Jiang and Peterson 2012), identity development (Dworkin et al. 2003) self-esteem (McGee et al. 2006), health (Fredricks and Eccles 2010), physical activity (Halpern 2003), and civic orientation (Denault and Poulin 2009). Thus, participation in organized extracurricular activities is an important predictor of youth well-being and future attainment.

Some scholars identify extracurricular activities as a new knife perforating American communities by social class. In an increasingly competitive economic context, middle- and upper-class parents "double-down" on extracurricular activities, and at increasingly earlier ages (Levey-Friedman 2013), to secure their children's standing, potentially exacerbating inequalities (Putnam 2015). Meanwhile, extracurricular activities carry the unique potential to increase motivation and reduce alienation among disadvantaged youth (Bohnert et al. 2008) and to create "identity projects" that disadvantaged youth can leverage to avoid delinquency and idleness and find a positive path to adulthood (DeLuca et al. 2016). Therefore, while extracurricular activities are identified as a divider among us, they also have the potential to serve as a conduit to social mobility among those able to access them.

Maintaining good grades in high school is strongly linked to getting into and persisting through college (Easton et al. 2017). Likewise, one's expectations for college can have a profound influence on how well one does in college in terms of grades and in developing friendship networks and mentor relationships which can be important for securing later employment (Yeager et al. 2016). Conversely, youth substance use can forestall positive development in a number of ways. First, it can inhibit one's ability to function at full capacity in important endeavors like school (Balsa et al. 2011). Relatedly, its mind-altering ability can lead to risky and regrettable behavior (Mason et al. 2010). Second, alcohol and drug use among adolescents is illegal and stigmatized in the broader society, so it

✉ Ann Meier
meierann@umn.edu

[1] Department of Sociology & Minnesota Population Center, University of Minnesota, Minneapolis, MN, USA

[2] Department of Sociology, University of Minnesota, Minneapolis, MN, USA

can affect one's status as delinquent in the eyes of the law and in one's community (Stuber et al. 2008). Third, substance use can negatively affect one's physical health, leading to premature health detriments and an increase in the risk of early death (CDC 2015). Given the high stakes of school engagement (positive) and substance use (negative), understanding their determinants—especially those that are amenable to policy intervention like extracurricular activity participation—is a worthwhile endeavor.

Despite their importance for youth well-being, social mobility, and social inequality, little is known about how participation in extracurricular activities has changed over time, who participates, and race, class, gender and age differences in patterns and trends. Such documentation is an essential barometer for assessing how well (or poorly) American society is doing in providing equal opportunity for all children. It is also critical to monitoring interventions seeking to increase upward mobility for socially and economically marginalized families. Using 27 years of Monitoring the Future (MTF) data, this article seeks to address the gap in knowledge about trends in participation in extracurricular activities, to paint a portrait of who participates in extracurricular activities in contemporary America, and to demonstrate links with consequential outcomes for youth.

The history of extracurricular activities in the United States has developed alongside of cultural, political, and economic shifts. Cultural conceptions of both childhood and parenting have changed considerably. Until World War II, childhood was a time of "disease, family disruption, and early entry into the world of work" (Mintz 2004, p. 2). At the turn of the 20th century, less formal methods of education and childrearing and less structured contacts with adults were followed by structured, adult-organized education and activities (Mintz 2004). This transition unfolded alongside demographic shifts from high to low fertility. As families had fewer children, generations became more distinct and parents had more resources (time, money and attention) to devote to each child (Angrist et al. 2005)

Recognizing the ebb and flow of competition as key to understanding the culture of childhood, Levey-Friedman (2013) argues that those who came of age as part of a baby boom cohort born in the late 1940s to 1960s faced more competition for school admission and jobs. Socialized to compete, these adults then attempted to help their children position themselves for equally fierce competition. Some life course and demographic theorists agree that economic experiences during one's formative years influence behavior and decisions as adults (Easterlin 1961; Elder 1999). The children of the baby boom went on to produce a baby boomlet, themselves. As a relatively large cohort, the boomlet youth could expect to face competition for college admission, jobs, and partnerships among other desired resources. Therefore, both past experiences and contemporary conditions influence how childhood is experienced.

Political shifts also have an important role in creating the contemporary youth activity landscape. Starting in the 1970s and 1980s, policy development began to favor neoliberal perspectives that shifted many services once provisioned in schools, including youth services, to private institutions. This meant that some extracurricular programs like after school sports and clubs were squeezed out schools (Putnam 2015). Therefore, while the demand for organized extracurricular activities for youth was increasing, their traditional supply was dwindling. As would be predicted by neoliberal models, privatized, pay-to-play, out-of-school activities started to fill the gaps.

While the field of youth extracurricular activities has expanded beyond the school yard, virtually all schools continue to offer sport and non-sport activities like art-related programs and academic clubs (O'Brien and Rollefson 1995). It is important to note that the existing body of research on extracurricular activities is broad and varied in its range of measures to capture activity participation – some measures are explicitly about school-based activities, while others name non-school groups like scouts or religious youth groups. Still other measures do not specify whether or not the extracurricular activities are linked to schools but are, instead, based on surveys or interviews that ask youth simply whether they participate in extracurricular activities and, if so, which activities (e.g., basketball, soccer, dance, robotics, etc.). Some of the literature cited above on the explosion of extracurricular activities in the last three decades focuses on pay-to-play activities that are not school-sponsored and usually do not happen on site at schools (e.g., Levey-Friedman 2013). The analysis presented below focuses on school-based extracurricular activities. This distinction is important when assessing differences by race, class, gender, and age because of cost, access, and cultural differences between school and non-school settings (Strobel et al. 2008). For example, the fact that social class differences exist in out-of-school activities is not surprising as it takes more resources to enroll in these activities. School-based extracurricular activities should prove to be more (though not perfectly) equitably available. Not only are costs often partially off-set by schools, but these activities usually take place at schools, requiring less of parents' resources in terms of time and transport (Dryfoos 1999). Indeed, some studies point to school-based extracurricular activities as an important source of care for children after school hours when parents are still at work (Junge et al. 2003). Below, the phrase "extracurricular activities" refers to the broadest set of activities, not differentiating between settings. The phrase "school-based activities" refers to extracurricular activities in the school

setting and often school-sponsored. The phrase "out-of-school activities" denotes private, often pay-to-play activities. Again, the analysis executed below is focused on school-based activities.

The economic recessions of the 1980s and the mid-2000s posed several different pressures regarding extracurricular activities. On the one hand, high unemployment left more parents out of work, and therefore able to mind their children in their non-school hours. As is typical, unemployment hit the working class harder than the middle and upper classes. On the other hand, the precarious recessionary years underscored for parents the importance of doing all that they could to position their children for economic success. The new field of extracurricular activity offerings in the 1980s and its broad proliferation in the mid-2000s created the perfect settings for parents with resources to "double-down" on their children's enrichment. Indeed, research indicates middle- and upper-class parents' purposeful and consequential efforts to concertedly cultivate their children through extracurricular activities (Lareau 2003). If extracurricular activities do, indeed, boost youths' future prospects, the differential participation implied by out-of-school activities suggests exacerbated economic inequality as today's youth come of age with different access to this new preparatory arena. However, access to school-based activities should remain more equitable. In fact, as cultural pressures mount for youth to be involved in more extracurricular activities and earlier, families who cannot afford out-of-school activities may turn, in higher numbers, to the more affordable school-based activity options which have always been and remain "prominent hubs" for extracurricular activities (Guest and McRee 2009).

The little that is known about patterns in participation in extracurricular activities is from studies that focus on social class differences. Studies using nationally representative data show that participation is higher among youth from middle- and upper-class families (Moore et al. 2014), and there is a parental education gradient to participation with a nearly linear increase in youth sport participation with each higher level of parental education (Child Trends 2017). While youth from working and lower-class families have lower participation rates, studies indicate that participation in extracurricular activities is actually more strongly linked to their self-esteem (Bloomfield and Barber 2011) and academic success (Martin et al. 2015), and it holds the potential to buffer the relationship between events like a parents' job loss and drug use (Darling 2015). Lareau's (2003) work provides strong evidence for social class differences in parents' approaches to children's extracurricular activities documenting how middle and upper-class parents, regardless of race, enroll their children in more extracurricular activities. Moreover, they are purposeful in their choice of activities, choosing those that will best prepare their children for particular desired futures with regard to college and career. Therefore, we hypothesize that social class differences favor youth in middle- or upper-class families.

The class gap in participation in extracurricular activities is not new, but has existed at least since the 1970s (Snellman et al. 2015). However, the gap has actually increased in more recent decades, for both sport and non-sport school-based activities. Existing analysis showing this, however, is limited to white students (Snellman et al. 2015). Given the strong racial dimension to social class status in the United States, patterns may be different when racial and ethnic minority students are included in the analysis. With the nationally representative MTF data, we hypothesize that social class gap in school-based activities remains, but has narrowed over time as the cultural pressure mounts on families, including working class families, to enroll their children in extracurricular activities. School-based activities may be more affordable and accessible for working and lower-class families, bolstering their enrollment over time.

Unlike the fairly strong evidence from multiple sources on class differences in participation in extracurricular activities, there are fewer studies on differences in participation by child race, gender, or age. With regard to race and ethnicity, some studies find that minority children start sports participation later and have somewhat lower levels of participation overall (Physical Activity Council 2013). Most of the minority disadvantage in youth sport participation rates are driven by the low rates of African American (Wang and Eccles 2012) and Hispanic participation (Darling 2015). Given these findings, we hypothesize lower levels of school-based activity participation for African-American and Hispanic youth.

With regard to gender, research indicates that girls' extracurricular participation lags behind that of boys. Girls' participation is two to six percent lower than boys (Colabianchi et al. 2012). However, girls' extracurricular participation has made extraordinary gains since the passage of Title IX in 1972 legislating gender equal opportunity in education programs and activities that receive federal funding, indicating access was a major barrier to girls' participation (Child Trends 2017). Moreover, girls currently outpace boys in participation when it comes to non-sport activities like arts and academic clubs (Darling 2015).

Participation rates generated by Child Trends (2017) using the Monitoring the Future data indicate that the gender gap in school-based sports participation declined between 1991 and 2004, but then increased a bit among twelfth graders between 2004 and 2013. Currently, boys still participate in school-based sports more than girls in eighth, tenth, and twelfth grades, though the gap is largest among twelfth graders at 14 percent (while it is just 4% among eighth graders). Taken together, these studies lead us

to hypothesize that girls outpace boys in their participation in non-sport activities, and that boys participate in sports at higher rates than do girls, but this gap has narrowed over time.

Regarding age, most contemporary studies argue that youth are participating in extracurricular activities at younger ages than ever before. Extracurricular activity enrollment used to be limited to adolescence. Now, however, the competition has moved down the age spectrum to childhood as more and more children accumulate activity experiences that they leverage to compete for entry into schools, important social networks, or jobs (Levey-Friedman 2013). Therefore, kids must participate earlier in order to compete—as early as preschool to set the stage for later schooling and ultimate success. We hypothesize that older youth participate at higher rates but this gap has narrowed over time as youth initiate extracurricular participation earlier than before.

In summary, while scholars have convincingly argued that social class structures if and how youth participate in extracurricular activities, much less research examines how other important elements of difference—race, gender, and age—also contribute to patterns in participation in extracurricular activities. This is especially true regarding analysis with nationally representative data. Moreover, there exists little evidence about how such patterns have changed over time, as the social context regarding race and gender, especially, shifted in society's major institutions including educational institutions, the workplace, and the criminal justice system. Finally, most existing studies do not consider whether extracurricular activities happen in or out of the school setting—a potentially important distinction. Thus, a comprehensive understanding of if and how patterns of participation in school-based activities have changed over time for youth of different social class backgrounds, race/ethnicities, genders and ages is important bedrock for any sound policy that aims to ameliorate social inequality among children and adolescents.

Current Study

This study has two main goals. First, it aims to describe patterns of participation in school-based activities over 27 years by major categories of social difference. A comprehensive description of trends and differences with nationally representative historical data has not yet been conducted. Second, it investigates links between dimensions of difference, school-based activity participation, and youth outcomes in the domains of educational achievement and expectations and substance use. This analysis shows the enduring importance of school-based activities for positive development in other life domains.

Method

Data

This study uses 27 years of data on youth from the Monitoring the Future (MTF) study. The MTF study began data collection with a nationally representative school-based sample of twelfth graders in 1976 and continued to interview twelfth graders nearly annually up to the present day. In 1986, MTF added more detailed questions on race and ethnicity, allowing examination of more racial categories. Therefore, this study uses data from 1986 until 2013. Currently, the MTF study surveys approximately 50,000 youth in 420 public and private schools annually (Monitoring the Future, Institute for Social Research, University of Michigan). Pooled over year, the analysis sample includes 593,979 youth.

To our knowledge these data provide the broadest historical swath of information on participation in school-based activities with enough cases to differentiate different patterns by social class, race, ethnicity, gender and grade in school. Some of these dimensions of difference have a longer historical record in the MTF data than others. For example, MTF started with twelfth graders only, but added eighth and tenth graders to their sample in 1991. Regarding race/ethnicity, in 1986 the survey started to include ethnicity in addition to race, allowing for a more detailed accounting of patterns by race/ethnicity. Because race is a key dimension of the present inquiry the analysis starts in 1986. For analysis including grade, the window narrows slightly to 1991 and the sample size to 329,806. All analyses extend through 2013.

Measures

Table 1 shows descriptive statistics on all measures included in the study. Their measurement is described below.

Extracurricular activity participation

Across the entire time series of the MTF data, participation in school-based activities is assessed with a series of questions asking respondents: "To what extent have you participated in the following school activities during the school year?" The activities are: yearbook or school newspaper, music or performing arts, athletic teams, and other school clubs or activities. The response options are: "not at all," "slight," "moderate," "considerable," or "great." Research by Eccles et al. (2003) and Linver et al. (2009) shows the central importance of: (1) participating versus not participating; (2) distinctions between youth who participate in sports versus other activities; and (3)

Table 1 Descriptive Statisics on Key Analysis Variables

(N = 593,979)		
	Distribution or proportion	Range
School-based activity profile		
Nothing	0.162	0/1
Only sport	0.119	0/1
Only non-sport	0.237	0/1
Both sport and non-sport	0.481	0/1
Race/ethnicity		
Non-Hispanic Black	0.121	0/1
Non-Hispanic White	0.656	0/1
Hispanic	0.115	0/1
Non-Hispanic Asian	0.041	0/1
Non-Hispanic other	0.067	0/1
Social class		
Parent is a college graduate	0.539	0/1
Parent is not a college graduate	0.461	0/1
Gender		
Male	0.480	0/1
Female	0.520	0/1
Grade in school		
8th	0.360	0/1
10th	0.362	0/1
12th	0.278	0/1
Family structure		
Two resident parent family	0.756	0/1
Single-mother family	0.182	0/1
Other family structure	0.063	0/1
School type		
Public	0.897	0/1
Private	0.103	0/1
Outcome variables	Mean or proportion	Range
Grades in school	6.06	1 - 9
Expect to graduate college	0.612	0/1
Ever smoked	0.440	0/1
Ever drank alcohol	0.632	0/1
Ever smoked marijuana	0.305	0/1

differences between those who specialize versus those who simultaneously engage in multiple activities that cross domains. Therefore, for the analysis that follows, youth are grouped into one of four mutually exclusive school-based activity categories indicating any level of participation: sport participant only (12%), non-sport participant only (24%), both sport and non-sport participant (48%), and non-participants (16%).

Race/ethnicity

With regard to race/ethnicity, the public-use MTF data include only broad categories for White, Black and Hispanic. However, this study leverages the restricted-use MTF data to describe patterns for non-Hispanic Whites, non-Hispanic Blacks, Hispanics, non-Hispanic Asians, and those of other races. In 2005, the MTF switched from a "choose one" race query to a "check all that apply" option. However, even the restricted-use MTF data does not allow for the separation of multi-racial respondents from the broader category of "other race." Likewise, disclosure concerns prevent MTF from releasing separate codes for Native American or other relatively small racial or ethnic groups. Therefore, this study continues to use the classification of non-Hispanic White (65%), non-Hispanic Black (13%), Hispanic (12%), Non-Hispanic Asian (4%), and other race (7%), with this last category being expanded after 2005 to include those who check more than one race once given the option.

Social class

The educational attainment level of parents is used to index social class. Educational attainment is strongly correlated with occupational prestige and income, and studies have shown school-age children to report their parents' highest level of education more reliably and with more validity than their parents' income (e.g., Entwisle and Astone 1994).

Social class is indexed by whether or not the respondents' parents' highest level of educational attainment is or exceeds a bachelor's degree (53%). Those whose parents' highest level of attainment is less than a bachelor's degree are considered working class or lower and those whose parents' education is a bachelor's degree or higher are considered middle or upper class. Both mother's and father's education are considered with the highest of the two used to indicate the respondent's social class. Therefore, for youth with only one parent, the single parent's educational attainment is the indicator for class.

Gender and age

Respondents' reports of their gender as male (49%) or female (51%) are used to index gender. A multi-category indicator for grade in school indicates eighth, tenth, or twelfth grade. Recall that surveys for eighth and tenth graders started in 1991, so the analysis assesses patterns for these grades only from 1991 forward. About a third of the sample is in each of the three grades (33, 38 and 29% in eighth, tenth, and twelfth grades, respectively).

Grades in school

Youth self-report their average grades so far in school. This variable ranges from 1 (D < = 69%) to 9 (A = 93–100%). The mean score in the sample is 5.97, corresponding to a "B" average.

College graduation expectations

College graduation expectations are indexed from youth responses to a question about how likely it is that they will graduate from college with four response categories from "definitely won't" to "definitely will." The dummy variable used for analysis indexes whether the respondent replies "definitely will" (1) versus all other response categories (0).

Substance use

To assess substance use, youth report whether or not they have ever: smoked cigarettes (1/0)—44%, drank alcohol (1/0)—37%, or smoked marijuana (1/0)—29%.

Controls

A series of dummy variables index whether or not the respondent lived with two continuously married or step parents (76%), a single mother (18%), or in another family arrangement (6%). These variables proxy for parent time and availability to facilitate extracurricular participation. An indicator for whether the respondent attended a private (10%) versus public (90%) school proxies for potential school level differentials in extracurricular offerings due to resource differences. These two control measures are included in all multivariate models but we do not show their coefficients (available upon request).

Analytic Strategy

Given the two main goals of this study are description and explanation, several analytic techniques are leveraged. First, graphs depict level differences and time trends in patterns of youth activity participation over 27 years by major categories of social difference. We note in the text where ancillary tests revealed significant differences in trends by race, class, gender, and age. Second, multinomial logit models are used to predict activity participation. In these models the data is pooled across years, survey year is included to assess time trends, and it is interacted with race, class, gender and age to assess trend differentials.

Third, again pooling all years of data, ordinary least squares models predict average grades, logit models predict college graduation expectations, and logit models predict ever use of cigarettes, alcohol, and marijuana. For each outcome, the baseline model includes race/ethnicity, social class, gender, grade in school, year, and controls. The second model adds the school-based activity measures to assess whether activities explain some of the associations between these social dimensions of difference and grades, college graduation expectations, and substance use, and to assess the associations between participation in school-based activities and outcomes in these two important domains of education and substance use.

Results

Figures 1 through 5 show school-based activity participation levels and trends over time overall and by race/ethnicity, social class, gender, and grade in school (the later from 1991 onward when eighth and tenth graders were added). To test whether trends in Figs. 2 through 5 are different across demographic groups over time, separate multinomial logistic regression models estimated school-based activity participation profiles using each demographic characteristic, survey year, and the interaction between the demographic characteristic and survey year. In these models, "no participation in any activity" is the reference category. These models are not shown, but significant trends differences are indicated in the text below.

Figure 1 shows school-based activity participation experiences for all youth in the sample. It shows that the highest proportion of youth participate in both sport and non-sport activities (like performing arts or academic clubs) – the proportion has centered on about half of all youth over 27 years of data, reaching a high of 52% and a low of 45%. There is not a clear time trend indicating increase or decrease in participation in the combination of both sport and non-sport activities. The next most common profile for youth is to participate in only non-sport activities. This profile was highest in the earliest years at 32%, but has declined over time to 20% in recent years. While those participating in only non-sport activities has declined over time, the proportion of youth participating in only sport activities has increased from 8% in 1986 to 15% most recently. The proportion not participating in any activities remained fairly steady across time ranging from 14 to 18%.

Figure 2 shows school-based activity participation plots separately by race/ethnicity. Levels and trends in school-based activity participation are similar across groups, but recall that these bivariate associations do not control for other important features that other research suggests are confounded with race, like social class.

Figure 3 shows school-based activity participation plots separately by parental educational attainment, the indicator of social class. Regarding levels, about 55% (between 50 and 60%) of those with a college educated parent participate

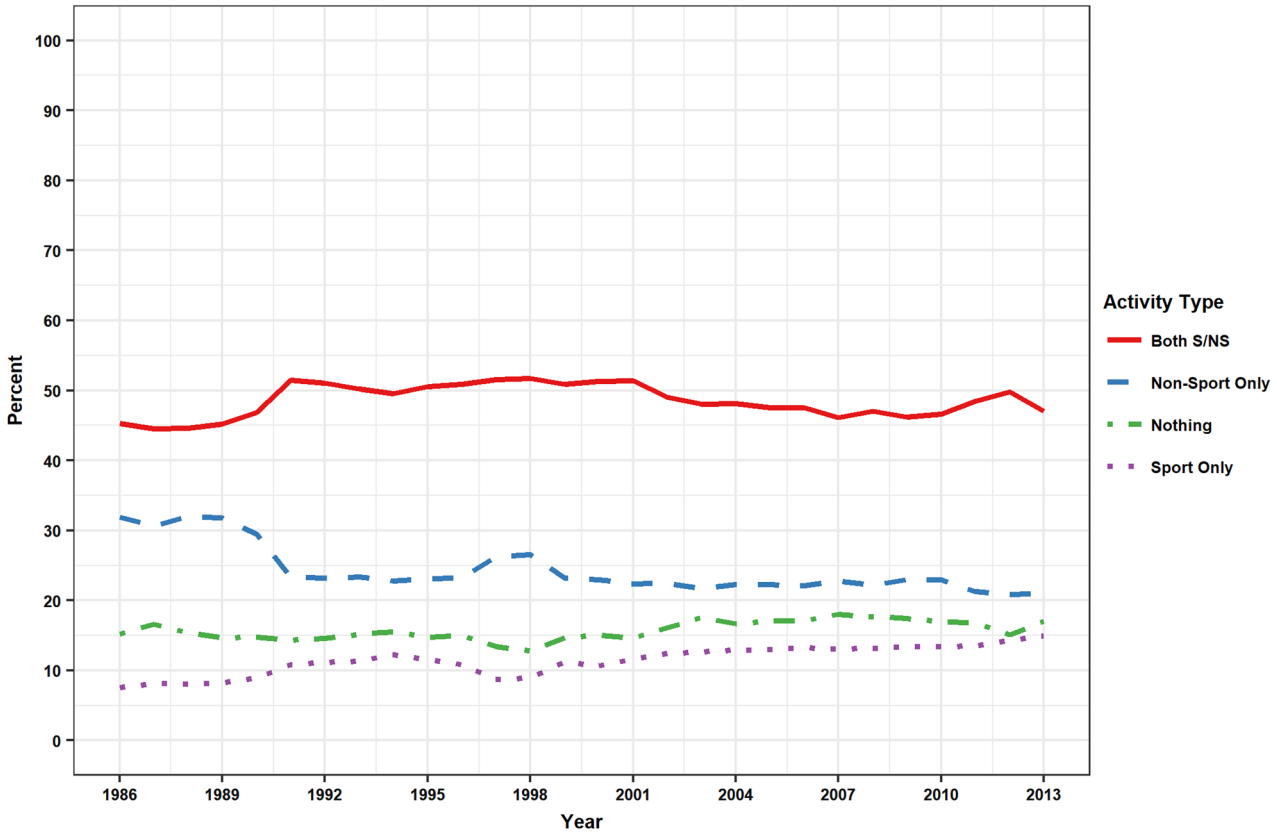

Fig. 1 Relative participation frequencies by type, 1986–2013

in both sport and non-sport activities, whereas only about 44% (between 40 and 47%) of those without a college educated parent participate in both types of activities. Figure 3 indicates that the trend in both sport and non-sport participation is up for those with a college educated parent and level or down for those without a college educated parent ($p < 0.05$). Furthermore, those without a college educated parent are more likely than those with a college educated parent to not participate in any activities and the gap has grown overtime ($p < 0.05$). Whereas between 15 and 23% of those without a college educated parent are non-participants, between 9 and 15% of those with a college educated parent opt out-of-school activities altogether. Taken together, Fig. 3 indicates that those without a college educated parent are shifting out of school-based activities altogether, whereas those with a college educated parent are increasingly combining sport and non-sport activities.

Figure 4 shows school-based activity profiles by gender demonstrating large and significant trend differences. Starting with the most common profile, girls increased their participation in both sport and non-sport activities from a low of 38% in the early years of observation to a high of about 54% in the late 1990s and again in 2011. Boys, on the other hand, decreased their proportion in both sport and non-sport activities from 52% in the late 1980s to 44% in the most recent years ($p < 0.05$). The proportion of girls participating in only non-sport activities dropped drastically from a high of 43% in the late 1980s to about 30% in the early 1990s and more gradually after that to a low of about 25% in 2013. The trends lines indicate that over time girls transferred their participation away from only non-sport activities to participation in both sport and non-sport activities and only sport activities. Boys' pattern of only non-sport participation is lower overall and more level over time. Between 15 and 23% of boys participate in only non-sport activities from 1986 to 2013. Regarding levels, a higher proportion of boys than girls participate in only sport activities. However, both boys' and girls' participation in only sport activities has grown over time. The proportion of boys who are non-participants is higher than that of girls, but trend lines do not show much change over time. In all, the trend lines indicate that girls' school-based activity patterns are more varied (the lines are farther apart) and have changed more over time (the lines have steeper gradients) than those of boys ($p < 0.05$). Girls who were participating only in non-sport activities in earlier decades have traded that profile for one of only sport activities or one that includes both sport and non-sport activities.

Finally, Fig. 5 shows trends in school-based activity profiles by grade in school. Recall that the MTF project

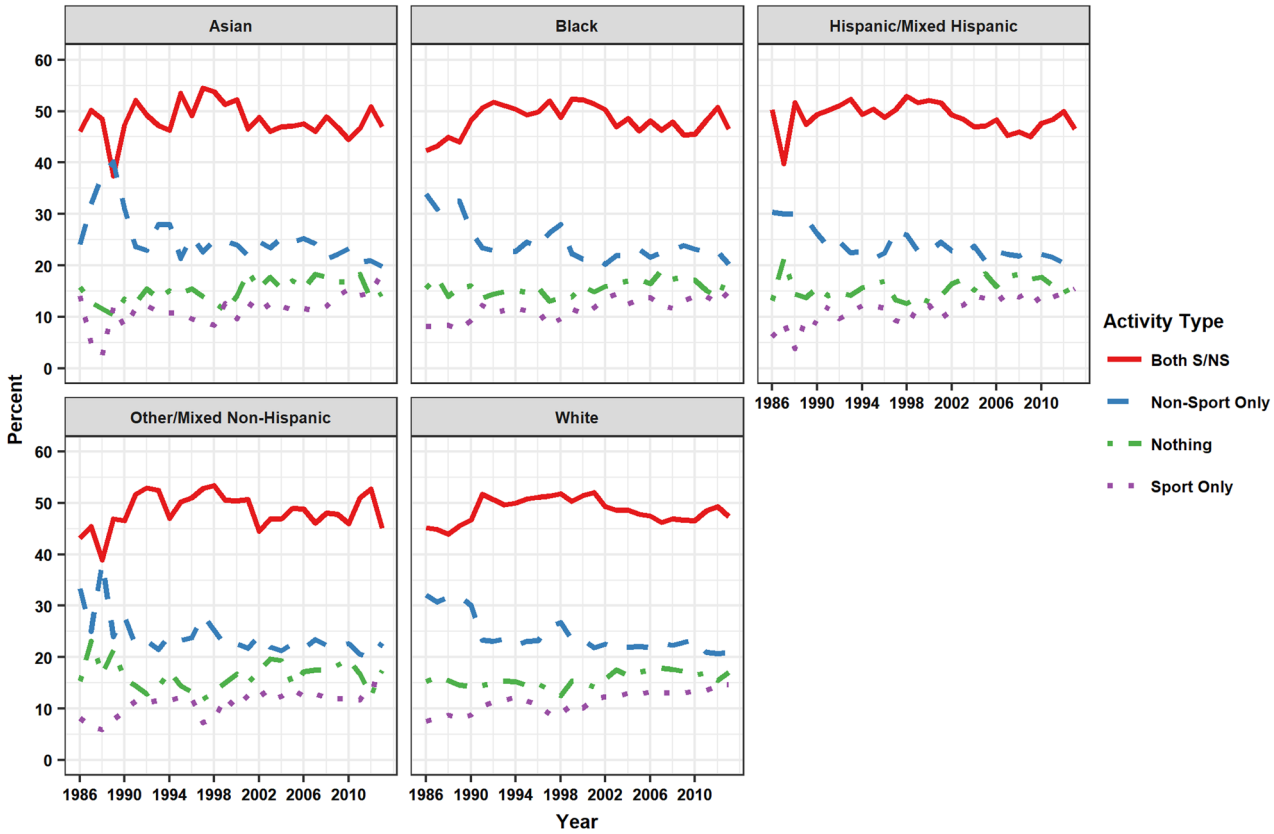

Fig. 2 Relative participation frequencies by race, 1986–2013

only began collecting data from eighth and tenth graders in 1991, so the lines start there in the first two plots of Fig. 5 while they start in 1986 for twelfth graders. Looking across the three plots, one can imagine students aging up from eighth to twelfth grade and changing their participation patterns as they get closer to high school graduation, though the data is not longitudinal so respondents are different youth each survey year. Framed this way, youth drop their participation in both sport and non-sport activities from eighth to tenth grade and in only sport activities from tenth to twelfth grade ($p < 0.05$). The proportion not participating in any activities maintained but at the relatively low level of about 15%. The proportion participating in only non-sport activities increases substantially, especially between tenth and twelfth grades ($p < 0.05$). This suggests an increase in non-sport activities (academic and performing arts) as youth near graduation and college attendance.

Next multivariate analysis is used to explore patterns and trends in participation in school-based activities while controlling for socio-demographic features, including year of survey data collection and controls for family structure and public versus private school attendance. Tables 2 and 3 show results from analysis with year treated as a continuous variable, mean centered, and, in Table 3, interacted with socio-demographic measures to indicate differences in trends.

Table 2 shows results of a multinomial logit model predicting type of school-based participation: none, sport only, non-sport only, or both sport and non-sport. The omitted category is "none," so relative risk ratios (RRRs) show the "risk" of participating in the type of activity (sport, non-sport, or both) relative to no participation. Relative risk ratios can be interpreted in a way similar to odds ratios. The RRR centers on 1.0, with values above 1.0 indicating an elevated risk relative to the reference group and values below 1.0 indicating a reduced risk. The first set of columns show that compared to non-Hispanic Black youth, Hispanic, non-Hispanic Asian, and other race youth have a lower relative risk of participating in only sport activities versus nothing. Youth with a college educated parent and male youth are more likely to participate in only sports activities than those without a college educated parent and females, respectively. Compared to eighth graders those in twelfth grade have a decreased risk of only sports participation compared to participating in nothing at all. The year variable indicates an increase over time in sport only participation relative to no activities.

The next set of columns shows non-sport participation compared to participating in no activities. The results

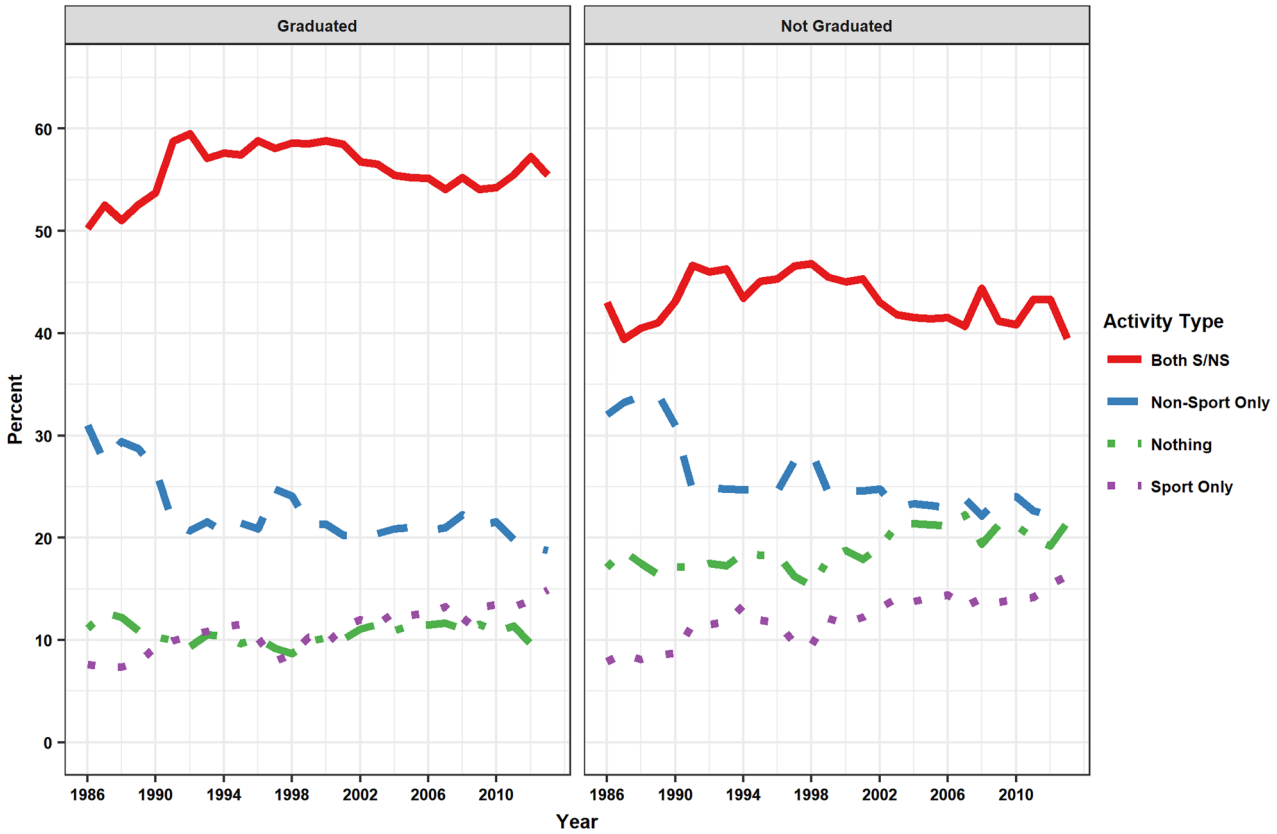

Fig. 3 Relative participation frequencies by parental college education, 1986–2013

indicate that compared to non-Hispanic Black youth, non-Hispanic Asian youth are more likely to participate in non-sport activities versus nothing at all, but Hispanic youth are less likely to participate in non-sport activities than nothing at all. As is the case with sports participation, youth with a college educated parent are more likely than those without a college educated parent to participate in non-sport activities compared to nothing at all. Unlike sports participation, however, male youth are less likely than females to participate in non-sport activities compared to nothing at all. In fact, they are half as likely as females to participate in non-sport activities (RRR: 0.427). Tenth graders are less likely and twelfth graders are more likely than those in eighth grade to participate in non-sport activities. The year variable indicates a decrease over time in non-sport only participation relative to no participation.

The third set of columns estimate the relative risk of participating in both sport and non-sport activities compared to no participation. The risk ratios indicate that compared to non-Hispanic Black youth, Hispanic and other race youth are less likely to participate in both sport and non-sport activities compared to no participation. Youth with a college educated parent are more likely to participate in both kinds of activities than those without a college educated parent, and the RRR is high at 2.152, indicating that having a highly educated parent is associated with more than twice the risk of participating in activities across domains (sport and non-sport). Males are somewhat less likely than females to participate in both sport and non-sport activities, and participation in both types wanes with grade in school—those in tenth and twelfth grades are less likely than those in eighth grade. Finally, the year variable indicates that participation in both types of school-based activities has become slightly less likely over time compared to not participating in any activity.

Next, the analysis tests whether race/ethnic, class, gender, and grade differences had intensified or waned over time. The mean-centered, continuous year variable is interacted with the discrete indicators for race/ethnicity, parental college degree, gender, and grade in school. Table 3 shows results for time trends in the association between race/ethnicity (Model 1), parental education (Model 2), gender (Model 3) and grade in school (Model 4) and school-based activity participation. Focusing on the "Interactions with Year" in the final rows of the Tables, Model 1 shows that compared to non-Hispanic Black youth, Hispanic youth's participation in only sports declined over time. Compared to non-Hispanic Black youth, all other groups increased their participation in non-sport activities. Furthermore, all other groups except non-Hispanic Asian

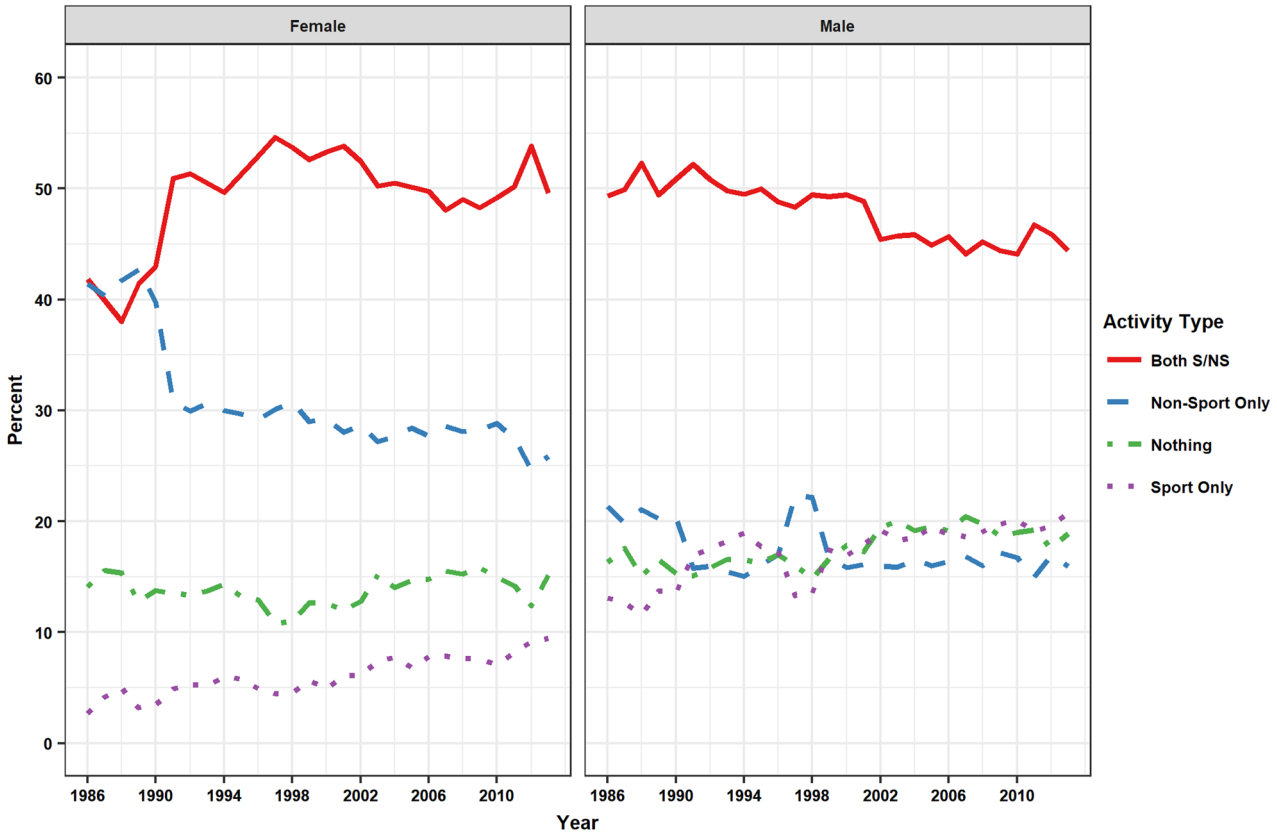

Fig. 4 Relative participation frequencies by gender, 1986–2013

youth increased participation in both sport and non-sport activities over time compared to non-Hispanic Black youth. Therefore, it appears that the gap between non-Hispanic Black youth and other groups in non-sport activities and in activities that cross domains (sport and non-sport) has widened over time.

Model 2 shows that the positive associations between having a college educated parent and all three types of school-based activity participation (v. none) have intensified over time, though the RRR on the interaction is modest in size (example RRR: 1.007 for sport only participation). Model 3 shows that gender is less predictive of activity participation over time. Specifically, the positive association between male and sport participation has weakened over time and the negative association between male and both sport and non-sport participation has also weakened over time, indicating decreasing importance of gender in predicting type of school-based activity participation.

Model 4 shows that grade in school is more predictive of two kinds of participation over time: non-sport only and both sport and non-sport. In both cases, each grade higher is associated with a higher likelihood of participating. There is no time trend, however, in the association between sport-only participation and grade in school.

Next, the relationship between activity participation and key academic and substance use outcomes is examined. Table 4 shows estimates for associations with grades in school and expectations to graduate from college. The first set of columns shows models estimating grades. Recall that this variable has 9 values representing letter grades (A–D) that correspond to a standard 0–100 grading scale. Grades are treated as continuous and estimated with an ordinary least squares regression model. The first model includes only socio-demographic indicators. The second model adds the set of school-based activity measures. After the second model, post-hoc adjusted Wald tests were estimated to assess differences between the non-omitted categories of school-based activities; significant differences are noted in text.

Model 1 shows that non-Hispanic White, non-Hispanic Asian and other race youth have an advantage in grades, whereas Hispanic youth report lower grades compared to non-Hispanic Black youth. Grades are positively associated with parental college education, but negatively associated with being male. Tenth graders generally reported lower grades than eighth graders. Model 2 indicates that school-based activity participation is also significantly associated with grades—sport-only, non-sport only, and especially both sport and non-sport participation are associated with

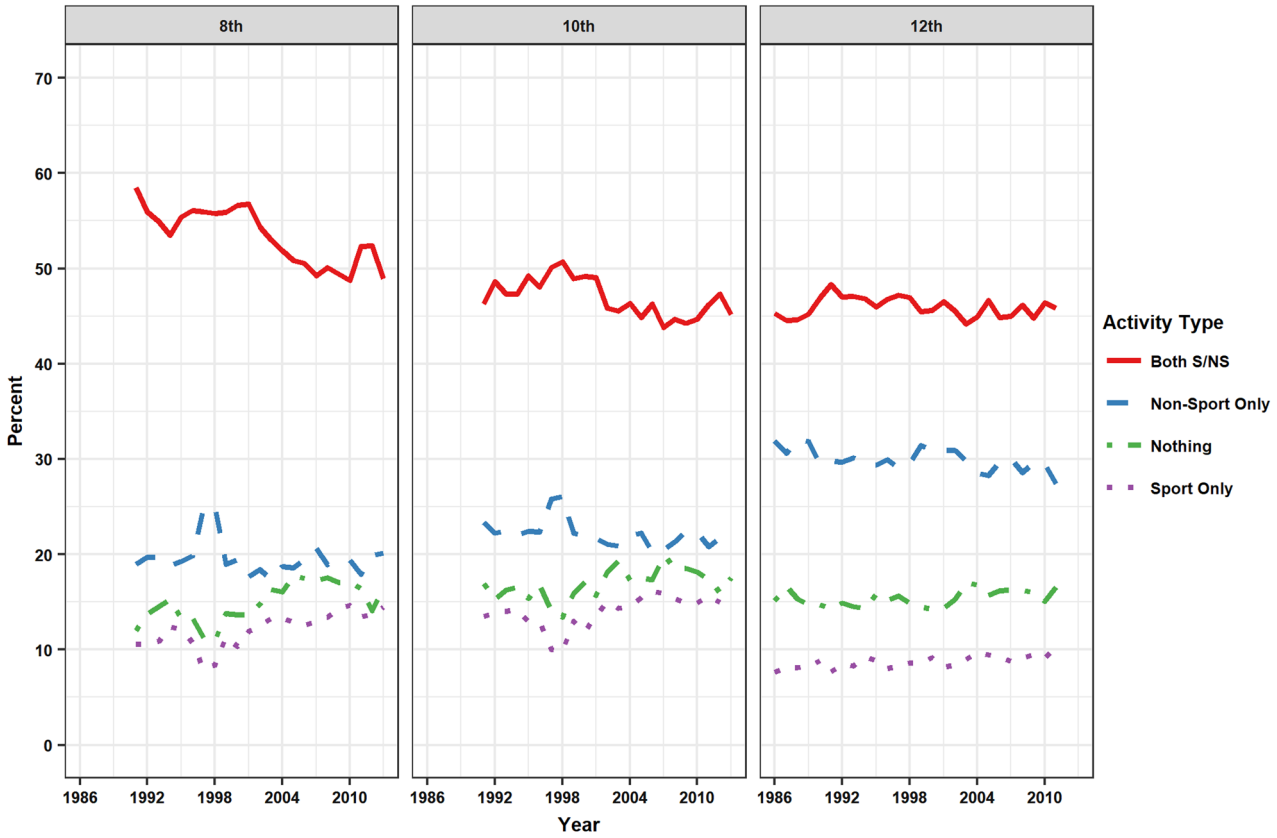

Fig. 5 Relative participation frequencies by grade, 1986–2013

Table 2 Multinomial Logistic Regression Predicting School-Based Activity Profiles

	School-based activity profiles (reference = no participation)		
	Only sport RRR	Only non-sport RRR	Both sport and non-sport RRR
Race (NH-Black omitted)			
NH-White	1.000	1.003	0.984
Hispanic	0.764***	0.775***	0.628***
NH-Asian	0.556***	1.463***	0.991
NH-other	0.836***	0.936*	0.829***
Class (no college degree omitted)			
College educated parent	1.434***	1.565***	2.152***
Gender (female omitted)			
Male	2.188***	0.427***	0.697***
Grade in school (8th grade omitted)			
10th grade	1.033	0.960**	0.750***
12th grade	0.694***	1.421***	0.790***
Survey year	1.010***	0.991***	0.994***
Constant	0.953***	2.808***	8.605***

Note: Family structure and public/private school controlled, not shown

*p < 0.05; **p < 0.01; ***p < 0.001

elevated grades. The inclusion of school-based activity participation does little to change the statistical significance of the socio-demographic indicators predicting grades. The year indicator suggests that average high school grades have increased over time. Post-hoc adjusted Wald tests assess the differences between the coefficients for school-based activities profiles. These tests indicated that all of the three participation categories (only sport, only non-sport, and both sport and non-sport) were also significantly different from one another.

The second set of columns in Table 4 show odds ratios from logistic regressions predicting expectations to graduate college. Compared to non-Hispanic Black youth, non-Hispanic White, non-Hispanic Asian and other race youth report lower odds of expecting college graduation. Hispanic youth do not differ significantly from non-Hispanic Black youth on college graduation expectations. Black and Hispanic youths' relative advantage regarding college expectations may be surprising given their actual disadvantage in rates of college going and, especially, college graduation. However, these models also control for social class, gender, grade, and our two controls of family structure and public versus private school attendance (not shown). For the other socio-demographic indicators, the pattern of results is strikingly similar to those immediately above for grades.

Table 3 Multinomial logistic regressions of school-based activity profiles with interactions for time trends

	Model 1			Model 2			Model 3			Model 4		
	Sport RRR	Nonsport RRR	Both RRR	Sport RRR	Nonsport RRR	Both RRR	Sport RRR	Nonsport RRR	Both RRR	Sport RRR	Nonsport RRR	Both RRR
Race (NH-Black omitted)												
NH-White	1.009	1.010	0.985	1.001	1.004	0.985	0.998	1.004	0.983	1.008	1.016	0.999
Hispanic	0.783***	0.782***	0.628***	0.766***	0.776***	0.629***	0.761***	0.775***	0.626***	0.763***	0.775***	0.629***
NH-Asian	0.564***	1.465***	0.994	0.556***	1.464***	0.992	0.554***	1.463***	0.989	0.552***	1.468***	0.982
NH-Other	0.846***	0.942*	0.831***	0.836***	0.936*	0.829***	0.832***	0.937*	0.827***	0.848***	0.955	0.842***
Class (no college degree omitted)												
College Educated Parent	1.434***	1.566***	2.152***	1.432***	1.566**	2.152**	1.434***	1.565***	2.152***	1.440***	1.572***	2.162***
Gender (female omitted)												
Male	2.190***	0.428***	0.698***	2.188***	0.427***	0.697***	2.217***	0.429	0.696***	2.152***	0.429***	0.683***
Grade in school (8th grade omitted)												
10th grade	0.997	0.959**	0.749***	0.997	0.960**	0.750***	0.997	0.960	0.750***	1.000	0.955***	0.745***
12th grade	0.679***	1.413***	0.787***	0.681***	1.419***	0.789***	0.682***	1.421***	0.790***	0.681***	1.427***	0.799***
Survey year (continuous)	1.010**	0.977***	0.984***	1.007***	0.989***	0.992***	1.027***	0.992***	0.999	1.010***	0.985***	0.985***
Interactions with year												
Year*NH-White	1.002	1.015***	1.010***									
Year*Hispanic	0.991*	1.012***	1.010**									
Year*NH-Asian	0.994	1.023***	1.005									
Year*NH-Other	1.007	1.034***	1.025***									
Year*college ed parent				1.007***	1.005**	1.005**						
Year*male							0.976***	1.002	0.989***			
Year*10th grade										0.999	1.007***	1.009***
Year*12th grade										1.010	1.009***	1.013***
Constant	0.948	2.801***	8.622***	0.953***	2.806***	8.597***	0.946***	2.806***	8.626	0.975***	2.872***	8.841***

Note: Family structure and public/private school controlled, not shown

*p < 0.05; **p < 0.01; ***p < 0.001

Table 4 Associations between academic outcomes and expecations, socio-demographic characteristics, and school-based activity profiles

	Self report grades OLS regression coeffiecients		Expectations to graduate college odds ratios from logistic regression	
	Model 1	Model 2	Model 1	Model 2
Race (NH-Black omitted)				
NH-White	0.521***	0.524***	0.730***	0.733***
	(0.12)	(0.11)		
Hispanic	−0.034*	0.042**	0.984	1.008***
	(.015)	(.015)		
NH-Asian	1.128***	1.113***	0.869***	0.877***
	(.020)	(.020)		
NH-other	0.132***	0.157***	0.780***	0.793***
	(.017)	(.017)		
Class (no college degree omitted)				
College educated parent	0.717***	0.598***	1.214***	1.170***
	(.007)	(.007)		
Gender (female omitted)				
Male	−0.538***	−0.444***	0.706***	0.702***
	(.007)	(.007)		
Grade in school (8th omitted)				
10th grade	−0.397***	−0.346***	0.748***	0.758***
	(.008)	(.008)		
12th grade	0.068***	0.095***	0.042***	0.042***
	(.009)	(.009)		
Survey year (continuous)	0.038***	0.039***	1.015***	1.015***
	(.001)	(.000)		
Activity profile (no participation omitted)				
Only Sport		0.556***		1.590***
		(.013)		
Only Non-Sport		0.928***		1.357***
		(.011)		
Both sport and non-sport		1.287***		1.585***
		(.010)		
Constant	6.200***	4.517***	16.566***	11.348***
	(.017)	(.044)		

Note: Family structure and public/private school controlled, not shown
*p < 0.05; **p < 0.01; ***p < 0.001

Parental college education is positively associated with the odds of expecting college graduation, and males have lower odds of expecting college graduation compared to females. High expectations for college graduation are reduced with school grade level, being highest in eighth grade and then declining in tenth and twelfth grade, perhaps as one nears college and the prospects of attending and eventual graduation become more realistic.

Participation in any sort of school-based activity increases the odds of expecting to graduate from college. Model 2 shows that those participating in sport only, non-sport only, or both sport and non-sport are about 1.5 times as likely to expect to graduate from college than non-participants. The year indicator suggests that the likelihood of expecting to graduate from college has increased over time. Post-hoc adjusted Wald tests indicate that "only sport" and "both sport and non-sport" odds ratios are not significantly different from one another, but both are significantly different from "only non-sport."

Table 5 estimates a series of logit models predicting the odds of substance use: ever smoked, ever drank alcohol, and ever smoked marijuana. Like with academic outcomes above, the first model includes just socio-demographic indicators; the second model adds school-based activity participation. Model 1 shows that non-Hispanic White, Hispanic and other race youth are more likely, and non-Hispanic Asian youth are less likely, than non-Hispanic Black youth to have ever smoked. Those with a college educated parent are less likely to have tried smoking and males are more likely to have tried it. Experience with smoking increases with grade in school. Including the school-based activity indicators in Model 2 reduces to non-significance the increased odds of having experience with smoking for males, but none of the other socio-demographic measures change much. School-based activity participation is negatively associated with smoking experience. Compared to participating in nothing, participating in any activities significantly decreases the odds of having ever smoked. The year indicator suggests that experience with smoking has declined over time.

The next set of models estimate the odds of having ever drank alcohol. Model 1 shows that compared to non-Hispanic Black youth, non-Hispanic White, Hispanic, and other race youth have higher odds and non-Hispanic Asian youth have lower odds of having ever drank alcohol. There are no significant differences by gender. Those with college educated parents are less likely to have experience with alcohol, while the odds of having tried alcohol increase with grade. Adding school-based activity participation in Model 2 changes the association between gender and alcohol experience, so that being male is negatively associated with having tried alcohol. This may be explained, in part, by the increase in odds of having tried alcohol among those who participate in sports only compared to no activity participation. The positive association between alcohol consumption and sports participation, especially for males, is well-documented (e.g., Hartmann and Masoglia 2007). Participating in non-sport activities only or in both sport and non-sport activities is negatively associated with drinking experience, indicating a protective effect of these two school-based activity

Table 5 Associations between substance use, socio-demographic characteristics, and school-based activity profiles

	Ever smoked odds ratios		Ever drank alcohol odds ratios		Ever smoked marijuana odds ratios	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Race (NH-Black omitted)						
NH-White	1.710***	1.716***	1.447***	1.451***	1.188***	1.188***
Hispanic	1.662***	1.614***	1.663***	1.649***	1.332***	1.290***
NH-Asian	0.863***	0.878***	0.693***	0.720***	0.538***	0.551***
NH-Other	1.792***	1.784***	1.429***	1.435***	1.268***	1.258***
Class (no college degree omitted)						
College educated parent	0.707***	0.741***	0.772***	0.788***	0.801***	0.846***
Gender (female omitted)						
Male	1.054***	0.992	1.010	0.933***	1.336***	1.235***
Grade in school (8th grade omitted)						
10th grade	1.732***	1.706***	2.342***	2.339***	2.370***	2.338***
12th grade	2.342***	2.364***	3.957***	4.113***	4.072***	4.177***
Survey year (continuous)	0.937***	0.936***	0.939***	0.938***	0.991***	0.990***
Activity profile (no participation omitted)						
Only sport		0.797***		1.146***		0.857***
Only non-sport		0.584***		0.636***		0.540***
Both sport and non-sport		0.564***		0.779***		0.544***
Constant	0.305***	0.493***	0.774***	0.985***	0.126***	0.210***

Note: Family structure and public/private school controlled, not shown

*p < 0.05; **p < 0.01; ***p < 0.001

profiles. The year indicator suggests that experience with alcohol has decreased over time.

Finally, the last set of models estimates the odds of having ever smoked marijuana. Model 1, including only socio-demographic variables and controls, shows that non-Hispanic Asian youth have lower odds and non-Hispanic White, Hispanic, and other race youth have higher odds than non-Hispanic Black youth of having tried marijuana. Males and those in tenth and twelfth grade are also more likely to have ever smoked marijuana. Those with a college educated parent are less likely to have tried marijuana. Model 2, adding school-based activity indicators, does nothing to change the associations between socio-demographic indicators and the odds of having ever smoked marijuana. All participation profiles, however, are associated with reduced odds of having smoked marijuana, especially participating in non-sport activities or both sport and non-sport activities. The year indicator suggests that experience with marijuana has decreased over time.

Other variable coding strategies and different modeling techniques were tested with little variation in results. Supplementary analysis tested a measure of grades earned in school that was ordinal. This test used an ordered logit model, and results were consisted with what is presented above with the continuous treatment. We also tested models predicting college graduation expectations with the full, four-point expectations scale, despite its left skew. Given its ordinal nature, these were ordered logit models. Results indicated very similar patterns to what is reported with a dichotomous treatment and logit model. The year variable was tested as a set of dummy indicators as well as a continuous variable. Both approaches resulted in the same time patterns.

Discussion

A large and growing body of research establishes the positive benefits to youth of extracurricular activity participation including better academic outcomes (Roeser and Peck 2003), better emotional and physical health (Halpern 2003; McGee et al. 2006), and lower levels of substance use (Mahoney 2000) and risk behaviors (Jiang and Peterson 2012). Further, participation in extracurricular activities is especially helpful for disadvantaged youth (Bloomfield and Barber 2011), suggesting their potential to level inequalities. However, disadvantaged youth have lower levels of participation in extracurricular activities (Moore et al. 2014), pointing to another possibility—that extracurricular activities may exacerbate inequalities. The field of extracurricular activities for youth has expanded greatly over the last three decades (Vandermeerschen et al. 2016), but little is known about trends in participation by social class, race/ethnicity, gender and age. Do participation gaps still exist?

Have they widened or narrowed over time? This article analyzed over a quarter century of data on school-based extracurricular activity participation to document patterns and trends in participation and their links to two important facets of youth well-being: academic performance and expectations and substance use experiences. This analysis reveals persistent and growing inequalities as well as areas of hope for leveling inequalities.

The analysis revealed differences in levels of school-based extracurricular activity participation by race/ethnicity, showing that whereas non-Hispanic Black and non-Hispanic White youth had similar levels of participation in activities, Hispanic and other race youth had lower levels of participation. Non-Hispanic Asian youth had greater participation in only non-sport activities but lower levels of participation in only sport activities and similar levels of participation in both sport and non-sport activities. Regarding trends in patterns of participation by race/ethnicity, the findings indicate non-Hispanic Black youth have lower levels of participation over time in "only non-sport" and in "both sport and non-sport" activity profiles than youth of other racial and ethnic groups. Indeed, non-sport participation and participation that crosses domains (sport and non-sport) is the most protective in terms of grades, college expectations, and substance use. Therefore, the disadvantage for non-Hispanic Black youth is important for contemporaneous academic and substance use outcomes and also because extracurricular participation has become increasingly important for future success (Levey-Friedman 2013).

In terms of social class, those with a college-educated parent were more likely than those whose parents did not graduate from college to participate in sport only, non-sport only, and, especially, both sport and non-sport activities. This reveals a clear advantage to middle and upper-class youth in their ability to engage in the increasingly important field of extracurricular activities. Moreover, the activity advantage to middle and upper-class youth has increased over time—representing what Putnam (2015) identified as a new, important division existing even before adulthood. As expected, social class is also protective in terms of academic outcomes and aspirations and substance use. School-based extracurricular activity participation is additionally protective, but it does not mediate the strong role of social class.

The analyses also produced some interesting findings regarding participation in school-based activities and well-being outcomes by gender. Overall, girls appear to be gaining an advantage in participation. Since the beginning of the study period (1986), girls have participated in non-sport activities in higher proportions than boys. Since 1994, they have also outpaced boys in their participation in school-based activities across domains (both sport and non-sport). While a larger proportion of boys than girls continued to participate in only sport activities, the analysis reveals significant interactions between gender and only sport activities indicating that boys' advantage in only sport participation has waned over time. Girls are less likely than boys to not participate in any activities. Finally, gender is associated with academic and substance use outcomes favoring girls—compared to boys, girls report higher grades, have higher expectations for college graduation and are less likely to have tried cigarettes and marijuana.

Differences by youths' grade in school reveal a decreasing intensity in both sport and non-sport participation, but an increasing intensity in only non-sport activities with grade in school. That is, compared to non-participation, youth are less likely to participate in both sport and non-sport activities in the tenth and twelfth grades compared to the eighth grade. On the other hand, compared to non-participation, youth are more likely to participate in only non-sport activities in the twelfth grade than in the eighth grade. Interactions with survey year indicate that tenth and twelfth graders are increasingly likely to participate in non-sport activities, suggesting a ramp up in participation in this profile for older youth, especially in more recent years. Grade in school is positively associated with substance use perhaps as exposure to the possibility of experimentation and use increases with age and grade.

Finally, with nationally representative data over 27 years, this analysis confirms what many other researchers have suggested—that school-based extracurricular activity participation is positively associated with academic outcomes (grades and expectations to graduate college) and negatively associated with substance use. This is true even as average grades and college aspirations have increased over time and smoking cigarettes, drinking alcohol, and smoking marijuana have decreased over time.

This study contributes to a growing body of literature emphasizing the overwhelming advantages to children with middle and upper-class parents in terms of participation in extracurricular activities. Of all of the indicators of social demographic characteristics examined—race/ethnicity, class, gender, and grade in school—social class background was most consistently and strongly associated with more participation and more varied participation (in both sport and non-sport activities). Importantly, the social class advantage has grown over time, confirming what scholars suggest is a new divider among American children and families: participation in extracurricular activities (Putnam 2015). While other recent studies have shown advantages to middle- and upper-class children in *out-of-school activities* (Lareau 2003; Levey-Friedman 2013), this analysis yields similar finding with regard to *school-based activities*. This is noteworthy because school-based activities should be more accessible than out-of-school activities both in terms of material resources needed to participate and in terms of time and

logistical resources to get children to extracurricular activities (Vandell and Shumow, 1999). Therefore, these findings cast an extra pall over the portrait of social class divisions in extracurricular activity participation.

On the other hand, this article contributes a positive outlook for gender equality in extracurricular activities—its findings show what might be considered a slight advantage for girls in terms of school-based extracurricular activity participation. Girls participate in greater proportions than boys overall, and especially in school-based activities across domains (both sport and non-sport). Moreover, their advantage has grown over time, suggesting continuing gains for girls. This "girl advantage," however, may be a consequence of this study's focus on school-based activities. Other studies have shown that girls excel in school settings where the skills they have cultivated are highly valued: taking turns, sitting still, following directions, and planning ahead (Duckworth and Seligman 2006). Therefore, school-based activities, as an extension of the school day and largely in the same school setting, may be a particularly advantageous arena for girls. It is not clear that the same "girl advantage" would manifest in out-of-school activities.

This study is not without limitations. One limitation is that the data did not allow for an examination of out-of-school extracurricular activity participation, the setting in which many scholars suggest the most inequality in participation occurs. To our knowledge, there are no nationally representative studies that detail out-of-school extracurricular activity participation over time. The findings presented above on differences in school-based extracurricular activity participation by social class may, therefore, be a "lower bounds" on the inequality that actually exists in participation in extracurricular activities as the field of out-of-school, pay-to-play activities is arguably large, growing, and fraught with more inequality. Second, the MTF data began to include eighth and tenth graders only in 1991. However, studies indicate that the ramp-up in extracurricular activity participation began before this, in the 1980s (Levey-Friedman 2013). Therefore, to the degree that intensified extracurricular participation meant that youth began to participate at earlier ages, the MTF data foreclose the opportunity to look at younger children farther back in time. Still, we believe the MTF data provides the longest historical swath of data on participation in extracurricular activities—now over a quarter of a century.

Conclusion

This study offers new, nationally representative information on differences in participation in school-based extracurricular activities, trends in these differences, and links to youth well-being. Findings indicate that the middle- and upper-class advantage identified by others in out-of-school participation exists in what should be the more democratic and accessible setting of school-based extracurricular activities. Furthermore, the disadvantage to those without a college-educated parent has grown over time. Findings also show that girls are doing as well or better than boys in terms of school-based extracurricular activity participation and any male advantage in the earlier years of the study has dissipated over time. Finally, this study finds persistent links between participating in school-based activities and better grades in school, higher expectations for college graduation, and lower odds of smoking cigarettes or marijuana. This indicates that even in a context where some school-based activities are being replaced by, or face competition from out-of-school activities, participation in school-based sport and non-sport activities still has a role to play in promoting positive well-being among youth. If participation in extracurricular activities is a barometer for how the U.S. is doing as a nation in providing youth equal access and opportunities to compete in important arenas of achievement that promote their well-being, these results suggest an unfavorable forecast for class-based equality.

Acknowledgements This work was made possible through a Grant-in-Aid from the College of Liberal Arts at the University of Minnesota and a proposal development grant from the Minnesota Population Center at the University of Minnesota. The authors wish to thank the research team from the KIDS Projects (Kids Involvement and Diversity Study) for helpful feedback on earlier drafts, especially Doug Hartmann and Teresa Swartz.

Authors' Contributions A.M. conceived of the study, participated in its design and coordination and drafted the manuscript. B.S.H. participated in the study design, managed the data, and performed statistical analysis. R.L. contributed methodological expertise, performed statistical analysis, and contributed the graphics. All authors read and approved the final manuscript.

Funding Funding for research assistance was provided by: (1) a Grant-in-Aid to Ann Meier from the Office of the Vice President for Research, University of Minnesota; (2) a Proposal Development Pilot Grant to Ann Meier from the Minnesota Population Center at the University of Minnesota; and (3) an Undergraduate Research Opportunity Program Grant to Benjamin Hartmann from the Office of Undergraduate Research at the University of Minnesota.

Data Sharing Declaration The data that support the findings of this study are available from The Monitoring the Future Project, Institute for Social Research at the University of Michigan but restrictions apply to the availability of these data, which were used under a limited private-use agreement for the current study, and so are not publically available.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval This study was determined "exempt" from review by the University of Minnesota Institutional Review Board. The University of Minnesota IRB reference number for this study is: 1510E79542.

Informed Consent This study was determined "exempt" from review by the University of Minnesota Institutional Review Board. The University of Minnesota IRB reference number for this study is: 1510E79542. For this type of study which analyzes secondary data, no formal consent is required.

References

Angrist, J., Lavy, V., & Schlosser, A., (2005), New Evidence On The Causal Link Between The Quantity And Quality Of Children, No 11835, NBER Working Papers, National Bureau of Economic Research, Inc, https://EconPapers.repec.org/RePEc:nbr:nberwo:11835.

Balsa, A., Guiluliano, L. M., & French, M. T. (2011). The effects of alcohol use on academic achievement in high school. *Economic Education Review*, *30*(1), 1–15. https://doi.org/10.1016/j.econedurev.2010.06.015.

Bloomfield, C. J., & Barber, B. L. (2011). Developmental experiences during extracurricular activities and Australian adolescents' self-concept: Particularly important for youth from disadvantaged schools. *Journal of Youth and Adolescence*, *40*, 582–594. https://doi.org/10.1007/s10964-010-9563-0.

Bohnert, A. M., Richards, M. H., Kolmodin, K. E., & Lakin, B. L. (2008). Young urban African American adolescents' experience of discretionary time activities. *Journal of Research on Adolescence*, *18*(3), 517–539.

Centers for Disease Control. (2015). Ten leading causes of death by age group highlighting unintentional injury deaths, United States: 2015. https://www.cdc.gov/injury/wisqars/LeadingCauses.html. Accessed 25 Dec 2017.

Child Trends. (2017). *Vigorous physical activity by youth*. https://www.childtrends.org/?indicators=vigorous-physical-activity-by-youth.

Colabianchi, N., Johnston, L., & O'Malley, P. M. (2012). *Sports participation in secondary schools: Resources available and inequalities in participation – A BTG research brief*. Ann Arbor, MI: Bridging the Gap Program, Survey Research Center, Institute for Social Research, University of Michigan, 2012. www.bridgingthegapresearch.org.

Darling, N. (2015). Participation in extracurricular activities and adolescent adjustment: Cross-sectional and longitudinal findings. *Journal of Youth and Adolescence*, *34*(5), 493–505. https://doi.org/10.1007/s10964.

DeLuca, S., Clampet-Lundquist, S., & Edin, K. (2016). *Coming of age in the other America*. New York, NY: Russell Sage Foundation.

Denault, A. S., & Poulin, F. (2009). Intensity and breadth of participation in organized activities during the adolescent years: Multiple associations with youth outcomes. *Journal of Youth & Adolescence*, *38*, 1199–1213.

Dryfoos, J. G. (1999). The role of the school in children's out-of-school time. *Future of Children*, *9*(2), 177–134. http://www.futureofchildren.org/usr_doc/vol9no2Art10.pdf.

Duckworth, A. L., & Seligman, M. E. P. (2006). Self-discipline gives girls the edge: Gender in self-discipline, grades, and achievement test scores. *Journal of Educational Psychology*, *98*(1), 198–208.

Dworkin, J. B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth & Adolescence*, *32*, 17–26.

Easterlin, R. A. (1961). The American Baby boom in historical perspective. *American Economic Review*, *51*(5), 869–911.

Easton, J. Q., Johnson, E., & Sartain, L. (2017). *The predictive power of ninth-grade GPA*. Chicago, IL: University of Chicago. Consortium on School Research.

Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues*, *59*, 865–889.

Elder, G. H. (1999). *Children of the great depression. Social change in life experience*. Boulder: Westview Press. 25. Anniversary print.

Entwisle, D. R., & Astone, N. M. (1994). Some practical guidelines for measuring youth's race/ethnicity and socioeconomic status. *Child Development*, *65*(6), 1521–140.

Fredricks, J. A., & Eccles, J. S. (2010). Breadth of extracurricular participation and adolescent adjustment among African-American and European-American youth. *Journal of Research on Adolescence*, *20*(2), 307–333.

Guest, A. M., & McRee, N. (2009). A school-level analysis of adolescent extracurricular activity, delinquency, and depression: The importance of situational context. *Journal of Youth and Adolescence*, *38*, 51–62. https://doi.org/10.1007/s10964-008-9279-6.

Halpern, R. (2003). *Physical (in)activity among low-income children and youth: Problem, prospect, challenge*. New York: Robert Wood Johnson Foundation, After-School Project.

Hartmann, D., & Masoglia, M. (2007). Reassessing the relationship between high school sports participation and deviance: Evidence of enduring, bifurcated effects. *The Sociological Quarterly*, *48*(3), 485–505.

Jiang, X., & Peterson, R. D. (2012). Beyond participation: The Association between school extracurricular activities and involvement in violence across generations of immigration. *Journal of Youth and Adolescence*, *41*, 362–378.

Junge, S. K., Manglallan, S., & Raskauskas, J. (2003). Building life skills through afterschool participation in experiential and cooperative learning. *Child Study Journal*, *33*(3), 165–174.

Lareau, A. (2003). *Unequal childhoods: Class, race, and family life*. Berkeley, CA: University of California Press.

Levey-Friedman, H. (2013). *Playing to win: Raising children in a competitive culture*. Berkeley, CA: University of California Press.

Linver, M., Roth, J., & Brooks-Gunn, J. (2009). Patterns of adolescents' participation in organized activities: Are sports best when combined with other activities? *Developmental Psychology*, *45*(2), 354–367.

Mahoney, J. L. (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns. *Child Development*, *71*(2), 502–516.

Martin, M. J., Conger, R. D., Sitnick, S. L., Masarik, A. S., Forbes, E. E., & Shaw, D. S. (2015). Reducing risk for substance use by economically disadvantaged young men: Positive environments and pathways to educational attainment. *Child Development*, *86*(6), 1719–1737.

Mason, W. A., Hitch, J. E., Kosterman, R., McCarthy, C. A., Herrenkohl, T. I., & Hawkins, J. D. (2010). Growth in adolescent delinquency and alcohol use in relation to young adult crime, alcohol use disorders, and risky sex: A comparison of youth from low- versus middle-income backgrounds. *Journal of Child Psychology and Psychiatry*, *51*(12), 1377–1385.

Mintz, S. (2004). *Huck's raft: A history of American childhood*. Cambridge, MA: Harvard University Press.

McGee, R., Williams, S., Howden-Chapman, P., Martin, J., & Kawachi, I. (2006). Participation in clubs and groups from childhood to adolescence and its effect on attachment and self-esteem. *Journal of Adolescence*, *29*, 1–17.

Moore, K.A., Murphey, D., Bandy, T., & Copper, P.M. (2014). Participation in out-of-school time activities and programs. *Child Trends Research Brief Publication* #2014:13.

O'Brien, E., & Rollefson, M. (1995). *Extracurricular participation and student engagement. Education policy issues. Statistical perspectives*. Washington, D.C: National Center for Education Statistics & Policy Studies Association, Inc.

Physical Activity Council. (2013). *2013 Participation Report*. www.physicalactivitycouncil.com/PDFs/2013_PAC_Overview_Report_Final.pdf. Accessed 15 Oct 2017.

Putnam, R. (2015). *Our kids: The American dream in crisis*. New York: Simon & Schuster.

Roeser, R. W., & Peck, S. C. (2003). Patterns and pathways of educational achievement across adolescence: A holistic- developmental perspective. New directions for child and adolescent. *Development*, *101*, 39–62. https://doi.org/10.1002/cd.81.

Snellman, K., Silva, J. M., Frederick, C. B., & Putnam, R. D. (2015). The engagement gap social mobility and extracurricular participation among American youth. *The Annals of the American Academy of Political and Social Science*, *657*(1), 194–207.

Strobel, K., Kirshner, B., O'Donoghue, J., & McLaughlin, M. W. (2008). Qualities that attract urban youth to after-school settings and promote continued participation. *Teachers College Record*, *110*(8), 1677–1705.

Stuber, J., Meyer, I., & Link, B. (2008). Stigma, prejudice, discrimination and health. *Social Science & Medicine*, *67*, 351–357.

Vandell, D. L., & Shumow, L. (1999). After-school child care programs. *Future of Children*, *9*(2), 64–80. http://www.futureofchildren.org/usr_doc/vol9no2Art7done.pdf.

Vandermeerschen, H., Vos, S., & Scheerder, J. (2016). Towards level playing fields? A time trend analysis of young people's participation in club-organised sports. *International Review for the Sociology of Sport*, *51*(4), 468–484.

Wang, M. T., & Eccles, J. S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. *Child Development*, *83*(3), 877–895.

Yeager, D. S., Walton, G. M., Brady, S. T., Akcinar, E. N., Paunesku, D., Keane, L., Kamentz, D. Ritter, G., Duckworth, A. L., Urstein, R. Gomez, E. M., Markus, H. R., Cohen, G. L., & Sweck, C. S. (2016). Teaching a Lay Theory Before College Narrows Achievement Gaps at Scale. Proceedings of the National Academy of Sciences of the United States of America (PNAS). May 31 2016.

Ann Meier is a Professor of Sociology at the University of Minnesota. Her major research interests include families, youth, well-being, life course, and demography.

Benjamin Swartz Hartmann recently received his Bachelor's of Science degree in Sociology and History from the University of Minnesota. His major research interests include race, ethnicity, and migration; stratification and inequality; and demography.

Ryan Larson is a graduate student in Sociology at the University of Minnesota. His major research interests include punishment; law, crime, deviance; quantitative methodology and statistics; and sport.