

Do School Friends Participate in Similar Extracurricular Activities?: Examining the Moderating Role of Race/Ethnicity and Age

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Abstract

Adolescents who participate in school-based extracurricular activities have higher adjustment than adolescents who do not participate. A critical, but often overlooked, question is what are the predictors of adolescents' participation in activities? The purpose of this study was to test whether school friends' activities predicted adolescents' activities. Data were drawn from the Longitudinal Study of Adolescent Health (N= 53,070; 7th through 12th graders). Adolescents' friendship networks were used to create indicators of friends' participation in (a) total number of activities, (b) three main types of activities, and (c) 31 specific activities. Results suggested that adolescents were likely to participate in similar activities as their friends. This association was stronger for Whites than racial/ethnic minorities and for older than younger adolescents.

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Adolescents' participation in high-quality, school-based extracurricular activities during their leisure time is related to positive adjustment, such as high school graduation, civic engagement, and continued participation in similar leisure activities into adulthood (for a review, see Mahoney, Vandell, Simpkins, & Zarrett, 2009). School-based extracurricular activities include a variety of activities, such as band, sport teams, and student council. Extracurricular activities could play a particularly important role during adolescence because they provide a context to build social capital at one's school by supporting relationships with peers and adult role models (Coleman, 1988). Although a great deal of research has documented the benefits associated with adolescents' participation in extracurricular activities, less research has addressed the processes surrounding participation (e.g., predicting participation, program retention). Understanding what predicts participation is particularly important during adolescence because many programs struggle to recruit and retain middle and high school youth (Deschenes et al., 2010).

A recent policy report examining the factors that promote participation noted that supporting positive interactions among friends and among peers during activities was one promising practice that should bolster participation for middle school adolescents (Deschenes et al., 2010). Recent qualitative work has found that spending time with friends is consistently mentioned as one of the main reasons adolescents participate in organized activities (Hirsch, 2005; Patrick et al., 1999). Although this qualitative work provides evidence for the importance of friends in adolescents' activity participation, how associations between friends and activity participation generalize to larger samples of adolescents and varies across age and race is not well understood. Thus, the purpose of this study was to test whether school friends' extracurricular activities predicted adolescents' activities using a nationally representative dataset, and to examine whether this relation was stronger for particular subgroups based on adolescents' race/ethnicity and age.

Theoretical Framework

Bioecological theory provided the theoretical foundation for the current investigation. Bioecological theory posits that individuals' development is the direct result of proximal reciprocal interactions between individuals and their immediate contexts. Furthermore, the effect of these proximal interactions varies systematically based on the characteristics of the individual and five larger environmental systems in which the interactions take place (Bronfenbrenner & Morris, 2006). The microsystem is the most immediate system and is comprised of settings that adolescents have direct contact with, such as families, friendships, and extracurricular activities. The next most immediate system, the mesosystem, looks beyond a single microsystem to the interactions among multiple microsystems. The microsystem and mesosystem are embedded within three larger systems: the exosystem, the macrosystem, and the chronosystem. The exosystem includes settings that the adolescent does not have direct contact with, such as parents' work. The macrosystem includes the socio-cultural context, such as society's cultural beliefs and attitudes about race/ethnicity. The chronosystem denotes that all of the other systems as well as relations among those systems change as adolescents age. Furthermore, Bronfenbrenner and Morris (2006) theorized that the larger systems (e.g., macrosystem and chronosystem) influence all of the nested subsystems (e.g., mesosystem and microsystem).

According to bioecological theory, adolescents' friendships and participation in extracurricular activities are microsystems. The associations between adolescents' friendships and activity participation are one aspect of the mesosystem. Furthermore, adolescents' friendships and activities, as well as the associations between them, should be shaped by the larger macro- and chronosystems. Previous work suggests that the friendship and activity microsystems vary based on race/ethnicity, an aspect of the macrosystem, and age, an aspect of the chronosystem (e.g., Mahoney et al., 2009). For instance, ethnic and racial differences may stem from the friendship and activity participation opportunities for diverse adolescents in the U.S. Moreover, as adolescents age, the available opportunities for friendship and activity participation may also change. Thus, in this investigation, we will examine if the associations between adolescents' friendships and activity participation vary by race/ethnicity and age.

Adolescents' Friends and Extracurricular Activities

Although Bronfenbrenner and Morris' bioecological theory (2006) suggests that adolescents' friendships and their participation in extracurricular activities should be linked, it provides less guidance on exactly what it is about adolescents' friendships that should influence their participation. Experts on friendships suggest there are three central aspects about friendships that influence people across the lifespan (Hartup & Stevens, 1997). These three aspects are (a) the number of friends, (b) friendship quality (e.g., support, conflict), and (c) friends' characteristics and behaviors. Of these three aspects, Hartup and Stevens (1997) theorized that the central friendship predictor of adolescents' behavior is friends' behavior.

Several studies on peer homophily (i.e., the similarity among friends) have demonstrated empirically that one of the central determining factors of adolescents' behavior is the extent to which their friends engage in similar behaviors (e.g., Dishion, Piehler, & Myers, 2008). For example, adolescents' delinquent behavior is predicted by friends' delinquent behavior even after controlling for other known predictors (Haynie & Osgood, 2005). The majority of research on friendships as predictors of adolescents' behaviors has focused on negative or risky behaviors, such as delinquent behavior, smoking, or sexual activity (e.g., Crosnoe, Cavanaugh, & Elder, 2003). According to Hartup and Stevens' (1997) work, friends' positive behaviors, such as participation in extracurricular activities, should be an important predictor of adolescents' positive behaviors.

There is some empirical evidence suggesting that adolescents are likely to participate in an organized activity if their friends participate in an organized activity (Denault & Poulin, 2009; Persson, Kerr, & Stattin, 2007). However, the relation between friends' activities and adolescents' activities is unclear because the existing research did not require that friends participated in the same activity. For example, an adolescent who participated in drama could have friends who also participated in drama or any other organized activity, like sports. In other words, the authors of both papers examined the extent to which friends' participation in any organized activity predicted adolescents' participation in any organized activity.

It can also be challenging to draw conclusions based on the previous research because scholars have grouped organized activities in a variety of ways. The authors of a classic study on organized activities grouped activities into three main

types, namely sports, art, and school clubs, because they felt these activity types were linked with adolescents' identity and peer group affiliation (Eccles & Barber, 1999). To address these gaps in the existing literature, the current study examined a variety of activity indicators including (a) participation in any activity, (b) participation in three activity types (i.e., sports, art, and clubs), and (c) participation in each specific activity (e.g., football, basketball).

Adolescents' Race/Ethnicity and Age as Moderators

According to bioecological systems theory, the association between friends' activities and adolescents' activities should be shaped by the larger systems (Bronfenbrenner & Morris, 2006). In this study, we focus on adolescents' race/ethnicity as an aspect of the macrosystem and adolescents' age as an aspect of the chronosystem. The literature suggests that adolescents' race/ethnicity and age influence their friendships and organized activities. We review this literature to provide insight into whether adolescents' race/ethnicity and age could also moderate the associations between friends' and adolescents' activities.

Race/Ethnicity. Adolescents' friendship networks are comprised of school-based friends and community-based friends (i.e., friends from outside of the school). Research suggests that many of racial/ethnic minority youths' friends are community-based. For example, 57% of inner-city African American youths' friends were community-based friends (Dolcini, Harper, Watson, Carania, & Ellen, 2005). Further, Way and Chen (2000) found that approximately 70% of low-income African American, Latino, and Asian American students' friends were community-based friends. Researchers have also found that African American adolescents were more likely to see their community-based friends every day and spoke less often to their school-based friends than European American adolescents (DuBois & Hirsch, 1990). Adolescents' community-based friends cannot participate in school-based activities with them. In order to spend time with a community-based friends, adolescents either need to attend community-based activities or spend time hanging out in the community. As a result, adolescents' school-based friendships could play a more minor role in the school-based activity participation of racial/ethnic minority adolescents than White adolescents.

The literature also suggests that racial/ethnic minority adolescents' participation in extracurricular activities is typically lower than White adolescents' participation (Fredricks & Simpkins, in press). Scholars have theorized that one of the reasons why participation may be lower for racial/ethnic minority youth is because racial/ethnic minority youth tend to have more limited family resources and reside in communities with fewer activities than their White counterparts (Fredricks & Simpkins, in press). Limited family resources can inhibit adolescents' ability to participate in extracurricular activities through a variety of mechanisms, such as the monetary cost of activities and increased family responsibilities. In other words, adolescents with limited family resources might have limited participation in extracurricular activities regardless of their friends' activity participation.

Age. Several studies suggest that, with age, decisions about extracurricular activities shift from parent decisions to adolescent decisions. Smetana and her colleagues have conducted several studies on changes in parental authority based on adolescents' age (e.g., Smetana, Crean, & Campione-Barr, 2005). In their work,

they describe the extent to which parents and adolescents believe decisions should be made by parents versus adolescents. Parents and adolescents often agree that parents should make decisions related to morality topics (e.g., stealing, lying) and conventional topics (e.g., assignment of household chores, cursing). They also agree that adolescents should make decisions about personal topics, such as dress, music, and after-school activities. The point of disagreement between parents and adolescents is what constitutes personal topics. For example, young adolescents and parents often disagree on whether the adolescents' choice of clothing is a personal topic. Smetana, Crean, and Campione-Barr (2005) suggest that as adolescents age there is increasing agreement between adolescents and parents that a wider range of topics are considered personal topics and are thus decisions to be made by adolescents. Indeed, research suggests that White and Latino children start deciding their extracurricular activities by the end of elementary school (Savage & Gauvain, 1998).

At the same time as parents' influence over decision making decreases, friends become key supportive figures in adolescents' lives. In a classic study of mostly White youth, Furman and Burhmester (1992) demonstrated the increasing salience of friendships as adolescents age. Adolescents reported that friends and parents were equally important in 7th grade, but friends became more important than other social relationships by 10th grade. Thus, as adolescents increasingly make activity decisions independent of parents, they might look to their friends for ideas, input, and advice. As adolescents grow older, friends may facilitate or inhibit adolescents' participation in extracurricular activities depending on how friends spend their time.

Study Research Questions

Given the potential positive benefits of adolescents' participation in school-based extracurricular activities (Mahoney et al., 2009), it is important to examine the predictors of their participation in these settings. The purpose of the current investigation was to test whether friends' activity participation predicted adolescents' participation. This study was organized around two broad research questions and five specific hypotheses.

Research Question 1. Does friends' school-based extracurricular activity participation predict adolescents' school-based extracurricular activity participation?

Hypothesis 1. The proportion of the adolescents' friendship network that participated in any extracurricular activity would positively predict the number of activities in which adolescents participated.

Hypothesis 2. The proportion of adolescents' friendship network that participated in each of the three main activity types (i.e., sports, art, school clubs) would positively predict the number of activities in which the adolescents participated in that same activity type.

Hypothesis 3. The proportion of adolescents' friendship network that participated in each specific activity would positively predict whether an adolescent participated in that activity.

Research Question 2. Does the association between friends' and adolescents' school-based activity participation vary based on adolescents' race/ethnicity and age?

Hypothesis 4. The association between friends' and adolescents' activity participation would be stronger for White adolescents compared to racial/ethnic minority adolescents.

Hypothesis 5. The association between friends' and adolescents' activity participation would be stronger for older versus younger adolescents.

Method

Participants

Adolescents in the current study were participants in the National Longitudinal Study of Adolescent Health (Add Health; Udry, 2003). Add Health includes approximately 90,000 7th through 12th grade adolescents from 132 middle and high schools throughout the United States. The data used in this report were from Wave I of the Add Health adolescent in-school questionnaire, which was collected during the 1994-1995 school year. In the self-administered in-school questionnaire, adolescents reported their demographic characteristics, activity participation, problem behaviors, GPA, and friendship nominations.

Because this study focused on adolescents' and friends' participation and how those relations vary by race/ethnicity and age, participants were removed from the sample if they did not have (a) data from at least one friend, (b) sampling weights, (c) race/ethnicity (for which we could not impute missing data on a series of dummy codes), and (d) extracurricular activity data. Of the approximate 75,800 adolescents who had valid friend network data, 53,070 met our four criteria. The 53,070 adolescents in this investigation included adolescents who identified with various racial/ethnic groups¹: 66.7% White, 9.5% Hispanic, 16.5% Black, 3.3% Asian, and 4% biracial. The adolescent sample was 53% female and on average 14.82 years of age ($SE = .11$). Parents' level of education ranged from less than high school (12% of the sample) to beyond a bachelor's degree (9% of the sample), but the average was a high school degree ($M = 1.77$, $SE = .04$).

Measures

Activity participation. Adolescents reported whether they participated in or were planning to participate in any school-based clubs, organizations, or sport activities at the school during the school year from a list of 33 activities (0 = no, 1 = yes). Two activities were dropped because the particular sport or club was not identified (i.e., "another sport", "another club or organization"). Four indicators of activity participation were created with the remaining 31 activities based on

¹The sample information presented is weighted with the sampling weights provided by Add Health. The Add Health survey assessed adolescents' affiliation with the following groups: White, Black or African American, Asian or Pacific Islander, American Indian or Native American, Hispanic or Spanish origin, and other. Because one of the options was "White," we refer to the other groups throughout the manuscript as Hispanic, Black, Asian, and biracial. This parallel terminology follows the guidelines described in the *American Psychological Association publication manual* (6th edition).

previous research (Eccles & Barber, 1999). First, we created the *total* number of activities by summing the number of activities in which the adolescent participated across all 31 activities. Second, *sport* activities was the sum of 11 activities including baseball/softball, basketball, field hockey, football, ice hockey, soccer, swimming, tennis, track, volleyball, and wrestling. Third, *art* activities included five activities: cheerleading/dance, drama club, band, chorus or choir, and orchestra. Fourth, *school clubs* included 15 activities: French club, German club, Latin club, Spanish club, book club, computer club, debate team, Future Farmers of America club, history club, math club, science club, honor society, newspaper, student council, and yearbook. All four indicators were count indicators representing the total number of activities in which the adolescent participated in the given area. The descriptive statistics for the indicators are presented in Table 1.

Table 1

Weighted Means and Standard Errors of Adolescents' and Friends' Activity Participation

Indicator	M	SE
Adolescents' participation		
Total number	2.38	.05
Sports	1.03	.03
Art	.44	.01
School clubs	.61	.02
Friends' participation		
Total number	.83	.01
Sports	.57	.01
Art	.35	.01
School clubs	.38	.01

Friends' activity participation. Adolescents identified their five closest female friends and five closest male friends (i.e., up to 10 friends total) at their school. Researchers associated with Add Health strived to survey all the adolescents in the schools. As a result, indicators of adolescents' friendship network were created based on the friends' self-reported data. Each indicator of friends' activity participation was the proportion of the friendship network that participated in that activity. Friends' activity participation was computed for (a) total activity participation, (b) the three main activity types, and (c) each specific activity. The proportion for total activities represented the proportion of the friend network that participated in at least 1 of the 31 activities. For each of the three main activity types (i.e., sport, art, school clubs), the proportion of the adolescents' friendship network that participated in any activity within that type was computed. For example, the proportion of friends in sports represented the proportion of the

adolescent's friendship network that participated in at least one of the 11 sport activities. Finally, the proportion was also computed for each specific activity.

Moderators. Adolescents' race/ethnicity and age were used as moderators of the relations between friends' and the adolescents' activity participation. Dichotomous variables for Hispanic, Black, Asian, and biracial adolescents were included as measures of race/ethnicity. White adolescents were included as the reference group. Age was used as a continuous variable.

Control variables. It is also important to control for other known predictors of adolescents' participation in activities. Accounting for other known predictors of adolescents' activity participation will help to isolate the extent to which friends' activities predict adolescents' activities. A recent review chapter suggested that adolescents' participation is predicted by their gender, grade point average (GPA), problem behavior, number of parents in the household, and parent education (Mahoney et al., 2009). Including gender, GPA, problem behavior, number of parents in the household, and parent education as predictors will provide insight into whether friends' activities predict above and beyond these predictors.

Adolescents' sex (1 = *female* [53%], 0 = *male*), GPA, engagement in problem behavior, number of friends, number of parents (i.e., biological, step-, foster, and adoptive parents) in the household (1 = 2 *parents* [73.5%], 0 = 1 *parent*), and mother's education were included. Adolescents' GPA was calculated by taking the average of their self-reported grades in English, Math, Social Studies, and Science in the past year (0 = *D*, 3 = *A*; $M = 1.86$, $SE = .02$). Adolescents' problem behavior was the average of seven items indicating how often they engaged in various behaviors during the last 12 months (e.g., "smoked cigarettes," "lied to his or her parents or guardians," and "skipped school without an excuse"; 0 = *never*, 6 = *nearly every day*; $\alpha = .77$; $M = 1.13$, $SE = .02$). Number of friends was based on the number of male and female friends each adolescent reported. Number of parents in the household was determined based on a household roster that the adolescent completed. Adolescents reported their mother's level of education (0 = *less than a high school degree*, 4 = *higher than a bachelor's degree*; $M = 1.84$, $SE = 1.18$).

Analysis Plan

All analyses were weighted with sampling weights to account for the complex sampling design of the Add Health data. Further, we accounted for the clustering of students within schools to correct for the correlated errors. Because the indicators of adolescents' activity participation were count variables (and not continuous variables), indicators of model fit were not available (Muthen & Muthen, 2007). Full information maximum likelihood was used to incorporate cases with missing data. Adolescents had complete data concerning adolescents' and friends' activity participation, and adolescent race/ethnicity. There were missing data on other indicators reported by adolescents, including gender (<1% missing), age (<1%), problem behavior (2.4%), GPA (10%), number of parents in the household (1.9%), and maternal education (17.5%).

Research question 1. Under the first research question, we tested path models predicting adolescents' participation from friends' participation in total activities (Hypothesis 1), the three activity types (Hypothesis 2), and in the 31 specific activities (Hypothesis 3). The predictors of adolescents' participation in each mod-

el included the proportion of the friend network that participated in that activity, the number of friends, age, race/ethnicity, sex, problem behavior, GPA, number of parents in the household, and mothers' education. These models were estimated in the latent variable modeling program Mplus v5.1 (Muthen & Muthen, 2007; <http://www.statmodel.com/>). There was one difference for the models estimated for the 31 specific activities. In these models, adolescent's participation in a single specific activity was a dichotomous indicator (rather than a count indicator in the previous models). For ease of interpretation, we also computed the odds ratio based on 1 SD unit of change in the proportion of an adolescents' network that participates in a particular activity. Odds ratios over 1 suggest an increase in the likelihood of adolescents' participating in a specific activity. For example, an odds ratio of 1.45 suggests that each 1 SD unit change in the proportion of the network that participates is associated with a 45% increase in the likelihood of the adolescent participating in that activity. Odds ratios under 1 suggest a decrease in the likelihood of the adolescent participating.

Research question 2. We addressed whether the relation between friends' and adolescents' activities varied based on adolescents' race/ethnicity (Hypothesis 4) and age (Hypothesis 5). In these analyses, race/ethnicity was represented by four dichotomous codes: Hispanic, Black, Asian, and biracial. Adolescents' age was mean centered prior to analysis (Aiken & West, 1991). Five two-way interactions between friends' participation and adolescents' race/ethnicity and age were used to test adolescents' race/ethnicity and age as moderators (i.e., four interactions to test race/ethnicity and one interaction to test age). The interactions were computed with the total activities and the three main activity types (i.e., sports, art, and school clubs). In total, 20 two-way interactions were tested (i.e., five interactions in four separate models). Based on the Bonferroni correction, these two-way interactions had to reach $p < .01$ level to be deemed as statistically significant (Olejnik, Li, Supattathum, & Huberty, 1997).

All interactions that met this significance criterion were examined further with simple slope analyses through the online calculator at www.quantpsy.org (Preacher, Curran, & Bauer, 2006). If one of the interactions with a race/ethnicity dichotomous code was statistically significant, the slopes for White adolescents and adolescents of the race/ethnicity minority group denoted in the dummy code were tested. For example, the statistical significance of the interaction including Black adolescents denotes that the relations between friends' and adolescents' activity participation was significantly different for Blacks compared to Whites. Thus, the simple slope analysis in this case would test if the strength of the relation between friends' and adolescents' participation was significantly different from zero for Black adolescents and for White adolescents. If an interaction with adolescents' age was statistically significant, the slopes were examined for (a) adolescents at the mean age, (b) older adolescents (i.e., adolescents who were one standard deviation or higher than the mean age), and (c) younger adolescents (i.e., adolescents who were one standard deviation or lower than the mean age) (Aiken & West, 1991).

Results

Research Question 1: Do Friends' Activities Predict Adolescents' Activities?

Hypothesis 1. The findings from the analyses are presented in terms of path coefficients and standard errors in Table 2. The proportion of friends who participated in extracurricular activities positively predicted the number of activities in which adolescents participated. Several of the other control variables also were statistically significant. Adolescents participated in a higher number of activities if they had a higher number of friends, were younger, engaged in problem behavior, had a higher GPA, were female, had a mother with high education, and had lived in a two versus one parent household compared to their peers.

Table 2

Path Coefficients (and Standard Errors) in Predicting Activity Participation

Predictor	Total activities	Sports	Arts	School clubs
Friends' participation	0.80(.10)***	1.24(.07)***	1.65(.06)***	1.34(.09)***
Other selection factors				
Number of friends	0.03(.01)***	0.04(.01)***	0.05(.01)***	0.04(.01)***
Age	-0.04(.01)***	-0.09(.01)***	-0.08(.01)***	0.02(.01)
Problem behavior	0.01(.01)	0.03(.01)***	-0.03(.01)	0.03(.01)*
GPA	0.21(.01)***	0.07(.01)***	0.10(.01)*	0.45(.02)***
Female	0.07(.01)***	-0.41(.03)***	0.82(.03)***	0.35(.02)***
Mother's education	0.08(.01)***	0.05(.01)***	0.07(.01)***	0.07(.01)***
Number of parents	0.03(.01)*	0.01(.02)	0.04(.02)	0.02(.02)
Hispanic ^a	0.05(.04)	0.06(.05)	-0.09(.04)*	0.32(.05)***
Black ^a	0.10(.03)***	0.10(.04)*	0.18(.04)***	0.30(.05)***
Asian ^a	0.04(.04)	-0.14(.04)**	-0.03(.06)	0.33(.06)***
Bi-racial ^a	0.09(.03)**	0.08(.04)	0.21(.06)***	0.17(.06)**
Interactions with friends' participation				
Hispanic*friend part.	-0.20(.09)*	-0.30(.10)**	-0.19(.10)*	-0.31(.12)**
Black*friend part.	-0.47(.12)***	-0.64(.10)***	-0.58(.09)***	-0.55(.11)***
Asian*friend part.	-0.17(.13)	-0.20(.11)	-0.22(.12)	-0.37(.13)**
Bi-racial*friend part.	-0.28(.13)*	-0.32(.13)*	-0.54(.12)***	-0.25(.17)
Age*friend part.	0.14(.03)***	0.10(.03)**	0.20(.02)***	0.07(.03)*

Note. ^aThe reference category for race/ethnicity was White.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Hypothesis 2. The findings suggest that the number of adolescent activities was higher in each of the three activity types as the proportion of the friend network who participated in similar types of extracurricular activities increased (Table 2). For example, as the proportion of their friend network that participated in sports increased, so did the adolescents' own participation in sports activities. Adolescents also participated in a higher number of activities in each of the three types if they had a higher number of friends, were younger, engaged in problem behavior, had a higher GPA, were female (with the exception of sports), and had a mother with high education compared to their peers.

Hypothesis 3. Although the full path models included the same controls as those presented in Table 2, we only presented information for the paths from friends' participation to adolescents' participation in Table 3. The full tables are available from the first author. All path coefficients were statistically significant. Furthermore, the odds ratios suggest that each 1 SD unit change in the proportion of friends that participate in a specific activity was associated with a 25% to 173% increase in the odds that the adolescent will participate in that same activity. For example, the odds ratio for book club was 1.25 suggesting that each 1 SD unit change in the friend network participation was associated with a 25% increase in the likelihood that the adolescent also participated. In the case of band, the odds increased by 173% (i.e., odds ratio of 2.73) with each 1 SD unit change in the friend network's participation.

Research Question 2: Does the Relation between Friends' and Adolescents' Participation vary by Race/Ethnicity and Age?

Hypothesis 4. We expected that the relation between friends' and adolescents' activities would be stronger for White adolescents than racial/ethnic minority adolescents. This hypothesis was tested with two-way interactions between adolescents' race/ethnicity and their friends' participation in total, sport, art, and school club activities (Table 2). At least one two-way interaction was statistically significant in each model.

One interaction between race/ethnicity and friends' total participation was statistically significant ($p < .01$), namely the interaction between friends' participation and the Black dichotomous variable. The simple slope follow-up analyses revealed that adolescents' and friends' participation were positively related for White adolescents, $z = 2.53$, $p < .001$, but adolescents' and friends' participation were not related for Black adolescents, $z = 0.73$, *ns*.

Two interactions between race/ethnicity and friends' sports participation were statistically significant ($p < .01$). The simple slope analyses revealed that friends' sport participation positively predicted adolescents' corresponding sport participation for White, $z = 4.69$, $p < .001$, and Hispanic adolescents, $z = 2.31$, $p < .05$, but not for Black adolescents, $z = 1.49$, *ns*. The relations were stronger for White adolescents compared to Hispanic and Black adolescents.

Two interactions between race/ethnicity and friends' art participation were statistically significant ($p < .01$). The simple slope analyses suggested that friends' art participation significantly predicted adolescents' art participation for all groups, but this relation was stronger for White adolescents, $z = 6.74$, $p < .001$, compared to Black adolescents, $z = 2.82$, $p < .01$, and bi-racial adolescents, $z = 2.65$, $p < .01$.

Table 3

Predicting Adolescents' Participation in the 31 Specific Activities from Friends' Participation in Those Corresponding Activities

Activity	Path coefficient (SE)	Odds ratio per 1 SD
Sports		
Baseball/softball	2.26(.09)***	1.69
Basketball	2.47(.13)***	1.93
Field hockey	7.11(.96)***	1.43
Football	3.01(.19)***	1.90
Ice hockey	4.26(.50)***	1.36
Soccer	3.91(.18)***	1.99
Swimming	2.66(.23)***	1.40
Tennis	3.74(.19)***	1.62
Track	2.70(.13)***	1.77
Volleyball	3.66(.27)***	1.84
Wrestling	3.34(.21)***	1.45
School clubs		
French club	4.24(.25)***	1.59
German club	5.60(.58)***	1.35
Latin club	6.26(.28)***	1.60
Spanish club	3.59(.25)***	1.82
Book club	4.38(.79)***	1.25
Computer club	2.89(.23)***	1.28
Debate team	4.58(.25)***	1.47
Future Farmers	5.67(.36)***	1.56
History club	5.82(.55)***	1.38
Math club	4.61(.31)***	1.62
Science Club	5.30(.27)***	1.84
Honors society	3.23(.19)***	1.90
Newspaper	3.73(.21)***	1.59
Student council	2.87(.15)***	1.64
Yearbook	2.79(.16)***	1.56
Arts		
Cheerleading/dance	2.80(.17)***	1.63
Drama club	3.88(.18)***	1.91
Band	4.39(.15)***	2.73
Chorus/choir	3.64(.12)***	2.09
Orchestra	5.55(.43)***	1.60

Note. *** $p < .001$.

Three interactions between race/ethnicity and friends' school club participation were statistically significant ($p < .01$). The simple slope analyses suggested that there was a stronger association between friends' and adolescents' school club participation for Whites, $z = 4.47$, $p < .001$, compared to the other groups. It is important to also note that friends' participation was a significant, positive predictor for Hispanics, $z = 2.25$, $p < .05$, and Asians, $z = 2.12$, $p < .05$, but not Blacks, $z = 1.82$, *ns*.

Hypothesis 5. Three of the four interactions between friends' participation and adolescents' age were statistically significant ($p < .01$). Simple slope analyses revealed that the relation between friends' and adolescents' participation was positive for all adolescents, but stronger for adolescents at the mean age or older compared to younger adolescents. This pattern emerged for total activity participation, sport participation, and art participation (*total activities*: younger, $z = 3.15$, $p < .01$; mean age, $z = 8.00$, $p < .001$; older: $z = 4.95$, $p < .001$; *sports*: younger, $z = 3.57$,

$p < .001$; mean age, $z = 4.69$, $p < .001$; older: $z = 4.28$, $p < .001$; arts: younger, $z = 5.13$, $p < .001$; mean age, $z = 6.73$, $p < .001$; older: $z = 6.54$, $p < .001$). The relations between friends' and adolescents' school club participation did not significantly vary by age at the $p < .01$ level.

Discussion

The purpose of this study was to examine whether friends' school-based extracurricular activities predicted adolescents' school-based extracurricular activities. The findings from this study suggest that adolescents' friendships and participation in extracurricular activities are connected. Friends' participation predicted adolescents' participation for the total number of activities, the three main types of activities (i.e., sports, art, school clubs), and the 31 specific activities. Although the association was strongest for White adolescents and older adolescents, friends' participation and adolescents' participation were related for adolescents of all races/ethnicities except Blacks, and for adolescents of all ages.

The finding that adolescents participate in similar activities as their friends aligns with basic psychological needs theory by Deci and Ryan (2011). It is theorized that people have three basic needs: competence, autonomy, and relatedness. In a recent paper, Deci and Ryan noted that "the basic needs provide the energy and direction for people to engage in activities that satisfy those needs" (p. 19). In other words, one function of the basic needs is that, to the extent possible, people select activities that meet those needs. The basic need of relatedness, which is feeling a sense of belonging and connection to the group, is relevant in explaining the results. Having friends who participate in the same extracurricular activity is likely to meet adolescents' need for relatedness in activities. The significant association between friends' and adolescents' activity participation emerged across all activities, most racial/ethnic groups, and ages. The consistency of this finding aligns with Deci and Ryan's (2011) assertion that everyone has the same basic needs.

Although we used friends' activities to predict adolescents' activities, it is likely that the direction of influence is bidirectional. Scholars who examine peer homophily theorize that the behavioral similarities between friends are the result of selecting to be friends with peers who are similar and socializing each other over time to become more similar (Kandel, 1978). In the case of extracurricular activity participation, the same two processes likely underlie the similarities in friends' activities. First, adolescents are likely to select to participate in activities with their existing friends. Second, adolescents are likely to develop new friendships within activity settings. Each of these processes has applied implications which are specified below.

These findings suggest that friends are important for recruitment and retention. Studies have shown that spending time with friends is one of the main reasons youth attend activities (Hirsch, 2005; Patrick et al., 1999). If adolescents are likely to select activities to be with existing friends, activity leaders should consider recruiting friendship dyads or groups into activities. Having events where participants bring friends to try out an activity might also be a strategy to bolster enrollment while also supporting adolescents' friendships. Leaders might consider how to support friendships within the activity to promote retention. Having time

set aside for group-building exercises or having friends work together on activity-related tasks are strategies leaders can use to support adolescents' basic need for relatedness.

Extracurricular activities may also be a setting to help students develop new friendships with other participants. Extracurricular activities are organized settings that bring together a group of adolescents with similar interests on a regular basis. General proximity of adolescents to other adolescents and their shared interest in an activity are likely to promote the development of new friendships among participants (Kandel, 1978). Research suggests that organized activities are particularly amenable to supporting friendships because this setting provides adolescents a safe environment where interactions among peers are often encouraged (Loder & Hirsch, 2003). Indeed, adolescents have reported that they develop friendships with peers that never would have emerged had they not co-participated in an activity (Watkins, Larson, & Sullivan, 2007). In other words, several studies suggest that participating in organized activities is associated with increased social capital for adolescents (Coleman, 1988). Extracurricular activities might play a particularly important role for students with limited social capital. Crosnoe (2011) found that having a school-based friend was important for high school students' school belonging, which in turn predicted students' academic success. School-based extracurricular activities helped promote friendships and school belonging for students who did not have friends.

The Role of Adolescents' Race/Ethnicity and Age

The second purpose of this study was to describe if the relations between friends' and adolescents' activities varied based on adolescents' race/ethnicity and age. Not only do the moderating roles of adolescents' race/ethnicity and age have theoretical implications, they also have critical applied implications. Documenting whether the association between adolescents' and their friends' activity participation is stronger for particular subgroups is instrumental to inform whether activity leaders should tailor their efforts for recruitment and retention.

Race/Ethnicity. Although friends' participation often predicted adolescents' participation for adolescents of every racial/ethnic group except Blacks, the relations were stronger for White adolescents than Hispanic and Black adolescents. Ecodevelopmental theory provides insight into why the findings might vary by racial/ethnic group (Szapocznik & Coatsworth, 1999). This theory is based on bioecological theory and includes the same systems (e.g., microsystem, macrosystem; Bronfenbrenner & Morris, 2006). Ecodevelopmental theory differs from ecological theory in that ecodevelopmental theory emphasizes the factors that promote the development of racial/ethnic minority youth. The theory asserts that family is a particularly important microsystem and that cultural values and practices are important aspects of the macrosystem in explaining development. According to ecodevelopmental theory, the relations between friends' and adolescents' activity participation may have varied across racial/ethnic groups because of differences in adolescents' family and cultural values and practices.

Friends' activities were not strong predictors of the activities of Black adolescents. One possible reason is that the family could continue to play a larger role in activity participation decisions of Black adolescents compared to White

adolescents. Black parents often place more restrictions on their youth than do White parents (e.g., Mandara, 2006; Simpkins et al., 2009). In addition, researchers posit that racial/ethnic minority families have stronger family cohesion (e.g., spend more time together, stronger reliance on families) than White families (e.g., Garcia-Coll, Meyer, & Brillon, 1995). Higher restrictions and stronger family cohesion could mean that families continue to have a large impact on Black adolescents' activities after school, leaving less room for friends to have an influence.

Ecodevelopmental theory also emphasizes the role of cultural values and practices (Szapocznik & Coatsworth, 1999). Although relationships with friends are important in many cultures, friends' influence on adolescents' decisions could vary by culture (Updegraff, McHale, Whiteman, Thayer, & Crouter, 2006). For example, familism, or the value of family, is a core cultural value of many Hispanic cultures (Cauce & Domenech-Rodriguez, 2002). Familism could alter the extent to which adolescents' friends influence their decisions on time use after school. An adolescent who has high familism could be more influenced by family members and less influenced by friends than an adolescent who has low familism. Scholars have urged researchers to examine specific cultural values and practices rather than proxies, such as race/ethnicity or generation status (Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002).

Age. Our findings suggest that although friends' activities predicted adolescents' activities for all age groups, the relation was stronger for older adolescents than younger adolescents. This supports the theoretical importance of understanding development across the chronosystem (Bronfenbrenner & Morris, 2006). One of the main mechanisms by which age could alter the relation between friends' and adolescents' activities is through autonomy. Autonomy is one of the three basic needs outlined in Deci and Ryan's (2011) basic psychological needs theory. Furthermore, basic psychological needs theory and Smetana and colleagues' work on decision-making suggest that youths' need for autonomy tends to increase with age (Deci & Ryan, 2011; Smetana et al., 2005). Older adolescents who are more likely to make decisions on their own concerning which extracurricular activity they want to attend might seek input from friends, whereas younger adolescents might make this decision primarily with their parents.

Parents play an important managerial role in children's after-school lives by establishing rules, selecting settings for their children, and providing necessary resources for their activity participation (Parke et al., 2003). Although parents manage their children's after-school lives from childhood through adolescence, research suggests that it is normative for parents' managerial strategies to shift from more direct strategies to distal ones. This shift typically occurs in middle childhood to early adolescence as children develop the necessary skills to navigate these interactions on their own. For example, parents' direct involvement in their children's peer interactions was associated with *more* prosocial behavior in early childhood, but with *less* prosocial behavior in middle childhood (Bhavnagri & Parke, 1991). The authors speculated that parents' direct involvement in young children's play taught children prosocial relationship skills. As children acquired these relationship skills, parents gradually decreased their direct involvement in children's play. Similar shifts from direct to distal strategies are likely to emerge in

parents' management of youths' participation in organized activities. Parents may shift from selecting youths' activities in childhood to providing approval and necessary resources for activities that youth choose in adolescence. Understanding the evolving role of parents across development will help practitioners tailor their recruitment and retention strategies for particular age groups.

It is also important to consider the current findings on age in light of age differences in activity participation. As adolescents get older, they tend to become more specialized in their activity participation (e.g., decreased activity breadth; Denault & Poulin, 2009) and participate in activities that increasingly correspond to their identity (Eccles & Barber, 1999). The stronger relation between friends' and adolescents' activities could reflect adolescents' specialization in activities and a stronger integration of adolescents' activities, identities, and friendships. Because this is a cross-sectional study, the age trends may also reflect the influence of activity duration. Activity duration is defined as the number of years someone participates in an activity (Bohnert, Fredricks, & Randall, 2010). The change in the relations between adolescents' and friends' activities may not simply be the result of development, but also the fact that older students have had more years to participate in activities at that school than younger students. For example, seniors in high school have had four years to attend the school, participate at activities, and develop friendships with peers at activities, whereas freshmen in high school have just started. Future research will need to test whether the stronger relation between adolescents' and friends' activities is the result of developmental processes or duration in participation.

Limitations and Future Directions

The current study also needs to be replicated to address two limitations. First, the data were collected in the mid-1990s. Although the findings do need to be replicated with more recent data, Add Health had some of the best data to address our research questions. Add Health researchers collected data from students at over 100 schools. It is the only existing dataset of this size that includes self-reported extracurricular activity data of friends and friendship nominations. Second, the activity question measured adolescents' current participation and planned participation over the school year. Although research using the theory of planned behavior indicates that intentions to participate in leisure activities were highly correlated with involvement a year later (Ajzen & Driver, 1992), it will be important for researchers to separate actual participation from intentions.

One of the clearest directions for future research is to examine the processes theorized to account for the association between friends' and adolescents' activity participation. There is a long debate in the friendship literature on whether the similarities between friends emerge from selection or socialization (Kandel, 1978). The similarities between friends' activity participation is likely due to both processes. Unfortunately, such questions could not be addressed with Add Health because activity data are only available at Wave I. Longitudinal data is necessary to untangle processes of selection and socialization. An equally important process to further research is to extend these findings that friends predict participation to understand how friends are important to adolescents' joining of an activity and their sustained participation in an activity.

The current study focused on school-based extracurricular activities. The focus on school-based activities could have clouded the findings for particular groups, such as low-income youth (e.g., Simpkins, Ripke, Huston, & Eccles, 2005). Although adolescents are more likely to participate in school-based extracurricular activities than community-based activities (Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999), it is important that future studies examine the full spectrum of leisure activities. Furthermore, if racial/ethnic minority youth often have a high number of community-based friends (DuBois & Hirsch, 1990; Way & Chen, 2000), then community-based activities could be the only option to participate in an organized activity with a sizable number of their friends.

Our findings suggest that the association between friends' and adolescents' activity participation varied across the three types of activities and across specific activities. For example, the odds ratio ranged from 1.25 for book club to 2.73 for band. Although we did not empirically examine this variability, it will be interesting for future research to examine whether friends have a larger influence on adolescents' participation in certain activities over others.

Friends' activity participation was the central predictor in this investigation; however, friends could influence adolescents' activity participation through other mechanisms. For instance, school-based activities often have GPA requirements for participation. Friends' influence on adolescents' GPA or school standing (e.g., skipping class) could impact the adolescents' ability to participate in school-based activities. Likewise, friends' engagement in delinquent behavior, such as drug use, could shift adolescents' interests during the after-school hours. Studies on such topics would provide further information on the direct and indirect mechanisms of friends' influence.

Adolescents' friendships are just one aspect of their peer relationships. Research on peer bullying and aggression aptly show that not all peer interactions are prosocial (Ladd, 2005). Little is known about the extent of peer bullying, aggression, or racism that occurs during organized activities as well as the implications these interactions have on adolescents' participation and engagement in an activity. Dworkin and Larson (2006) note in one of the few articles on this topic that many of the negative experiences adolescents report about activities involve peers. For example, adolescents have reported experiencing negative interactions and exclusionary behavior from peers at their activities. Such negative exchanges are part of peer interactions and must be examined in organized activities in order to achieve a complete picture of peers' influence on activity participation.

One of the unexpected findings was that activity participation was positively associated with higher problem behavior. Similar positive relations have emerged in our analyses on activity participation among the Latino adolescents in the Add Health study (Simpkins, O'Donnell, Delgado, & Becnel, 2011). Typically, participation in organized activities is associated with lower problem behavior (for a review, see Mahoney et al., 2009). One exception is that participation in sports in high school is often associated with higher alcohol use (Eccles & Barber, 1999). Although the current study includes an indicator of general problem behavior and not alcohol use, many of the behaviors in this scale are "normative" behaviors that often increase during adolescence, such as lying to parents and drinking

alcohol. Future research should examine if this is something specific to this scale or the Add Health study.

Conclusion

This investigation provided evidence that adolescents are likely to participate in similar activities as their friends. This relation emerged for all adolescents, but was stronger for Whites compared to Hispanic and Black youth and for older adolescents compared to younger adolescents. Previous research suggests that friends play a role in adolescents' engagement in delinquent behavior during the after-school hours (Dishion et al., 2008; Haynie & Osgood, 2005). This study suggests that friends also play a role in adolescents' engagement in leisure settings that could promote positive youth development during the after-school hours. It is critical for researchers to pinpoint where friends are most influential in adolescents' decisions to join, stay, or drop out of an activity. Supporting adolescents' enrollment and long-term engagement in an activity is vital for adolescents to achieve the full benefits of extracurricular activities (Bohnert et al., 2010). Friends and friendship groups are a potential source for activity recruitment and retention for adolescents of all ages and racial/ethnic groups.

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