

# A School-Level Analysis of Adolescent Extracurricular Activity, Delinquency, and Depression: The Importance of Situational Context

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**Abstract** In this article we investigate the extent to which the relationship between extracurricular activities and youth development depends on situational contexts. Using a national sample including 13,466 youths in grades 7–12 across 120 schools, we conduct school-level analyses of the association between extracurricular activities, delinquency, and depression. Three main findings are reported. First, we observe near-normal distributions across schools in the proportions of delinquent or depressed youths involved in extracurricular activities, illustrating that extracurricular activities can be positive, neutral, or negative settings for youth development. Second, within individual schools we fail to uncover consistent associations in the propensity of delinquent or depressed youth to be involved with different types of extracurricular activities. Third, standard macro-level context variables do not explain the observed variations within or between schools. The results suggest that the relationships between extracurricular activities, delinquent conduct and depressive symptoms among youth ultimately depend more upon micro-level contextual factors than the type or content of the activities themselves.

**Keywords** Extracurricular activities · Delinquency · Depression · Youth development · Context

## Introduction

For a large number of young people in the US, participation in extracurricular activities is a dominant feature of

adolescence. Virtually all public school students report access to a core of extracurricular activities, such as sports, academic clubs, and arts-related activities (O'Brien and Rollefson 1995), and approximately 3/4ths of youths in grades 7–12 participate in at least one school-based extracurricular activity during the school year (McRee and Cote 2002). Their popularity derives partially from the assumption that structured activities provide positive settings for youth development (see, for example, Agnew and Petersen 1989; Landers and Landers 1978; Lerner 2005; Vilhjalmsen and Thorlindsson 1992; Wankel and Berger 1990).

An accumulating body of research, however, provides rather inconsistent data concerning extracurricular activities and developmental characteristics (Feldman and Matjasko 2005; Mahoney et al. 2006; Mahoney et al. 2005; Marsh and Kleitman 2002). Whether in reviews of academic research (Feldman and Matjasko 2005; Marsh and Kleitman 2002), assessments of programming initiatives (Kane 2004), or meta-evaluations of available data (Durlak and Weissberg 2007; Lauer et al. 2006; Scott-Little et al. 2002), the evidence suggests no consistent relationship between extracurricular activities and positive developmental characteristics. As Feldman and Matjasko note in their review (2005, p. 163), “it is impossible to generally state that extracurricular activities are beneficial.”

Indeed, the failure of researchers to identify a consistent relationship suggests that it may be a gross simplification to think that the content of extracurricular activities has a direct influence on youth development. In this paper we argue that it is more fruitful (if decidedly more complex) to consider extracurricular activities as settings for development that primarily influence youth by virtue of the social context in which participation takes place. Thus, for example, while one particular sports team may consist of

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pro-social peer networks, in another context teammates may implicitly condone delinquency. Or, where a debate club in one school might be associated with high social status, in another environment participating in debate might signify marginal status. Overall, we suspect that activities can be positive settings in certain contexts, negative settings in some contexts, and relatively neutral settings in other contexts. If this is true, it would go a long way in accounting for the diversity of findings in the literature thus far concerning the ability of extracurricular activities to affect positive outcomes for youth.

We investigate this issue through a school-level analysis of youth extracurricular activity and developmental characteristics using *The National Longitudinal Study of Adolescent Health*, a nationally-representative sample of adolescents in grades 7–12 in the US. We specifically look for variations across schools in the proportions of delinquent or depressed youths who participate in extracurricular activities as a way of assessing whether similar types of activities can simultaneously associate with positive, negative, and neutral characteristics in different social contexts. We analyze delinquent activity and depressive symptoms because these characteristics represent aspects of youth development commonly associated with participation in extracurricular activities.

### Delinquency and Extracurricular Activities

Although the importance of extracurricular activity figures prominently in several theoretical perspectives on reducing juvenile delinquency, the empirical evidence suggests that activity participation has a complex relationship with delinquent activity. Theoretically, *social control theory* (Hirschi 1969) posits that participation in structured activities such as sports and school clubs should serve as a prophylactic against delinquency by encouraging youths to develop a commitment to conformity. Affection and respect for coaches and teachers, for example, may bind youth to the conventional social order and thus discourage participation in criminal and antisocial conduct (Thornberry et al. 1991). Moreover, children engrossed in structured after-school activities should not have time to engage in delinquency (Agnew and Petersen 1989). Although such logic has helped popularize youth activity programs, the supporting evidence is inconsistent.

Some broad-based studies have found that activity participation can reduce delinquency (Holland and Andre 1987; Landers and Landers 1978; Schmidt 2003), but other studies have found that activities can actually increase some forms of delinquency including alcohol and drug use (Barber et al. 2001; Begg et al. 1996; Eccles and Barber 1999; Mahoney et al. 2001; Paetsch and Bertrand 1997). Still other investigations suggest that the same activities

can have both deterring and facilitating effects on delinquency (Hartmann and Massoglia 2007; Miller et al. 2007). Thus, activity participation can sometimes associate with decreased delinquency, with increased delinquency, or sometimes with increases and decreases in different types of delinquency.

There are many attempts to account for the sometimes contradictory nature of the relationship between delinquency and extracurricular participation. In some research, for example, the relationship has been reported to depend on specific types of activities (e.g., Sokol-Katz et al. 2006), the quality of supervision (Mahoney and Stattin 2000), and the types of peers involved in the extracurricular activities (see, for example, Dodge et al. 2006). For instance, youths who join competitive academic clubs in schools with rigorous expectations might engage in antisocial conduct as a way of reducing strain (Agnew 2007). Thus, while extracurricular activities may generally associate with reduced delinquency, certain combinations of activities and interactions within particular social contexts can actually lead to increased delinquent activity. Indeed, the most consistent story that emerges from the literature is that the social context of participation matters greatly to any discussion of extracurricular activities and delinquency.

### Depression and Extracurricular Activities

The research on activity participation and psychological adjustment also presents mixed findings that indicate the context in which activities take place may matter more than the activities themselves. On the one hand, for example, Holland and Andre (1987) concluded from a broad literature review that there was a generally positive relationship between activities and self-esteem. On the other hand, Rees et al. (1990) found that boys heavily involved in sports felt more irritable and less independent, and Barber et al. (2001) reported that adolescents who participated in performing-arts activities were more likely to experience psychological distress in early adulthood.

Amidst the mix of both positive and negative findings, the existing research has tended to uncover a modest positive relationship between extracurricular participation and psychological adjustment but also note that contextual variables moderate the effect (e.g., Darling et al. 2005). Variables that have been considered include school attachment, gender, health, academic achievement, relationships with parents, and affective evaluations of one's participation in structured activities (Boone and Leadbeater 2006; Broh 2002; Gore et al. 2001; Mahoney et al. 2002; Tracy and Erkut 2002). For instance, some youths may experience intense pressure towards achievement by coaches, parents, or peers, thus producing anxiety that overrides any general feeling of well-being they might

otherwise experience (Luthar et al. 2006). Overall, the large number of potential moderating variables is consistent with our suggestion that the extracurricular activities themselves are less important than the context in which the activities take place. McHale et al. (2001, p. 177) articulated the point as follows: “to the extent that some social contexts are more conducive to the developing child’s adjustment than others, the links between activities and adjustment may be explained by the social context, not the content of those activities.”

### The Current Study

When accounting for social context, most recent research on extracurricular activities and positive youth development focuses on how specific structural variables influence the developmental characteristics of individuals over time. Important examples of such structural variables include the nature of peer networks (Dodge et al. 2006; Fredricks and Eccles 2006), the degree to which activities are structured vs. unstructured (Mahoney and Stattin 2000; Posner and Vandell 1999), social class (Guest and Schneider 2003; Marsh 1992), the degree to which activities promote school engagement (Dotterer et al. 2007; Marsh 1992), whether parents and other adults are involved in activities (McHale et al. 2001), the nature of activity-based identity formation (Miller et al. 2007), whether activity program designs are evidence based (Durlak and Weissberg 2007), and more. Although understanding the influence of each of these variables on individual development is important, the large number of potential influences suggests that the overall effects of any extracurricular activity on adolescent development may ultimately depend upon a host of dynamic situational factors in the settings where activities take place.

As such, our endeavor in the current study is to focus on activity settings themselves by assessing the developmental characteristics of youths at the school level. This perspective is not a point of focus in recent reviews of broad theoretical perspectives on how extracurricular activities might associate with development characteristics (e.g., Marsh and Kleitman 2002), but it is consistent with sociocultural approaches to activity participation and development (Gallimore et al. 1993; Rogoff 1990; Shweder et al. 1998). Our hypothesis is that the content of activities is less important in shaping the developmental characteristics of participants as the situational context in which the activity takes place. We thus expect that the valence of activity settings will vary greatly according to situational context.

We test our general hypothesis by examining a cross-section of schools and searching for patterns in the proportions of delinquent and depressed youths who participate in extracurricular activities. Further, we explore

whether or not conventional measures of context can explain instances in which extracurricular activities may appear to have strongly positive or negative associations with rates of delinquent activity or rates of depressive symptoms. School-level analysis is appropriate for our exploration of the importance of context because schools are discrete entities that are prominent hubs for structured activities. Not only do schools represent institutional contexts in which activities take place, but they are also the nexus for other relevant aspects of context, such as friendship networks, social status, and supervision.

### Data and Method

This study analyzes data collected during the first wave (1994–1995) of the National Longitudinal Study of Adolescent Health (henceforth, Add Health). The Add Health study is a nationally representative, probability-based survey of adolescents in grades 7–12. The sampling design of Add Health has been described in detail elsewhere (Bearman et al. 1997; Chantala and Tabor 1999). Briefly, 80 high schools were randomly selected from a roster of all high schools in the United States stratified by enrollment, region, urbanicity, type of school, and racial/ethnic mix. Subsequently, the largest feeder school (junior high or middle school) was selected when one existed; thus, a total of 132 schools participated. Due to the sampling design of Add Health, respondents at some schools did not furnish data that are examined in this study. As a result, our analyses consider complete data from 120 of the 132 schools in Add Health. A total of 13,466 respondents were in the sample.

We draw from four sources of information in the first wave of Add Health Data. Administrators from each school completed a questionnaire describing several characteristics of their institutions. In addition, adolescents attending these schools were eligible to participate in in-school surveys and in-home interviews. Information was solicited about youths’ demographic characteristics, involvement in extracurricular activities, delinquent behavior, and self-assessments of psychological well-being. As part of the Wave 1 in-home survey, a parent of the adolescent was also asked to complete a separate questionnaire. We rely on these parental data to develop school-level measures of social class.

Although Add Health is a longitudinal study of youth, we restrict our analysis to responses solicited in the first wave of data collection so as to capture the situational context at a particular point in time. A cross-sectional analysis offers two specific advantages for testing our hypothesis. First, the theoretical perspectives emphasized in this paper would predict contemporaneous or short-term

relationships between specific extracurricular activity settings and delinquency and depression. Although Add Health asked follow-up questions of respondents about delinquent activity and depression 1 year and 3 years after the first wave of data collection, the use of these data could miss crucial contemporaneous and short-term relationships that are predicted by theory. Second, our working hypothesis implies that many important aspects of social context are dynamic and change over time. For example, the student bodies of most high schools change significantly from year to year, as seniors graduate and new cohorts enroll. Friendship networks change; staff are hired and fired; program budgets are expanded or reduced. The use of cross-sectional data allows us to minimize the degree to which changes in school-level context would influence our results.

### Outcome Variables

#### *Delinquency*

Delinquent activity was assessed with a set of 15 questions in which youths reported the number of times they engaged in particular delinquent act in the previous 12 months. Questions included violent, property, and drug-related offenses, along with measures of less-serious antisocial conduct (such as being loud and rowdy in a public place). Response categories ranged from 0 to 3 (0 times, 1–2 times, 3–4 times, and five or more times).

Although most youths report engaging in some delinquent activity during the adolescent years, a small number of youths are responsible for a disproportionate share of all delinquent activity committed by young people (Tracy et al. 1990; Wolfgang et al. 1972). We rely on this phenomenon to isolate the top quartile of youths in each school that reported the most delinquent conduct in the year prior to the study, and then seek to assess whether they are over- or under-represented in different types of extracurricular activities in their schools. To accomplish this, the responses of each student for the 15 questions were summed. Next, a dichotomous variable of delinquent activity was created by comparing each respondent's self-reported delinquent activity with the amount of delinquency reported by other students in the sample of the same sex and age. Youths whose delinquent activity placed them in the top quartile of the delinquency distribution among their same-sex and same-age peers were identified as delinquent youths and were coded as '1'; otherwise they were coded as 0. Because there is no perfect standard for dichotomizing delinquency, the findings reported here depend to some degree on where the threshold is set. However, given the near universal nature of minor delinquency during adolescence (Gottfredson and Hirschi 1990), our measure

is inherently conservative because we avoid defining as delinquent youths who engage in delinquency only infrequently.

#### *Depression*

A variable to represent adolescent depression was constructed to be reasonably consistent with the dichotomous measure of delinquency described above. In the Wave I in-home survey, respondents answered 18 questions to tap depressive affect that are drawn from the CES-D scale (Radloff 1977). After recoding questions to ensure response consistency the responses of each student to these questions were summed. These data were used to create a dichotomous measure of depression. Youths whose summed scores placed them in the top quartile of the depression distribution among their same-sex and same-age peers were identified as depressed and were coded as '1'; otherwise they were coded as 0. Although these youths exhibit relatively more depressive symptoms overall, our definition is not meant to imply a diagnosis of depression.

### Independent Variables

#### *Extracurricular activity*

In the in-school survey students were provided with a list of extracurricular activities that are found at many schools. Respondents were asked to identify the activities in which they participated. (Unfortunately, the Add Health study did not collect information about the amount of participation or the level of enthusiasm a youth might have had about the activities.) Three dichotomous measures of extracurricular activity involvement were constructed: participation in sports (baseball/softball, basketball, field hockey, football, ice hockey, soccer, swimming, tennis, track, volleyball, wrestling, other sport); arts (drama, band, cheer/dance, chorus/choir, orchestra); and academic (book club, computer, future farmers, history, science, newspaper, honor society, student council, yearbook). For each of the three measures, students were coded as 1 if they reported participation in at least one of the listed activities; otherwise they were coded as 0. When aggregated at the school level, these measures were used to establish the proportion of youths in each school who participate in sports, arts, or academic extracurricular activities.

#### *Context Variables*

There are several variables available in Add Health to capture economic, organizational and institutional contexts at the school level. Variations in economic characteristics were measured at the school-level by aggregating data

from parent samples concerning parent educational attainment, and by computing the proportion of parent respondents who reported receiving any type of family public assistance. (Income was not used due to a high non-response rate.) Several aspects of the institutional context of each school were obtained from school administrators; information included whether the schools were private or public institutions, the region of the country in which their schools were located, whether they were situated in a rural, suburban, or urban environment, and the quartile percentage of their student body that is white. Finally, youths who completed in-school surveys were asked to nominate up to five male and five female friends from a roster of all students enrolled in the respondents' school (and feeder school). These data were used to establish the density of the school friendship network by dividing the number of nominations made by students in a school by the number of possible nominations (Carolina Population Center 2001). In addition, we include measures of race and sex segregation for each school. These measures have a theoretical range from  $-1$  (total integration) to  $1$  (total segregation) (Carolina Population Center 2001).

### Analytical Strategy

Our investigation proceeds in four steps. First, we provide descriptive statistics for all variables employed in this study. Individual-level data that were collected from adolescents and parents are aggregated by school and reported along with summary measures of school-level data that were obtained from school administrators.

Second, we assess whether delinquent or depressed youth were over-represented or under-represented in extracurricular activities for each school. To accomplish this, we identify the actual number of delinquent and depressed respondents within each school that reported participation in sports, arts, and academic extracurricular activities. We also calculate the number of delinquent or depressed youths in each school that one should expect to observe in those activities, given a condition of no association between extracurricular participation on the one hand, and delinquency or depression on the other. For example, suppose a school with 1,000 student respondents was observed to have 100 students enrolled who were identified as delinquent (or 10% of the total enrollment). If 80 total students in that school joined at least one school sports team, a null hypothesis of no association would suggest finding exactly eight delinquent students involved in extracurricular sports. But if this school actually had 16 delinquent students on sports teams it would have 200% of the number expected; four delinquent students would be 50% of the number expected, etc. When pooled together, the results of these "percent of expected" computations for

each school represent a frequency distribution that can reveal associations between extracurricular activities, delinquency, and depression at the school level. The data are reported as a set of histograms, along with means, standard deviations, and skew statistics.

Our third objective is to consider whether schools have *consistent* proportions of delinquent or depressed youth across different extracurricular activity domains. For instance, if a school has a substantially lower than expected proportion of depressed youth involved in academic clubs, are depressed youth also less likely to be involved in that school's sports teams and arts clubs? A pattern among schools of consistently greater or fewer than expected delinquent or depressed youths across multiple activity domains would suggest the existence of one or more macro-level contextual factors (such as school type, or community characteristics) that are not restricted to a particular type of activity. Inconsistency, on the other hand, would suggest the importance of more micro-level contextual factors (such as the personality of a coach, the identity associated with specific types of participation, or unique peer norms within a team or club) that may not exert consistent effects across different activities in the same school.

To investigate this issue, each school is classified according to where it is situated in the "percent of expected" frequency distributions for all schools in the sample. Any school with at least one "percent of expected" value that is  $\pm 1$  one standard deviation from the mean value for all schools is compared for consistency across extracurricular activity domains.

Finally, we run a series of regression models to analyze whether the macro-level school context variables employed in the study can account for the likelihood of schools to have a greater or less than expected number of delinquent or depressed youths in extracurricular activities. For OLS regressions our dependent variables are the "percent of expected" values calculated for each activity type. We run a series of regression models to identify any direct, moderating, and conditioning effects of our available school-level context variables on the relationship between delinquency, depression, and extracurricular activity involvement.

### Results

Table 1 reports descriptive statistics for the variables under consideration for the study. The data for the summed delinquency index reveal that the mean number of offenses reported by all adolescents in the sample was 4.23, with a standard deviation of 5.23. The mean summed depression score for the youths in the sample is 9.41, with a standard



deviation of 6.26. Approximately 40% of youths in the total sample reported participation in one or more extracurricular sports activities at their school. A substantially smaller proportion of youths reported participation in one or more extracurricular academic (18%) or arts (24%) programs.

Our school context variables reveal a significant amount of variability among schools in terms of parent education and economic status. The mean value for parental education is 2.59, suggesting an average level of parental schooling equivalent to some college or job training beyond the high school level. However, average parental schooling for some schools is well beyond the baccalaureate degree, while for other schools a majority of parents do not report earning a high school diploma or equivalent certification. The proportion of parents receiving public assistance by school ranges from 0.0% to 42% of respondents.

The data also show that schools vary considerably with respect to the racial composition of the student body. Schools were drawn from all regions of the US, with about 43% located in the southern portions of the country. Suburban schools represent 57% of the schools in the sample, followed by urban schools (29%) and rural institutions

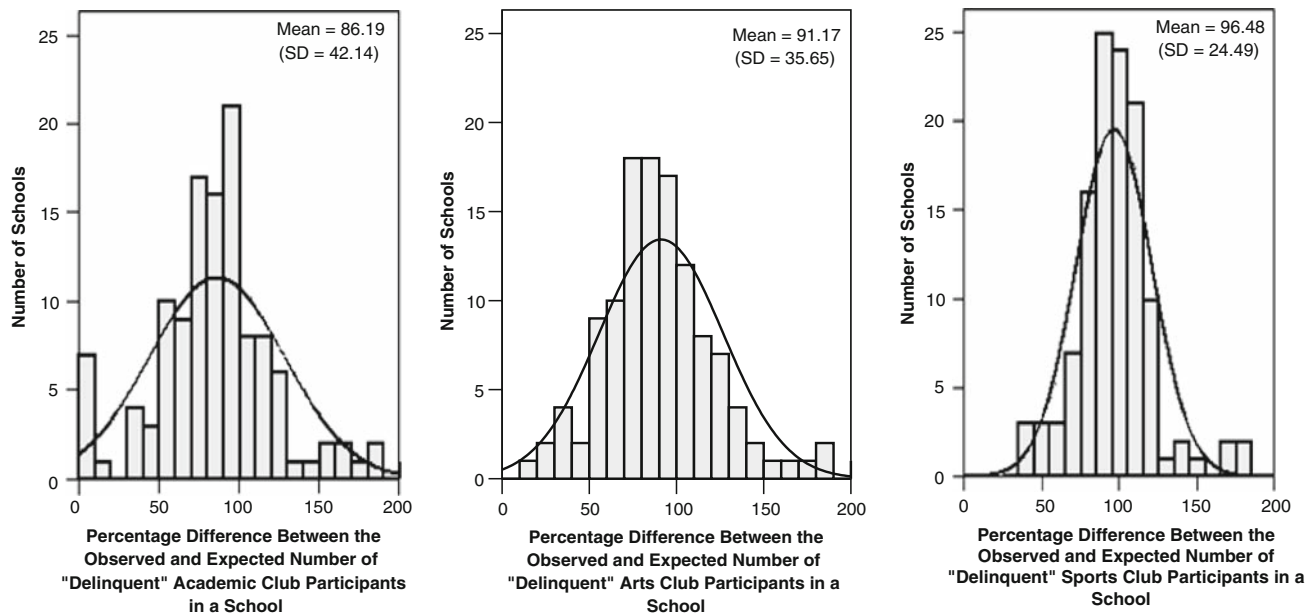
(14%). Most of the schools in the sample (91%) are public institutions.

Table 1 also reports measures of school friendship network characteristics. The school network density measure ranges from 0 to .35, with a mean value of .02. Most school friendship networks in the sample are characterized by a low total number of ties between students (relative to the total possible number of ties that could be generated). This suggests that the dominant friendship patterns in the schools are composed of several distinct clusters or cliques of friendships that are loosely linked together within the school. The racial/ethnic segregation index ranges from .02 to .75 with a mean value of .24, while the gender segregation index ranges from .07 to .37 with a mean value of .19.

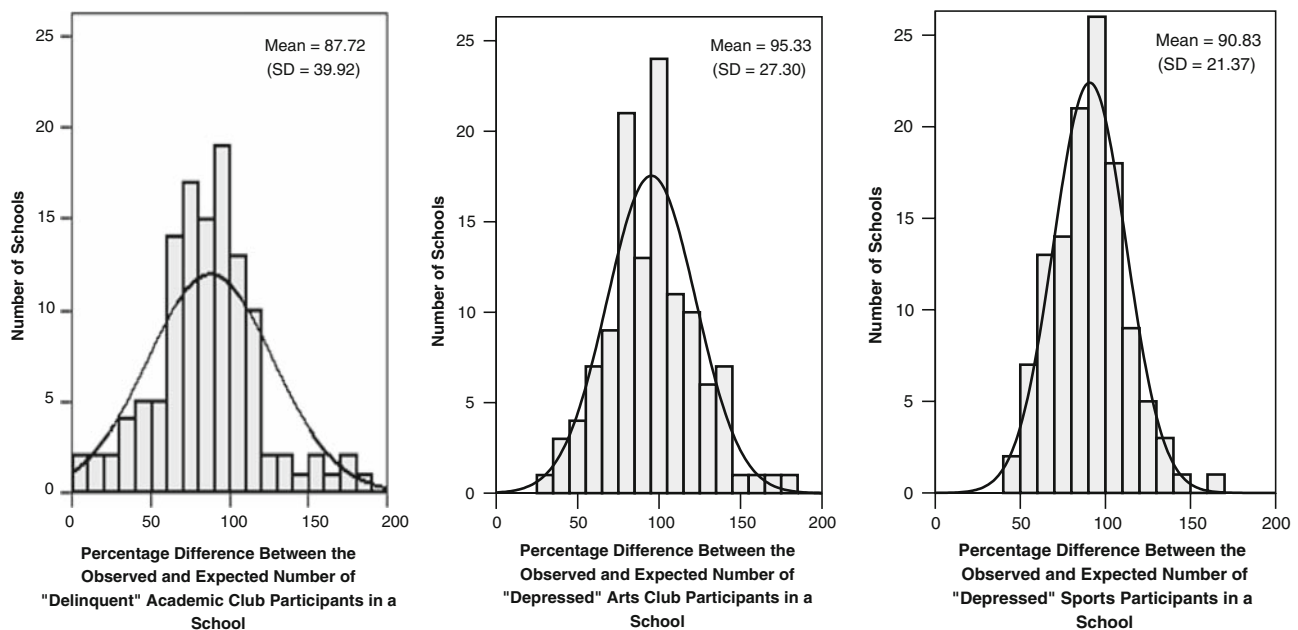
We now consider whether the proportion of delinquent or depressed youth in extracurricular activities within each school is greater or less than expected. As explained above, we computed the proportion of delinquent or depressed students in each school that were involved in extracurricular activities relative to the number expected, given a null hypothesis of no association. The results of these computations are reported in two figures; Fig. 1 focuses on delinquency and Fig. 2 considers depression.

**Table 1** Descriptive statistics

	Min	Max	Mean	SD
Delinquency and depression (all respondents)				
Summed Index of Delinquency	0	45	4.23	5.23
Summed Index of Depression	0	43	9.41	6.26
Extracurricular activities (all schools)				
% of Respondents in sports	0	1	0.40	0.49
% of Respondents in academic clubs	0	1	0.18	0.39
% of Respondents in arts programs	0	1	0.24	0.43
Parent Ed. (all schools: 1 = HS; 2 = HS/GED; 3 = some college /trade; 4 = college +)	1.57	3.74	2.59	.40
% Families with public assistance (all schools)	0	.42	.10	.09
Race (% white, by quartile)	1	4	2.63	.97
School type (public = 1, else 0)	0	1	.91	.29
School region and metropolitan location				
Northeast	0	1	.15	.39
South	0	1	.43	.50
Midwest	0	1	.23	.42
West	0	1	.19	.40
Rural	0	1	.14	.35
Suburban	0	1	.57	.50
Urban	0	1	.29	.46
Density of school friendship network	0	.35	.02	.05
Racial/ethnic segregation in school	.02	.75	.24	.19
Gender segregation in school	.07	.37	.19	.06



**Fig. 1** Relative percentages of “delinquent” students involved in extracurricular activities ( $N = 120$ ). *Note:* Schools with greater than 200% difference do not appear in histogram to maintain scale consistency



**Fig. 2** Relative percentages of “depressed” students involved in extracurricular activities ( $N = 120$ ). *Note:* Schools with greater than 200% difference do not appear in histogram to maintain scale consistency

The percentage difference between the observed and expected number of delinquent youths involved in academic-oriented extracurricular activities is found in the left panel of Fig. 1. The data show that the mean value for the “percent of expected” delinquent youths in academic clubs is 86.19%; that is, on average within a school there were approximately 14% fewer delinquent youths involved in one or more academic clubs and groups than one would

expect. The standard deviation for this frequency distribution is 42.14, indicating a fairly high level of variation among the 120 schools in the proportion of delinquent youths involved in academic activities, relative to expectations. There is a rather pronounced positive skew to this frequency distribution (1.22), reflecting a lack of symmetry in the distribution and that many schools have substantially higher-than-expected delinquent youths involved in

academic clubs and activities. Overall, the left panel of Fig. 1 indicates that most schools in the sample had lower numbers of delinquent youths involved in academic clubs than what would be expected under the null hypothesis, but also that a number of schools had significantly more than the expected number of delinquent students involved in academic activities.

Similar results are observed for the “percent of expected” frequency distribution for delinquent youths involved in extracurricular arts programs and sports activities, which are found in the middle and right hand panels of Fig. 1, respectively. The mean value for “percent of expected” delinquent youths in arts programs is 91.17%, while the mean value for sports activities is 96.48%. Thus, across all three extracurricular activity domains represented in Fig. 1, on average within a school there are slightly fewer delinquent youths involved in those activities than would be expected by chance. On the other hand, the standard deviation statistics for arts (35.65%) and sports (24.48%) suggest significant variability in the frequency distributions, and just as in the case of academic activities, both distributions feature a substantial positive skew (1.39 for arts and 0.69 for sports). Thus, a number of schools have many more delinquent students involved in arts programs and sports teams than expected, even as the central tendency reveals a less-than-expected proportion of delinquents involved in these activities.

Figure 2 provides a view of the schools in the sample on the basis of the proportions of youths indicating high levels of depressive symptoms who are involved in academic, arts and sports activities, relative to the number that would be expected at a school under a condition of no association. The left-hand panel of Fig. 2 reveals that the mean value for the “percent of expected” depressed youths in academic clubs is 87.72%; that is, on average within a school there were approximately 12% fewer depressed youths involved in one or more academic clubs and groups than one would expect. The middle panel reveals that for arts clubs the mean value for the “percent of expected” depressed youths in arts clubs within a school is 95.33%, and for sports the mean value is 90.83%. All three distributions also display a meaningful degree of variation among the schools (standard deviations of 39.92%, 27.30%, and 21.37% for academic, arts, and sports activities, respectively).

All three distributions also demonstrate a positive skew, although the value for academic clubs (2.02) is much greater than what is observed for arts programs (0.25) and sports activities (0.31). Finally, in all three cases some schools had a higher than expected number of depressed youth in all types of activities, some schools had a lower than expected number, and some schools had approximately the number would be expected assuming no

association between extracurricular activity participation and depression.

We offer two general observations concerning the data reported in Figs. 1 and 2. First, all of the frequency distributions have a mean value of less than 100% of expected and a positive skew. Overall, this suggests a modest but general association between extracurricular activity participation and lower levels of delinquency and depression. On the other hand, the data also reveal a great degree of variation among schools in the clustering of delinquent or depressed youths within extracurricular activities. This variation is important because it illustrates our larger point about how dramatically extracurricular activities can vary in their associations with developmental characteristics.

The next step in the analysis is to consider whether the schools in our sample have consistent proportions of delinquent or depressed youth across different extracurricular activity domains. We rely on the frequency distributions described in Figs. 1 and 2 to classify schools according to whether the “percent of expected” values were one standard deviation above or below the mean value calculated for all schools. In Table 2, we report whether schools have similar distributions of delinquent or depressed youth across different extracurricular activity domains. The table is split into two parts; the upper portion of the table considers delinquency, while the lower portion of the table focuses on depression. The left side of the table identifies the number of schools that had youths overrepresented on either tail of the frequency distribution. Schools are then catalogued depending on whether that finding was observed in only one activity domain, two domains, or all three domains.

For delinquency, we observed 29 schools where the percentage of delinquent youths involved in any extracurricular activity domain, compared to what would be expected, was at least one standard deviation lower than the mean value computed for all schools. Only two of those schools had that finding across all three activity groups under consideration. Another 24 schools were +1 standard deviation above the mean for at least one activity set. Of those schools, 21 (or 85%) had the discrepant finding in only one activity domain.

There are similar findings for depression. Of 33 schools where the percentage of depressed youths involved in any extracurricular activity sphere was at least one standard deviation lower than the mean value computed for all schools, only 1 sustained that finding across all three activity sets. Ten of the schools saw such concentrations across two domains, while the remaining 22 schools had such a finding in only one domain. For the 30 schools on the other tail of the distribution, 22 were found to have an overrepresentation of depressed youths in only a single domain; there were no schools in which depressed youth



**Table 2** Consistency in proportions of delinquent and depressed youths across multiple extracurricular activity domains within schools

	Number of schools with over- or under-representation			
	Total	In one domain	In two domains	In three domains
Delinquency				
<1 SD above mean	29	20	7	2
>1 SD below mean	24	21	1	2
Depression				
<1 SD above mean	33	22	10	1
>1 SD below mean	30	22	8	0

were overrepresented in all three activity spheres in a single school.

Taken together, these results suggest no broad aspects of school context are operating across multiple activity types within a single school. However, it may be possible that our contextual variables exert consistent effects on a single type of extracurricular activity across schools. To test this possibility, we ran a set of OLS regression models focused on available school level variables including socioeconomic status, public/private status, geographic location, friendship density, and racial/gender segregation in the school. These variables were regressed on the continuous “percent of expected” frequency distributions reported in Figs. 1 and 2. None of these variables demonstrated a statistically significant association with the rates of delinquency or depression among extracurricular participants within a school.

Ultimately, then, our results provide no indication that either broader school context or specific activity content affects rates of delinquency and depression among extracurricular activity participants. Instead, those rates seem to systematically vary both within and between schools depending upon unique contexts in which the activities are situated.

## Discussion

When looking specifically at the school level, different types of extracurricular activity participation seem to associate with different rates of delinquency and depression in a similar pattern—a near-normal distribution. In certain schools, some types of activity participants are more likely to engage in delinquency, in other schools they are less likely; in certain schools some types of activity participants are more likely to indicate depressive symptoms, in other schools they are less likely. There were virtually no schools in our sample in which all types of extracurricular activity were consistently associated with positive or negative characteristics. Further, based on our OLS regression analyses, standard school context variables did not consistently predict the schools in which activity

participation is more or less likely to associate with delinquency and depression. In finding that neither the content of activities nor the character of communities in which activities take place explain the consistent distribution of rates for delinquency and depression among activity participants, we are left to conclude that it is characteristics of the micro-context within specific activity settings that matter. Of course, because we have aggregated individual activities into larger categories it is conceivable that a particular sports activity, type of arts program, or academic club has a consistent association with delinquency or depression across a range of social contexts. Likewise, it is possible that other variables such as race, gender, and social class may have somewhat consistent interactions with more specific types of activities. The results reported here, however, suggest a broader conclusion: any type of activity within any type of school can be associated with positive or negative developmental characteristics, depending on that particular activity setting.

We focused on both delinquency and depression as two somewhat distinct dependent variables because we wanted to broadly test the idea that any association between activity participation and the characteristics of participants depends on context. Nevertheless, we assume that the relationships between activity participation, delinquency, and depression are not identical. There is, for example, a broad literature about activity participation and adolescent delinquency positing several possible relationships. Activities might, for example, inhibit delinquency through social control (Agnew and Petersen 1989), or intensify delinquency through peer contagion (Dodge et al. 2006). While our analysis did not specifically test these mechanisms, the finding that the relationship between activity participation and rates of delinquency varies at the school level suggests that the activities themselves do not matter as much as the particular social contexts in which activities are situated.

Likewise, while there has been significant work investigating the relationship between psychological adjustment and activity participation, our findings suggest no one consistent association. Instead, it seems that activity participation in different contexts can have a positive

association with depressive symptoms, a negative association with depressive symptoms, or no association with depressive symptoms. Theoretically, it seems possible that micro-level factors could moderate these associations. For example, participants' successes or failures within activities, the intensity of their involvement, the quality of activity leadership, and interpersonal relationships within activity settings may each contribute to the psychological adjustment patterns of individuals. Overall, however, the general implication here is that, at the school level, psychological adjustment relates more to the context than the content of extracurricular activities (McHale et al. 2001).

It is worth noting that in all of our analyses the average relationship within a school between activity participation, rates of depression, and rates of delinquency was slightly negative. Thus, consistent with literature reviews and meta-analyses (including Durlak and Weissberg 2007; Feldman and Matjasko 2005; Marsh and Kleitman 2002), activity participants in schools are slightly less likely to exhibit delinquency and depressive symptoms. Overall, however, that general tendency would not tell anyone much about the valence of activity settings as a site for youth development in any specific activity at a particular school because the relationships at a school level are so broadly distributed, and the effects are rarely consistent across different activity domains.

Our exclusive focus on a cross-section of schools, while relatively blunt, provides a useful alternative perspective on relationships between activity participation and developmental characteristics. Although our use of cross-sectional data limits our ability to observe long-term associations between activities, delinquency, and depression, we are able to avoid having the changes in school-level context that invariably occur over time influence meaningful statistical relationships. Moreover, the central aim of the research is to observe how these associations may vary across schools, and our research reveals that activities do not necessarily associate with any particular characteristics of adolescent development. Most prior research investigating activity participation focuses either on individual-level analysis, often controlling for demographic variables to account for context (e.g., Busseri et al. 2006; Fredricks and Eccles 2006), or multi-level analysis (e.g., Guest and Schneider 2003). While such research provides important information about activities and development, simply controlling for context or integrating context into a larger model may implicitly de-emphasize the role of context. Instead, it seems more likely that activities provide a situational context where developmental characteristics are expressed and negotiated in diverse ways.

Our suggestion that extracurricular activities be conceptualized as a situational context with diverse potential as a setting for adolescent development has several

implications for both research and practice. In terms of research, our findings allow at least three suggestions. First, we would support an emphasis on micro-contexts as a focus for research on the increasing prominence of extra-curricular activities. While there is some such work, including recent work on youth organizations (see, for example, Jarrett et al. 2005) and in relation to family life (e.g., Lareau 2003), our findings suggest that the importance of activities lies in context specific details that are best understood through close consideration of specific sites. Second, we would suggest caution when trying to generalize results about activity participation in one context to other contexts. From our perspective, it is likely that contextual factors such as relationships, identities, and norms within specific activity settings matter more than the content of an activity itself. Third, our findings suggest that investigations of extracurricular activities and development should focus more on understanding these contextual factors. In line with Pedersen and Seidman (2005) we suspect that the important questions about extracurricular activities address how context matters; how do contextual factors such as relationships, identities, and norms function within participation in extracurricular activities.

More practically, this line of thinking would emphasize a need to attend carefully to how activities are provided rather than what activities are provided. When done poorly, activities can be a breeding ground for delinquency, depression, and other social ills. When done well, activities can be a positive setting for youth development. Or, in many cases, extracurricular activities are relatively neutral settings that have limited developmental implications. Based on previous research, we suspect the difference between doing activities well and poorly depends significantly on factors such as the personal characteristics of other youth program participants (Dodge et al. 2006), the nature of social norms and supervision within activities (Eccles and Gootman 2002), the identities associated with participation (e.g., Eccles and Barber 1999; Guest and Schneider 2003), and the level of commitment involved (e.g., Hartmann and Massoglia 2007). Further investigation of these factors would be fruitful.

The idea that the personal characteristics of participants matters is often a problem for research on activity participation and development because it indicates selection effects. In our analyses, however, we think of selection effects as an essential part of the context for participation. That is, activity participation never occurs in a vacuum where other participants, with whom activities usually foster direct interaction, are completely neutral. There are always certain factors, such as eligibility requirements and peer networks that facilitate the selection of certain youth into activity participation. From this perspective recognizing selection effects is another way of saying that

context matters more than content. Extracurricular activities relate to youth development mainly by providing a space for socialization that inevitably takes on meaning according to the dynamic and situational character of the activity setting. That meaning may be positive, negative, or neutral, but it is always determined in context.

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