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Author :

Sandra Hofferth
University of Maryland

Ui Jeong Moon
Lyndonville State College

www.popcenter.umd.edu

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Sandra L. Hofferth
Department of Family Science
School of Public Health
University of Maryland
College Park, MD 20742
hofferth@umd.edu

Ui Jeong Moon
Lyndonville State College
Lyndonville, VT
ujmoon@gmail.com

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Abstract

Extracurricular activity participation is widely believed to contribute to academic and social achievement, yet many children spend their out-of-school time in unstructured activities such as watching television. Using detailed time diary data from three waves of the Panel Study of Income Dynamics Child Development Supplement, according to their intensity of participation in nine activities this study identified five latent classes of children – sports, electronic games, television, television and visiting, and academic – and then explored predictors of individual patterns across ethnic minority groups. Parental social class and social capital explained differences in activity patterns between Latino and White children, but did not explain differences between African American and White children. Cultural values of working hard, being popular, and thinking for oneself were associated with activity choices within racial-ethnic subgroups, particularly African Americans and Latinos.

Children's extracurricular activity choices matter. Organized activities are characterized by structure, adult supervision, and skill-building. Participation in organized extracurricular activities such as sports, music, and clubs has been linked to greater academic achievement, improved mental health, reduced antisocial problems, less school dropout, greater college attendance, and to having a higher status job as a young adult (Barber, Stone & Eccles, 2005; Feldman & Matjasko, 2005; Fredericks & Eccles, 2006; Fredericks & Simpkins, 2012; Mahoney, 2000). In spite of known benefits to most groups (Marsh & Kleitman, 2002), participation varies across racial and ethnic subgroups. African Americans participate more in sports and less in activities such as scouting than White children and Latinos participate less in organized activities overall (Fredericks & Simpkins, 2012). Because immigration has increased the ethnic heterogeneity of children and youth, with wide variation in culture and SES, continued high levels of participation cannot be assumed. Yet to date ethnic minority youth participation in organized programs has been understudied (Fredericks & Simpkins, 2012).

Although participation in organized programs has been the focus of most research, youth activities do not necessarily need to be organized and structured to be productive. Greater time spent in activities such as studying and reading has been linked to better grades and test scores for U.S. children (Chambers & Schreiber, 2004; Fuligni, 1997; Hofferth & Sandberg, 2001). Social ties across families (social capital) that lead to greater monitoring and control can also support academic success (Coleman, 1988; Valenzuela & Dornbusch, 1994). A greater amount of time spent socializing with nonhousehold members has been linked to higher achievement test scores among school-aged children (Hofferth & Sandberg, 2001); however, too much unstructured time socializing with peers can lead to poor grades, delinquency, and drug use, especially for boys (Osgood, Anderson & Shaffer, 2005). Because unstructured activities

occupy the bulk of children's weekly discretionary time (88%) (Hofferth, 2009), they need to be considered.

Besides the focus primarily on *organized and structured* extracurricular activities, existing research has several other important limitations. First, although it has examined the number of activities in which children participate (Fredericks & Eccles, 2010), it *rarely considers the mix of activities*. Because they vary in commitment and time burden, activities tend to be complementary (Hofferth, Kinney & Dunn, 2009). Most children cannot participate in more than one sport per week, for example, whereas they may participate in a sport and a youth group. The mix of activities may be more important than participation in any one of them. Research suggests that failure to participate in extracurricular activities may be detrimental to youth adjustment but the explanation may lie in what else they are doing (Mahoney & Vest, 2012). Therefore, it is important to examine the mix of structured and unstructured activities in which children engage.

Second, very little research has examined the *amount of time spent or intensity of participation in activities*. Some children become highly specialized and skilled in a single sport or musical instrument whereas other children dabble in a variety of activities without commitment to or specialization in any one. Both theory and research suggest that one of the important benefits – increased skill in a particular activity – is realized by greater commitment (Holland & Andre, 1987; Larson, 2000), but very little research has incorporated this dimension.

Finally, previous treatments of adolescent activity have ignored the fact that *children's activities have changed dramatically over the past decades whereas activity categories used by researchers have not* (Eccles & Barber, 1999; Barber et al., 2005). From fewer than 3 hours a week for 10-12 year olds in 1997, time with electronic devices increased to 6 hours for 10-12

year olds today; similarly, it increased from 7 hours for 13-18 year olds in 1997 to 10 hours per week on electronic devices for 13-18 year olds today (Hofferth & Moon, 2011). Television viewing amounts to 13-15 additional hours per week (Hofferth, 2010). Not only have activities changed, but computing and video game play have become avenues to later success; those who develop substantial computing expertise in high school may further specialize in college and their later career or leapfrog across college entirely to establish their own businesses (e.g., Bill Gates, Steve Jobs). Recent research suggests that children who spend more time playing computer and other electronic games have higher reading and math test scores (Hofferth, 2010; Hofferth & Moon, 2011). Yet excessive electronic game play is still suspected as a risk for the development of social and behavioral problems. No previous studies have taken the use of new media into account in examining profiles of children's activities.

This paper takes a person-centered approach to identify factors linked to participation patterns of White, Black, Latino, and Asian children in structured and unstructured activities during the preadolescent and adolescent years. It first explores whether categories of individual leisure time relevant to later achievement can be identified through examining the pattern of participation children of different racial-ethnic backgrounds exhibit across a wide set of activities. Second, it examines what explains such differences. This paper examines three important origins of child activities: 1) differences in parental financial resources and human capital; 2) differences in the social capital families have, including links to school and to other families; and 3) differences in culture, originating from broad differences in parental childrearing values and expectations for children. Gender and age are considered throughout.

Racial-Ethnic Differences in Activity Participation

Interpersonal obligation and family stability are core strengths of Latino families (Fuligni, Tseng & Lam, 1999; Rueschenberg & Buriel, 1989) and Latinos may attribute success to personal connections, personalism. Although the Latino population in the U.S. is heterogeneous, most research has focused upon the largest group, Mexican-American families. Mexican immigrants rated social skills as more important to school readiness than cognitive skills (Okagaki & Sternberg, 1993). Latino parents reported that getting along well with others was more important than did White parents and they also placed greater emphasis on doing well in athletics (Julian, McKenry & McKelvey, 1994). As a result, Latino children may spend more time visiting or playing sports than studying and they may also engage in household chores (Fuligni et al., 1999). Studies have found high levels of television viewing among Latino children, associated with greater English fluency (Hofferth & Moon, 2011; Fisch & Truglio, 2001).

Asian American parents are said to attribute success to hard work rather than ability (Stevenson, 1992). They place the greatest emphasis on doing well in school and they have higher expectations for their children's achievement than White or Latino parents (Julian et al., 1994; Okagaki & Frensch, 1998). As a result, Asian American parents participate in their children's schooling at home, including helping children with homework, providing extra tutoring, and sending them to weekend classes (Schneider & Lee, 1990; Stevenson, 1992). They are less likely than White parents to support children's participation in extracurricular activities or to become involved with the school (Sy & Schulenberg, 2005)

African American fathers emphasize getting along well with others (Julian et al., 1994). Social and community activism and volunteerism may result from strong church influence

(McDade, 1995) and strong family and kin networks (Dixon, Graber & Brooks-Gunn, 2008). In middle childhood African American youth tend to participate in sports and church activities but are less likely to participate in youth activities such as scouting and student government (Fredericks & Simpkins, 2012). We also know that African American children spend less time on the computer and more time watching television than White children (Hofferth & Moon, 2011).

We argue that there are three plausible explanations for differences in activity participation across racial-ethnic groups: differences in social class, differences in social capital, and differences in culture.

Social Class: Human and Financial Resources

Children's participation in activities is costly to families; thus, family financial resources constrain choice. Consistent with resource theory (Haveman & Wolfe, 1994), African American and Hispanic families, who experience a greater degree of economic disadvantage, are less able to afford to participate. Activities through the public schools may reduce the SES gradient in participation in extracurricular activities just as they do in achievement (Raudenbush & Bryk, 2002). Once children develop sufficient skill to join private sports teams and attend regional meets, however, costs of fees, travel, and equipment may be prohibitive (Covay & Carbonaro, 2010). Lower income families may have less access to activities because of neighborhood economic segregation and this may be more problematic in urban than rural areas. Large families also face a greater burden at the same income level.

Parental education is also an important aspect of social class. Ideas about how children succeed are influenced by education; access to academic resources and to successful role models will be greater for children whose parents are highly educated. Parents with more education will

also be better able to assist their child navigate the school setting, communicate with teachers and other authority figures, and access appropriate services when needed, what Lareau called "concerted cultivation" (Lareau, 2003). Minority parents often have low levels of education.

Social Capital

Activities take time. Social relationships or social capital are a resource that individuals can draw upon when families are constrained by lack of flexible employment, a partner, or extended family support for child activities (Hofferth, Boisjoly & Duncan, 1999). A child has access to more adult social capital in two-parent than in single-parent families (Coleman, 1988; Valenzuela & Dornbusch, 1994). Extrafamilial ties also form social capital, with families who are more embedded in networks of social exchanges outside the household having access to more resources than those who are not. Although such ties expand pressures for participation, families with social ties may also be able to pool resources for transportation and babysitting. Friends' positive characteristics mediate the effects of breadth of activities on adolescent adjustment (Simpkins, Eccles & Becnel, 2008). However, time spent socializing with friends has been associated with poorer grades (Posner & Vandell, 1994).

Culture

Differences in culture, that is, *values and beliefs* across groups, are believed to influence children's activities and later success. This is because educational expectations, beliefs, and attributions about children are likely to influence parenting practices (Dumka, Gonzales, Bonds & Millsap. R.E., 2009; Hess & Holloway, 1984; Simpkins, Fredericks & Eccles, 2012). Seminal research focused on the degree to which parents emphasized the development of autonomy (self-direction, thinking for oneself) versus conformity (obedience) in children (Schaefer & Edgerton,

1985), with autonomy positively related to school competence. Second, whether families

attribute performance success to hard work or to ability has been a focus of research in child

achievement (Stevenson, 1992). The value of getting along with others and helping behavior

may also vary across families and across generations, particularly the sense of interpersonal

obligations across family members (Rumbaut, 1996; Sabogal, Marin, Otero-Sabogal, Marin &

Perez-Stable, 1987). This value may lead to participation in activities such as church groups and

civic organizations. Although ethnic groups are often characterized as differing in cultural

elements, one study found that beliefs did not distinguish children's achievement across ethnic

groups, whereas they did within ethnic group (Okagaki & Frensch, 1998). This fact likely

reflects substantial heterogeneity within the broad ethnic categories described below.

Latino parenting objectives and values are characterized by familism (strong family ties,

loyalty and commitment to the family, high family cohesion) and respect (to elders) (Halgunseth,

Ispa & Rudy, 2006; Roosa, Morgan-Lopez, Cree & Specter, 2002). Mexican American fathers

have been shown to place greater emphasis on child obedience than Anglo parents (Julian et al.,

1994; Roosa et al., 2002); however, research also documents less control and more shared

responsibility for their children than White fathers (Hofferth, 2003). Asian cultures stress

respect for elders and commitment to the group over the individual. They are less likely to place

importance on being independent compared with other groups (Julian et al., 1994). Because of

their experience of racial segregation and discrimination, African Americans tend to focus on

fostering skills for coping with hostile environments (Furstenberg, Cook, Eccles, Elder &

Sameroff, 1999; Julian et al., 1994; McDade, 1995; Suizzo, Robinson & Pahlke, 2008). As a

result, parenting may be more authoritarian; African American parents have been found to place

greater importance on obedience and less on autonomy than Caucasian parents (Julian et al., 1994), and to use greater parental control (Hofferth, 2003).

Parental Nativity Status. Differences in attitudes and values across groups may be linked to parental immigration status. There is evidence that immigrants comprise the most highly motivated individuals and families (Akresh & Frank, 2008; Feliciano, 2005). Parents were optimistic about their chances prior to leaving their home country and remain so in the U.S. (Kao & Tienda, 1995). Parents communicate these expectations to children.

Urban residence and Study Year. Attitudes and values of residents in large metropolitan areas, smaller cities, small towns, and rural areas are likely to differ. We adjust for such differences as well as the timing of data collection because of increased electronic media use.

Person-Centered Studies of Activity Participation

Person-centered studies assume that what matters is the entire set of activity choices children and families make. There are likely to be positive associations across subsets of activities, forming a lifestyle choice (Cockerham, 2005). Parents articulate explicit goals in the selection of activities: gaining a skill, learning teamwork, winning a college scholarship, or just keeping occupied (Hofferth, 2009). It is the lifestyle that parents select and not the specific activity because different activities may meet the same ultimate objective. Activities such as participation in sports promote development by increasing self-esteem and self-competence, increasing ties to school, promoting the development of supportive networks of peers and adults and increasing social capital, and supporting academic achievement (Feldman & Matjasko, 2005; Fredericks & Simpkins, 2012; Fredericks & Eccles, 2010). However, children may achieve the same goals by simply directly investing in academic achievement – reading and studying. In

addition, today children have the very attractive option of playing video and computer games. A comparison of contemporary activity patterns during the school years is, indeed, needed.

Although the literature on participation in extracurricular activities is extensive, only a few investigators have taken a person-centered approach; In general, the limitations of previous research are that previous investigators have not had sufficiently fine-grained questions to distinguish intensity of activities over a week. Many of children's activities have a weekly rhythm. Using cluster analysis, Bartko & Eccles, 2003, and Morris & Kalil 2006 analyzed questions about a wide range of activities (9-11 structured and unstructured activities) over the previous month. Because participation codes were constrained to a simple categorization, such as 1= less than once a month to 6= every day, activities such as television viewing, reading, and studying that occurred daily could not be distinguished. The advantage of the present study is that more variation in intensity can be captured using a daily activity diary, particularly for those activities that occur regularly and frequently.

Several studies have examined breadth as a measure of participation. One found that breadth of participation was more important than a dichotomous participation measure or a measure of the intensity of participation in one extracurricular activity in predicting successful development (Busseri & Rose-Krasnor, 2010). Both Simpkins and colleagues (Simpkins et al., 2008) and Busseri and Rose-Krasnor included six activities, and Fredericks and Eccles (Fredericks & Eccles, 2010) included seven activities. However, except for the latter, which added unspecified "hobbies" to the list, these studies only included measures of structured extracurricular activities. Most notably, they did not include television viewing, the activity that takes up the largest proportion of children's discretionary time (Hofferth, 2010).

Marsh and Kleitman (Marsh & Kleitman, 2002) raised the possibility that, instead of positively clustering, multiple activities may interfere with each other in predicting positive development.   The primary concern is that more time spent in extracurricular activities such as sports may result in less time spent studying and reading. Hofferth (Hofferth, 2010) showed that time spent playing computer games and time spent playing sports were negatively associated. Television viewing time was also negatively associated with sports time. But sports time was not associated with study time. On a short-term basis there is likely to be a negative association between time in one type of activity and that in another, because total time is fixed. This provides additional justification for constructing groups of correlated activities or lifestyle choices rather than treating them as though they are independent.

This paper focuses on the activities in which children engage during their nonschool hours– time spent in regular and frequent activities that have been shown in prior research to be linked positively or negatively with school success and success in later life. We examine how activity choices reflect 1) socioeconomic resources, 2) family social capital, and 3) parental expectations, values, and beliefs (Denault & Poulin, 2009; Ramey & Rose-Krasnor, 2012).

Objectives and Hypotheses

The behavior of interest in this research is the amount of time White, African American, Latino, and Asian children spend in activities relevant to the broad goals of student achievement and later success. Children's activities form a set of lifestyle options from which families choose, given their goals, skills, and resources (Cockerham, 2005). Our underlying theory is that socioeconomic, social capital and cultural differences affect the importance or priority families place on academic activities and other routes to adult success, and that these priorities influence

children's pattern of participation in extracurricular activities (Simpkins et al., 2012). This paper specifically focuses on majority-minority ethnic differences in children's activity patterns and whether and how parental socioeconomic status, social capital, and cultural beliefs and values influence the pattern of activities. Our hypotheses are:

1. African American and Latino children will spend less time than White children in academically-focused patterns and more time in social and sports-focused patterns.

2. Children of parents who have a higher level of education or income will spend more time in academically focused activity patterns and less time in television-focused patterns.

3. Children whose parents know their friends will spend more time in socially connected activity patterns such as sports and visiting. Connection with school will be associated with children spending more time in academically focused patterns.

4. Including parental income and education and social capital will reduce most racial-ethnic differences in activity patterns.

5. Within racial-ethnic groups, parenting beliefs and values will be associated with children's activity patterns. In particular, beliefs about working hard will be associated with spending more time in academically focused patterns and less in electronic gaming and television patterns; beliefs about getting along with others will be associated with greater time spent in sports and social activity patterns.

Method

Panel Study of Income Dynamics, Child Development Supplement

The current study used data from the Panel Study of Income Dynamics (PSID), a longitudinal ongoing survey that has gathered detailed socioeconomic and demographic data from individuals since 1968. The PSID is a representative sample of U.S. families when weights are applied (Fitzgerald, Gottschalk & Moffitt, 1998). In 1997, the PSID added a refresher sample of 441 immigrant families. To be eligible, either the head/wife or their parents had to have arrived in the United States after 1968, when the first wave of the PSID was collected (Panel Study of Income Dynamics 1999). Also in 1997, the PSID inaugurated a Child Development Supplement (CDS), which was administered to the parents of children aged 0-12 and up to two of their children were assessed using standardized assessments. Interviews were conducted during the school year in the preferred language of the parent respondent and assessments were conducted in either English or Spanish. The first wave of the CDS (CDS I) included 3,563 children from 2,380 families, with a response rate of 88%. These same families were recontacted approximately 5 years later. In the second wave (CDS II), conducted in 2002 and 2003, 2,907 out of 3,191 eligible children and adolescents aged 5-18 completed interviews, a response rate of 91%. The third wave (CDS III) included 1,506 children aged 10-18 who were still living at home and had not yet completed high school; the response rate was 96%.

In the PSID-CDS, detailed data on the amount of time spent in daily activities are available for children of all ages. This study focuses upon children aged 10-18 who provided both CDS and Time Diary data. We pooled CDS I data from 740 children ages 10 to 12; CDS II data from 1,183 children who were under 10 at CDS I and had become 10 or older by CDS II; and CDS III data from 893 children who were either under 10 at CDS I but were missing data at

CDS II, or who were under 10 at CDS II and had become 10 or older by the time CDS III data were gathered. Pooling across the three waves maximized the number of children aged 10 to 18 whom we were able to include, and also reduced potential selection bias. After excluding children whose primary caregiver was listed as someone other than the biological, step-, or adoptive mother or father, the sample consisted of 2,784 children.

Measures

Children's Activity Time

In each year in which the CDS was administered, the study collected time diaries for two days – a randomly chosen week day and a randomly chosen weekend day. Completed by a parent and child together in the case of older children and adolescents, the diary is a 24-hour record of children's activities. Beginning at midnight it obtains the start- and end-times for these activities, people who engaged in the activity with the child, and the location of the activities. Excluding secondary activities, the total hours for each time diary amounted to 24.

Study outcomes were weekly hours spent in ten activities: computer game play, video game play, television viewing, reading, studying, household chores, visiting, sports participation, playing music, and youth organizations. These 10 common activities occupy 73% of children's 48 weekly discretionary hours (Hofferth, 2009; Hofferth, 2010). Computer game time was drawn from time spent on a set of computer-related activities that occurred at home. Other computer-related activities (e.g., web surfing, email, and shopping) accounted for little time spent (Hofferth & Moon, 2011). Electronic video game time included handheld game devices such as Game Boy and screen game play, in which a game console was connected to a television. Children's reading time included time spent reading books, newspapers, magazines, or online material, as long as this reading was for pleasure. Study time included time spent studying and

on homework, with or without a computer. Time spent on household chores included indoor activities such as setting the table, doing dishes, or making beds, and outdoor chores such as weeding or trash cleanup. Visiting time was defined as socializing with people other than the child's own household members, both at home and at places other than the child's home. Time spent on sports included lessons, practices, informal pickup games, and structured sports matches such as football, baseball, and gymnastics in which the child participated. Music included time spent playing, practicing, or taking lessons in voice or a musical instrument. Time spent volunteering or participating in clubs, helping, or civic organizations was categorized as youth organization time. To calculate the total hours spent per week on each activity, the total weekday time was multiplied by 5, and added to the total weekend time multiplied by 2.

Social Class

Social class (family socioeconomic status or SES) included parental education and family income relative to the poverty line. Except in the few single-father families, the mother's education was used as the indicator of parental education. Children of parents who had completed high school but no college and children of parents with some college education or more were compared to children of parents who had less than a high school education. The ratio of income to poverty was created by dividing total family income by the poverty line for a family of that size in that year. A control for the number of children in the household was also included.

Social Capital

Three measures of social capital were included: intrafamilial, extrafamilial, and school: From family structure and parental employment, four categories of intrafamilial capital were created: (1) two working parents, (2) one working parent in a two-parent family, (3) no working parent in a two-parent family, and (4) a single parent (working or not). Each was coded 1 = yes

and 0 = no. The extrafamilial measure of social capital is how many of the child's close friends

the parent knows by sight and first and last name, coded 1 = none of them to 5 = all of them.

This was asked in all three waves of the PSID CDS. In 2002-3 and 2007-8 parents were also

asked how many of the parents of the child's close friends they know. Knowing the child's

friends is highly correlated ($r = .75$) with knowing the child's friends' parents; we use the

former.

The last measure is that of school involvement. In all three waves the parent was asked

how many times during the school year they participated in 8 types of activities at the child's

school, such as volunteered at the child's school, had a formal or informal conversation with the

child's teacher, principal, or school counselor, attended a school event, and attended a PTA

meeting, coded as 0 = not at all, 1 = once, and 2 = more than once.

Culture

Values. Based upon items drawn from research by Duane Alwin (Alwin, 2001), the

parent was asked: If you had to choose, which item on this list would you pick as the most

important for a child to learn to prepare him or her for life: To obey, to be well-liked or popular,

to think for himself or herself, to work hard, or to help others when they need help? Five dummy

variables for first choice, coded 1 = yes and 0 = no, were created.   The omitted category was the

belief that to obey was most important. Each represents a types of value that has been reported to

characterize different groups: natural growth (Lareau, 2003), personalism (Roosa et al., 2002),

American individualism and concerted cultivation (Lareau, 2003), hard work over innate

endowments (Stevenson, 1992), and familism and voluntarism (Roosa et al., 2002).

Expectations for Child's Schooling. The child's parent was asked how much schooling

she expected that the child would complete. Responses included high school graduation, some

college, college graduation, and graduate or professional degree. Because the majority expected

a 4-year college degree, expectations were coded into two dummy variables: (1) obtain an

advanced degree beyond college and (2) complete four years of college, each coded 1 = yes and

0 = no. The omitted category is (3) complete some college or less.

Racial-Ethnic Minority Status . Dummy variables were created for each ethnic minority

group, and in this study African American, Latino, Asian American, and other non-European

children were compared to those of European background (White). Ethnic background was

determined according to the child's race-ethnicity reported by the primary caregiver. If that

information was not available, ethnicity was determined by information on the household head.

In two cases there was a discrepancy between the ethnicity of a parent and her/his child; we used

the parent's information because parental origin was most relevant to cultural values.

Parental Nativity. Parental nativity (immigrant or not) was determined by questions that

asked where each child, their parents, and their grandparents was born. Children with an

immigrant background were those born to at least one foreign-born parent. We do not

distinguish between children born in or outside the U.S.; our small sample of foreign-born

children arrived before age 12 and in most respects are like generation 2.

Urban Residence and Survey Year. The residence was categorized into five dummy

variables based on the population in the area: central city, metropolitan, urban, small town, and

rural. Additionally, dummy variables were included for whether the family and child information

was gathered in 2002-3 or 2007-8 compared with 1997.

Background Variables

Several key individual characteristics that might influence the child's activity choices were included in all analyses. Children's ages were grouped into three categories: 10-11, 12-14, and 15-18. Child gender was coded 0 = boy and 1 = girl.

Analytic Plan

We conducted a latent class analysis of children's activity time that categorizes children into activity groups or life style patterns. Latent class analysis uses discrete categories rather than the continuous intensity measures used in cluster analysis. Not all children participated in some activities, at least on the days in the week selected for the diaries. Nonparticipation tends to shape our inferences because, in the population, average time is a function of time spent by participants and the proportion who participate. For example, only 10 percent participated in musical activities and the time spent was also low, producing an average time of zero.

Dichotomizing based on participation alone is also not very informative. We wanted to characterize children not just by whether or not they participated but whether they specialized in a particular activity, such as a sport or musical instrument. Research suggests that the consequences of participation may accrue to those who spend more time in the activity (Holland & Andre, 1987). Consequently, after examining distributions we divided time in each of the activities into three categories: no participation, low participation (below the median amount of time of those who participated), and high participation (median or above). This appeared to distinguish high versus low involvement with sufficient sample sizes in each category. Because of the small number who played either video or computer games, we combined these two activities into an "electronic games" category, resulting in 9 rather than 10 activities. All of our analyses showed differences in the types of activities in which boys and girls engage and the

amounts of time spent; we constrained the latent activity groups to be similar but allowed the probability of being in each group to differ by gender, with age as a covariate.

Based upon the amount of time spent in all nine of these activities in the previous week, latent class analysis using Proc LCA in SAS 9.2 was used to group children into 5 activity patterns that characterize children ranging in age from 10 to age 18, with adjustment for both age and gender (see Appendix 1). Each person was assigned a probability of being in each pattern. After examining means of background variables and activities by race and ethnicity, we then regressed the probability of being classified in each of the 5 activity patterns onto background characteristics of their families – race and ethnicity, socioeconomic status (class), social capital of their parents, and the cultural values of their family as well as nativity. Finally, we examine predictors of activity patterns separately for Whites, Blacks, and Hispanics.

Results

Descriptive Statistics

The PSID-CDS sample consisted of 2,784 children between ages 10 and 18 (Table 1). Of the full sample, 64.1% were White, 15.1% African American, 13.6% Latino, 3.3% Asian, and 3.9% were of other racial-ethnic backgrounds. The children are primarily preadolescents and early adolescents. One-third (37.2%) were 10-11, half (52.1%) were 12 to 14, and 10.6% were 15-18; the average was 12.31 years. Half were boys and half were girls.

Activities. Table 1, lower panel, shows the mean times in children's activities for the full sample and by race-ethnicity. African American children averaged more hours (3.39) and Asian children fewer (1.47) hours playing video games compared to White children (2.58 hours). African American children spent fewer hours playing computer games (.45) than did White children (1.35). Television viewing was highest for African American children, who averaged

almost 17 hours per week, compared with 13.39 among White children. Reading time was lower

for African American (0.61 hours) and Latino children (0.79 hours) compared with 1.35 hours

for White children.   Asian American children spent substantial weekly time studying. Asian

children spent significantly more time studying (6.32 hours) compared with African American

children's average of 3.77 hours per week and White children's average of 4.26 hours. White

children's household work time averaged about 3 hours per week; African Americans (2.46) and

children of other minority ethnicities (2.18) spent less time in chores.

White children averaged 2.39 hours per week visiting or hanging out with friends

whereas Asian children spent less than an hour per week (0.89) doing so. Sports time was

similar for African Americans (3.76 hours) and Whites (4.19 hours), but Latinos (3.23) and other

minority ethnic groups (3.11) spent less time, and Asian children averaged only 1.46 hours.

Music lessons were the least frequent activity category, averaging 0.44 hours for White children.

African American children spent significantly less time taking music lessons (0.06). The amount

of time White children spent in youth organizations averaged about an hour per week. Even so,

Latinos spent half the time of Whites (0.54 hours) participating in such organizations.

Class. Table 2 shows the means and proportions of family background variables for the

full CDS sample and for racial-ethnic groups. Sixty percent of White children's parents had

completed some college or more schooling, 30.6% had completed a high school degree, and

8.8% had completed less than high school. African American, Latino, and other racial-ethnic

origin children were less likely to have a parent who had completed some college or more.

Latino families had the least educated parents; almost two thirds (63.7%) had completed less

than a high school education, 19.4% had completed high school, and only 16.9% had completed

some college. Family income relative to the poverty line averaged 3.83. African American and

Latino families had lower incomes, about twice the ratio of income to poverty, whereas White families' incomes averaged almost 5 times the poverty line.

Social Capital. Three-quarters of children lived with two parents and one-quarter (24.2%) lived with one parent. In 60% of two-parent families both parents were employed, whereas in only a small fraction of such families was neither parent employed. Family structures differed dramatically across racial-ethnic groups. Almost two-thirds (62.6%) of African American children and one-third (35.1%) of children in other racial-ethnic groups lived with a single parent compared with only 15.6% of White children. A higher proportion of White families (55.8%) were two-working-parent families compared to African American (19.2%), Latino (36%), and Asian (30.5%) families. White families had 2.31, whereas Latino families averaged 3 children.

White parents scored 14.71 out of 24 on a scale of parent involvement with their child's school. African American parents averaged 14.14, Latino parents 13.08, and Asian parents 11.74, significantly less than White parents. Overall, parents scored 3.84 on a scale from 1- 5 of how many of their child's friends they knew. Compared to White parents, who scored 4.15, African American, Latino, and Asian parents scored about 1 point lower; they knew about half of their child's friends, compared to White parents who knew three-quarters of them.

Culture. Of the full sample, 16.4% of families had a parent who was not born in the United States but this obscures dramatic differences across groups. Few White parents and only 4.9% of African American parents were born outside the U.S., whereas 82.3% of Latino and 98.3% of Asian families had at least one foreign-born parent.

Parental expectations were high: 68.1% of parents expected their child to complete some college or a 4-year degree and 14.2% expected an advanced degree. Again, there were substantial racial-ethnic differences. Whereas 72.5% of Whites expected their child to obtain at

least some college and 14.4% expected an advanced degree, only 55.0% of African Americans

expected some college and 8.4% expected an advanced degree. Latino expectations did not

differ from those of Whites. Asian Americans had the highest expectations: 58.5% expected

their child to complete at least some college and 38.1% expected an advanced degree.

In ranking five parenting values, the majority of whites (62.7%) responded that to "think

for oneself" was the most important. Think for oneself was also the first choice for African

Americans (49.8%), Latinos (35.5%), and others (66.9%), but not Asians (21.8%).   Work hard

was second (17.1%) for Whites. For Whites, to help others was third (12.2%) and obey was

fourth (7.9%).   Obey was the second choice for African Americans (24.1%) and Latinos

(28.4%), with work hard third (16.0% and 14.6%, respectively). To be well-liked or popular was

unlikely to be mentioned by Whites (0.1%), but popularity was mentioned by 1% of African

Americans and by a sizeable fraction of Latino (8.5%), and other racial-ethnic origin parents

(5.5%). Asian parents' attitudes differed the most from other groups. For them, work hard was

the top choice (44.4%), with think for oneself second (21.8%) and obey (16.1%) third.   Help

others came in fourth for all nonwhite groups except "other" ethnicity, where it was fifth.

One quarter (25.7%) of the sample lived in the central city, 46.2% lived in a metropolitan

area but not the central city, and one quarter (24.5%) lived in an urban area or small town. Only

3.6% were rural. Compared to Whites, minority families were more likely to live in the central

city and less likely to live in a small town or rural area. African Americans were less likely than

whites to live outside the central city of a metropolitan area.

Data came from all three waves, with fewer in the first wave because all children were

under 13 at that time and only those 10 to 12 years old were eligible for the present study. The

only racial-ethnic difference is that data for Asian children were more likely to come from the 2008 wave and less likely to come from the 2003 wave than data for White children.

Gender Differences in Activities

Boys and girls differed in the time spent in all activities except television, music, and youth organizations (not shown). Boys spent more time playing video games, computer games, and sports. Boys' video game time averaged more than 4 times the amount of time spent by girls and their sports time was 70% higher. Girls, in contrast, spent 50% more time reading than boys. Girls also spent more time studying, visiting, and doing household work, but the differences were more moderate.

Latent Class/Pattern Analysis

Table 3, top panel, shows the probabilities of not engaging at all in each of 9 activities for individuals classified in each of five latent patterns. The only activities in which few participated were music and youth activities. The middle panel shows the probability of engaging in each activity at a low level (below the median for participants), and the bottom panel shows the probabilities of participation at a high level (above the median). Participation at a high level was used to characterize and label these latent patterns.

Boys in class 1 had a .96 probability of spending above the median amount of time in a sports activity. Boys in class 2 had a .97 probability of spending above the median amount of time in electronic games. Boys in class 3, the most sedentary, had a .57 probability of spending a lot of time watching television, a .22 probability of high game playing, and no chance of playing sports at a high level. Boys in class 4 had a .59 probability of spending more than the median time watching television and a .33 probability of visiting. Boys in class 5 had a high probability of engaging in academic activities such as reading (.52) and studying (.39). They took music

lessons (.11) and were involved in youth organizations at higher than the median level (.22). They also had a .42 probability of spending a lot of time on chores.

Because of gender differences in participation, the amount of time representing a high level of participation differed for boys and girls and needs to be considered in interpreting the results. Girls in class 1 had a .24 probability of being above the median in time spent in sports, which was the highest for that activity across all the classes. In contrast to boys in class 2, who played electronic games, girls in class 2 had a high probability of watching television (.49) for above the median, but they also had a moderate chance of spending more than the median time visiting. Girls in class 3 had a high probability (.99) of watching television for more than the median amount of time and low probabilities of specializing in anything else. As did boys, girls in class 4 had high probabilities of watching television (.54) and visiting (.27) at above median levels; they also had a high probability of doing chores at a high level (.47). Girls in class 5 had a .35 probability of reading above the median, and a .47 probability of studying above the median amount of time. They had a higher probability of being involved in music activities and in youth organizations that those in other classes (.17 and .24, respectively) and they had a higher probability of a high level of chores (.49). Playing sports was part of a boy's activity set, but not that of a girl; the probability of boys participating in sports was relatively high in all classes except the third; the probability of girls participating in sports at all was lower and, when they did, their participation tended to be at low levels.

The first row in Table 3 shows the predicted distribution of boys and girls in the five latent activity patterns, based on their activities. Of boys, 16% focused on sports, 23% pursued electronic games, 42% were primarily television viewers, 10% watched television and visited, and 10% focused on academics. Of girls, 25% were in the sports class, 17% were in the

electronic games class, 24% were primarily television viewers, 24% watched television and visited, and 11% focused on academics. The typical activity patterns for boys were television viewing and electronic games: 42% of boys were in class 3, television and low sports, and 23% were in class 2, electronic games. Visiting distinguished between girls and boys. The typical activity patterns for a girl were those of television viewing and visiting. Almost half were in class 3 (television) and 4 (visit and television) and 17% were in class 2, electronic games, which, for girls, also included television viewing and visiting.

Probabilities of Latent Class/Pattern of Activity Participation, Multivariate Analyses

In Table 4 the probabilities of membership in each of these five latent patterns were regressed onto age, gender and race-ethnicity (Model 1). Family socioeconomic status (social class) was added in Model 2 and social capital variables were added in Model 3. Finally, parental expectations and values as indicators of culture were added in Model 4.

Race, Ethnicity, Age, and Gender. African American and Latino children were less likely to fall into the academic pattern than White children. Asian children were neither more nor less likely to be in the academic group. African American, Latino, and Asian children were more likely than White children to fall into the pattern that devotes time primarily to television.

Age distinguished children's activity patterns. Older children were more likely than younger ones to be classified into the electronic games and the TV and visiting patterns. Participation in both TV alone and in the academic class became less common as children aged. There were also significant gender differences in activity patterns. Girls were more likely to be in the sports class and in the TV and visiting class and less likely to be in the electronic games and TV-alone classes than were boys. Why should girls be more likely to fall in the sports pattern than boys? Boys in all of the activity patterns except the TV-alone pattern showed a

substantial probability of playing sports; thus, sports does not distinguish among boys except at high levels. Not surprisingly, girls were much less likely to be in the electronic gaming group.

Social Class. In Model 2 we added controls for social class – education, income, and family size. Parental education and income were strong predictors of activity pattern. Children of parents with at least some college education were more likely to follow the academic pattern and less likely to follow the electronic games pattern. Having completed only a high school education was also associated with being in the academic class, though the association was weaker than that of having completed at least some college. The larger the number of children in the household, the greater the chance of following the sports or the academic pattern, and the lower chance of following the electronic games pattern.

Social Capital. In model 3 we added measures of social capital. Growing up with a single mother was associated with a lower chance of being in the academic class and a greater chance of being in the electronic gaming class. Knowing one's children's friends was associated with a greater chance of the child being in the sports and academic classes and a lower likelihood of being in the electronic games class. Greater parental school involvement was linked to a greater probability of being in the sports and electronic games classes.

Expectations and Preferences. Model 4 added measures of parental preferences and values. Parental educational expectations were highly linked to activity pattern. Children whose parents expected their child to obtain an advanced degree were more likely to be in the academic class and less likely to be in the electronic games class. Expectation of either some college or a 4-year degree was also associated with being less likely to be in the electronic games class.

None of the parenting values was linked to activity pattern. Residence in an urban area (small city) was linked to a greater chance of being in the TV-alone class and a lower chance of

being in the sports class. Finally, having data drawn from a more recent wave was linked with being in the electronic gaming class.

Are Racial-Ethnic differences explained by Class, Capital, and Culture?

In Model 1 Latino children were less likely than White children to be in the academic class. After education and income were added in Model 2, the association between being Latino and being in the academic class remained significant, though the coefficient declined from -.09 to -.04, a reduction of 56%. After social capital was added in Model 3, the coefficient declined 25%, to -.03, and was no longer significant. A similar pattern held for the association between being Latino and being in the TV-alone class. These results suggest that the SES difference between Latinos and Whites is the most important reason for the lower participation of Latino children in the academic pattern and their higher participation in the television pattern; differences in social capital also contribute but not as strongly.

The coefficient for African American participation in the academic pattern was significant in Model 1. After controlling for social class in model 2, the coefficient dropped 27%, from -.11 to -.08, but remained significant. Adding social capital and then parental expectations and preferences produced a 25% additional decline in the coefficient (to -.06), which remained statistically significant. The coefficient for the African American probability of being in the TV-alone pattern was significant in Model 1. After controlling for social class in model 2, the coefficient dropped 20%, from .10 to .08 but remained significant. Adding social capital and culture (parental expectations and preferences) produced small additional declines in the coefficient (.06 in model 4), but African American TV participation remained significant at p < .001. Thus, differences in social class and social capital between whites and African American families explained 45% of the difference in their children's participation in academic activities

and 30% of the difference in television viewing. Adding culture did not further explain their lower participation in the academic and greater participation in the primarily television pattern.

Being Asian was strongly associated with being in the TV-alone group before and after adding social class, but it declined 21% (from .14 to .11) to nonsignificance after social capital was added. Asian children were less likely to be in the electronic game category, but this was not significant until after class and capital were included. This suggests that for Asians these variables are confounders, suppressing the association.

Heterogeneity in the process of choice of child activity patterns across the different racial-ethnic groups may be linked to differences in cultural values and nativity. To explore these cultural contribution, we examine whether educational expectations, cultural values, and parental nativity (foreign born) predict activity patterns within racial-ethnic group.

Differences in Latent Class/Pattern of Activity Participation by Race-Ethnicity

Table 5 shows the association between cultural variables and the probabilities of latent class membership separately for White, African American, and Latino children. White children with a foreign-born parent were less likely to be in the TV and visiting class and more likely to be in the sports class. Having a parent who expected them to complete an advanced degree was associated with the child being more likely to be in the academic class and less likely to be in the electronic games class. Parental expectation of some college or a 4-year degree was associated with children being more likely to be in the TV and visiting class and less likely in the electronic game class. Values were important within racial-ethnic groups. Among Whites, children of parents who selected "popular" as the first choice for their children were less likely to be in the academic or in the television only class, and were more likely to be in the TV and visiting or in the sports class.

Among African American children, having a foreign-born parent was associated with being less likely to be in the TV and visiting class. Children whose parents expected them to attain an advanced degree were more likely to be in the academic class and less likely to be in the electronic gaming class. Similarly, children whose parents expected them to complete at least some college were more likely to be in the academic class. In contrast to White children, African American children of parents who selected "popular" as the first choice for their children to learn were more likely to be in the academic class and less likely to be in the television and visiting class. Belief that working hard or thinking for oneself is most important was associated with a lower chance of being in the TV and visiting class.

For Latinos, parental educational expectations were more important to activities than parental educational levels. Expectations but not actual parental education levels were associated with activity pattern (not shown). Expecting children to complete an advanced degree was associated with a marginally greater probability of being in the academic class ($p < .10$), a greater probability of being in the TV-alone class, a lower probability of being in the TV and visiting class, and a marginally ($p < .10$) lower probability of being in the electronic games class. The parental belief that working hard is important was linked to a lower probability of being in the electronic gaming class. Although no single activity pattern focuses on participation in household chores, we note that, for Latino girls, the TV and visiting class includes high level of chores. Thus the data provide some evidence for a decline in participation in chores with higher educational expectations. Among Latinos there were no differences by nativity of parent; in this sample, the majority of parents were foreign born.

Discussion

This paper addresses whether meaningful patterns representing different life style choices can be identified through examining children's activity participation across a wide set of activities. Second, it examines whether these patterns differ by race and ethnicity. Third, it examines whether these differences are explained by social class, social capital, or culture.

Using latent class analysis, children were grouped into 5 latent classes or patterns, based on the probability that a person in that group would have spent no time, below the median, or above the median amount of time in each of 9 activities. Labels were assigned based upon the highest probability activities of children in that pattern: (1) sports, (2) electronic games, (3) television only, (4) television and visiting, and (5) academic activities. This paper examined the association between race-ethnicity, social class, social capital, and culture and the probability of being in each activity pattern, net of age and gender, urban residence, and year of data collection.

Hypothesis 1, that African American and Latino children would be less likely than White children to be in the academic pattern was supported. The former demonstrated lower participation in academic pursuits such as reading and studying and less time in youth groups. Latino children were not, however, more likely than White children to engage in patterns involving visiting or sports. Therefore, the hypothesis that Latino children overall would be involved in social skill-building activities was not supported.

Hypothesis 2, that social class would be associated with the academic participation pattern was supported. These analyses revealed, as expected, that parental education was strongly positively associated with children being in the academic pattern and negatively associated with being in the electronic game-playing pattern. Higher income relative to the poverty line was also associated with being in the academic pattern. In contrast to the other

patterns, which showed concentration in one or two activities, the academic pattern included children who were above the median on reading, studying, music lessons, and youth groups.

Hypothesis 3, that social capital would be linked to social skills-related activities, was partially supported; children whose parents knew their children's friends were more likely to be in the sports pattern and less likely to be in the electronic games pattern. They were also more likely to be in the academic pattern, which includes social interaction through youth organization participation. They were not more likely to be in the pattern focused on television and visiting.

Contrary to Hypothesis 3, school involvement was not linked to the academic pattern; rather, school involvement was linked to sports and, surprisingly, it was linked to spending a lot of time in electronic games. Sports involvement attracts parents to the school to attend games and other events. However, parents may also visit when they are notified that their child is having difficulty; children who spend a lot of time playing electronic games may attract teacher concern and lead to parent-staff conferences.

The number of parents was important. As expected, compared with being in a two-employed-parent family, being in a single parent family was associated with less participation in academics and in sports (marginal significance: $p < .10$) and greater participation in electronic games. But living in a two-parent family with only one employed parent was also associated with a lower chance of participation in sports and a greater chance of being in the electronic games pattern. Having a *second* parent available is important for children's involvement in the academic track; this is likely due to having more supervision. Having *two employed parents* is important for being more active in sports and less active in electronic gaming. We speculate that families in which both parents are employed are selective of greater community participation more generally. Such parents become concerned when their children focus only on electronic

games to the exclusion of other extracurricular activities (Hofferth et al., 2009). Although living

in a two-parent, single earner family was expected to support children's extracurricular activities

through availability of a nonemployed parent, it apparently does not. More research is needed.

According to Hypothesis 4, most of the association between race-ethnicity and activity

pattern was expected to result from differences in social class and social capital. As the first

analyses showed, Latino, Asian and White children's activities no longer differed once social

class and social capital were controlled. This was not the case for African Americans; activity

differences remained after social class and social capital were controlled.

Hypothesis 5, that culture would be related to activities, was partially supported. Parental

expectations for their child's education were the most important of the culture variables. The

children of parents who expected their child to attain an advanced degree were more likely to be

in the academic pattern and less likely to be in the electronic games pattern. Expecting some

college or a college degree acted similarly to discourage excessive electronic game involvement

but was not associated with participation in the academic pattern.

Cultural Differences in Activity Patterns within Racial-Ethnic Groups

For the total sample, values were not linked to activities. This is apparently due to

within-group heterogeneity in values. Consistent with other research (Okagaki & Frensch,

1998), values emerged as linked to activity choices within ethnic groups. The role of parental

educational expectations was similar across racial-ethnic groups, as was the part played by

having a foreign-born parent. The role played by parental values in choice of activity pattern

varied considerably across ethnic group. Differences in associations by minority ethnicity

explain why values were not associated with activity patterns in the full sample.

We expected that parents who valued popularity would encourage children to participate in sports and visiting. This was true for Whites. Sports as an activity has long been valued by parents and touted by youth development experts for its promotion of social skills (Hofferth et al., 2009; Larson, 1994). Consistent with these prior expectations, children of White parents who thought that being popular was most important were more likely to be in the TV and visiting pattern or the sports pattern and less likely to be in the academic pattern. However, this was not the case for African Americans and Latinos. Even though Latino parents were the most likely to endorse popularity as number one, there was no association between parental belief in popularity as key to success and Latino children's activities. For African Americans, the parental belief that *popularity* was most important for later success was linked to *a greater chance of being in the academic pattern* and a lower chance of being in the TV and visiting pattern. Only a small fraction of African American parents espoused popularity as a key value; perhaps academic success is seen as a positive pathway to achieve being well-liked.

Thinking for oneself and working hard were linked to activities that take effort and practice, as expected. For African Americans, thinking for oneself and working hard were associated with a lower chance of being in the TV and visiting pattern. Latino children whose parents reported valuing hard work were less likely to exhibit the electronic games pattern. Surprisingly, thinking for oneself and working hard were not linked to being in the academic pattern, but this is probably because educational expectations, which were controlled, were strongly associated with academic activity participation.

Strengths and Limitations

The strength of this study is its reliance on detailed 24-hour time diaries of the time children spent in multiple activities during an actual week, a large nationally representative

sample of children, and, detailed questions about parents' values and expectations for their children. The study was able to go beyond most previous studies because it could incorporate measures of intensity as well as participation, was more appropriately focused on one week rather than an entire year, and could show how activities realistically clustered into patterns for individual children. This study has also been useful in demonstrating how youth activities have been influenced by the influx of new media. Even though electronic games are an important part of youth activities, television viewing remains the most common activity.

One limitation is that this study did not examine the actual achievement of youth who engaged in different activity patterns. In order to explore whether there was an association, we conducted an ANOVA with the passage comprehension and applied problems tests from the Woodcock Johnson Test of Basic Achievement as the dependent variables (not shown) and activity classes as the independent variable. Average test scores were consistently and significantly highest for the academic pattern and lowest for those in the electronic games pattern with the other patterns averaging slightly higher test scores than electronic games. Although we found strong mean differences across activity patterns, we have not proven causality. To do so requires longitudinal data as youth transition into adulthood; this remains for future research.

Implications for Research on Youth Extracurricular Activities

These analyses have demonstrated that the association between youth organization participation and academic outcomes documented in many studies may not be causal. Children who participate in youth organizations also spend time reading and studying, which are independently linked to higher achievement. No other studies have incorporated these important activities to be able to demonstrate this clustering. As information from detailed diaries becomes more available and accepted, it will become possible to include more activities, to incorporate

electronic media, and to show activity participation patterns rather than treat activities as independent. Latent class analysis is a useful tool for addressing how both amount and intensity of participation contribute. This is the first analysis to use this technique with time diary data.

Conclusion

Although high parental educational expectations consistently predict children's greater participation in academic groups, these are not the only values linked to the patterns of activities parents and children select. Whether parents value working hard, thinking for themselves, or being well-liked are associated with child activity patterns but these associations differ across racial-ethnic groups. This suggests that the same set of activities serves different purposes.

It has probably been incorrect to infer that participation in youth organizations *causes* better youth outcomes, because such participation is also associated with greater studying and reading, well-established as associated with long-term achievement and other school success. The patterns that resulted from our analysis of detailed time diary data suggest that one reason for the commonly reported empirical association between youth organization participation and positive child development in observational studies is that the children who participate are also engaged in other academically productive activities. Potential confounding associations are rarely considered.   Rigorous experimental designs are needed to determine the contribution of youth organizations to children's long-term development beyond their correlation with other positive youth development activities.

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Table 1. Descriptive Statistics for Background Variables and Activities, by Race-Ethnicity

Variables	All				White			African American				Latino				Asian				Other			
	N	Mean/%	SD	Range	N	Mean/%	SD	N	Mean/%	SD	v. W	N	Mean/%	SD	v. W	N	Mean/%	SD	v. W	N	Mean/%	SD	v. W
Child Background																							
Race/ethnicity																							
White	2784	64.1%	1.96																				
African American	2784	15.1%	1.47																				
Latino	2784	13.6%	1.40																				
Asian	2784	3.3%	0.73																				
Other race	2784	3.9%	0.80																				
Child age	2784	12.31	7.37	(10-18)	1328	12.27	8.36	1118	12.40	4.72		209	12.36	10.31		45	12.71	11.74		84	12.10	7.60	
Age 10-11	2784	37.2%	1.98		1328	37.9%	2.30	1118	36.1%	1.21		209	37.2%	2.67		45	33.0%	2.76		84	34.1%	2.23	
Age 12-14	2784	52.1%	2.04		1328	52.2%	2.37	1118	50.9%	1.25		209	51.0%	2.76		45	50.6%	2.94		84	60.0%	2.31	
Age 15-18	2784	10.6%	1.26		1328	9.8%	1.41	1118	13.0%	0.84	*	209	11.8%	1.78		45	16.4%	2.18		84	5.9%	1.11	
Girl	2784	50.4%	2.05		1328	51.0%	2.37	1118	45.1%	1.25	**	209	52.0%	2.76		45	44.1%	2.92		84	60.9%	2.30	
Child Activities																							
Weekly Hours:																							
Video games	2784	2.63	21.59	(0-55)	1328	2.58	24.90	1118	3.39	15.31	***	209	2.37	26.85		45	1.47	13.72	**	84	2.41	24.07	
Computer games	2784	1.23	15.91	(0-35)	1328	1.35	18.85	1118	0.45	4.49	***	209	1.08	21.17		45	3.40	46.54		84	0.84	10.99	
Television	2784	14.19	43.83	(0-70)	1328	13.39	48.95	1118	16.92	27.06	***	209	14.68	60.48		45	14.81	70.50		84	14.59	59.72	
Reading	2784	1.19	10.95	(0-22)	1328	1.35	13.38	1118	0.61	4.79	***	209	0.79	10.57	***	45	2.02	18.44		84	1.54	17.92	
Studying	2784	4.26	21.48	(0-34)	1328	4.26	25.95	1118	3.77	10.79	*	209	4.38	27.54		45	6.32	36.37	*	84	3.90	20.71	
Chores	2784	2.95	16.85	(0-34)	1328	3.08	19.68	1118	2.46	9.09	***	209	3.25	24.50		45	2.47	27.37		84	2.18	16.15	*
Visiting	2784	2.22	19.97	(0-50)	1328	2.39	23.57	1118	1.99	13.35		209	2.22	24.54		45	0.89	15.72	***	84	1.57	19.84	
Sports	2784	3.86	24.95	(0-38.75)	1328	4.19	30.10	1118	3.76	16.05		209	3.23	28.62	*	45	1.46	20.30	***	84	3.11	21.64	*
Music	2784	0.42	6.84	(0-18)	1328	0.44	7.21	1118	0.06	1.57	***	209	0.31	9.95		45	1.34	18.53		84	0.91	15.63	
Youth organizations	2784	0.95	12.25	(0-31)	1328	1.07	15.68	1118	0.87	6.38		209	0.54	9.87	***	45	0.92	18.77		84	0.74	10.14	
N	2784				1328			1118				209				45				84			

*** p< .001, ** p< .01, * p< .05, two-tailed t-test

Data are weighted.

Table 2. Descriptive Statistics for Class, Capital, and Culture, by Race-Ethnicity

Variables	All				White			African American				Latino				Asian				Other			
	N	Mean/%	SD	Range	N	Mean/%	SD	N	Mean/%	SD	v. W	N	Mean/%	SD	v. W	N	Mean/%	SD	v. W	N	Mean/%	SD	v. W
Class																							
Parent education																							
Less than high school	2746	20.1%	1.64		1321	8.8%	1.34	1093	24.0%	1.08	***	205	63.7%	2.67	***	44	36.7%	2.84	***	83	26.7%	2.09	***
High school	2746	29.4%	1.87		1321	30.6%	2.18	1093	36.1%	1.21	**	205	19.4%	2.19	***	44	11.8%	1.90	**	83	34.4%	2.25	
Some college or more	2746	50.5%	2.05		1321	60.7%	2.31	1093	39.9%	1.23	***	205	16.9%	2.08	***	44	51.5%	2.95		83	38.9%	2.31	***
Income/poverty ratio	2784	3.83	18.05	(0-113.36)	1328	4.67	24.00	1118	2.01	4.28	***	209	1.98	9.54	***	45	3.72	19.63		84	3.71	15.50	*
Number of children in the HH	2784	2.45	4.59	(0-9)	1328	2.31	4.46	1118	2.58	3.37	***	209	2.99	7.74	***	45	2.46	8.18		84	2.26	4.28	
Capital																							
Family structure																							
Two parents, both working	2784	46.0%	2.04		1328	55.8%	2.36	1118	19.2%	0.99	***	209	36.0%	2.65	***	45	30.5%	2.71	***	84	36.3%	2.26	***
Two parents,one working	2784	26.5%	1.81		1328	25.8%	2.08	1118	14.9%	0.89	***	209	38.7%	2.69	***	45	42.1%	2.90	*	84	27.4%	2.10	
Two parents, none working	2784	2.9%	0.69		1328	2.4%	0.73	1118	3.2%	0.44		209	5.0%	1.20		45	4.7%	1.25		84	1.2%	0.51	
Single parent family	2784	24.2%	1.75		1328	15.6%	1.72	1118	62.6%	1.21	***	209	19.4%	2.19		45	22.7%	2.46		84	35.1%	2.25	***
Parent's school involvement	2783	6.32	15.62	(0-16)	1328	6.73	18.32	1117	6.16	9.07	***	209	5.09	19.32	***	45	3.74	16.38	***	84	6.71	18.00	
Parents know child's friends	2783	3.84	4.97	(1-5)	1328	4.15	4.60	1117	3.39	3.26	***	209	3.00	7.89	***	45	3.10	8.68	***	84	3.93	5.84	
Culture																							
Parent nativity	2784	16.4%	1.51		1328	1.1%	0.49	1118	4.9%	0.54	***	209	82.3%	2.11	***	45	98.3%	0.77	***	84	13.4%	1.60	**
Parent expectation for child's education																							
High school or less	2781	17.8%	1.56		1328	13.2%	1.60	1116	36.6%	1.21	***	209	19.0%	2.17	*	44	3.4%	1.06	**	84	27.9%	2.11	**
Some college or 4 year degree	2781	68.1%	1.91		1328	72.5%	2.12	1116	55.0%	1.25	***	209	65.7%	2.62		44	58.5%	2.88		84	62.0%	2.28	*
Advanced degree	2781	14.2%	1.43		1328	14.4%	1.66	1116	8.4%	0.70	***	209	15.3%	1.99		44	38.1%	2.84	**	84	10.1%	1.42	
Parenting values																							
Obey	2735	13.3%	1.39		1311	7.9%	1.28	1097	24.1%	1.07	***	203	28.4%	2.51	***	41	16.1%	2.20		83	4.9%	1.02	
Popular	2735	1.6%	0.52		1311	0.1%	0.13	1097	0.7%	0.20	*	203	8.5%	1.55	***	41	3.2%	1.05		83	5.5%	1.08	*
Thinkself	2735	56.0%	2.04		1311	62.7%	2.30	1097	49.8%	1.25	***	203	35.5%	2.66	***	41	21.8%	2.48	***	83	66.9%	2.23	
Work hard	2735	17.5%	1.56		1311	17.1%	1.79	1097	16.0%	0.92		203	14.6%	1.96		41	44.4%	2.98	**	83	18.3%	1.83	
Help others	2735	11.7%	1.32		1311	12.2%	1.56	1097	9.4%	0.73	*	203	13.0%	1.87		41	14.6%	2.12		83	4.5%	0.98	**
Locale of residence																							
Central city	2726	25.7%	1.79		1307	18.0%	1.82	1092	40.3%	1.23	***	200	38.1%	2.70	***	43	48.8%	2.98	***	84	34.6%	2.24	**
Metropolitan	2726	46.2%	2.04		1307	48.3%	2.37	1092	36.3%	1.21	***	200	48.0%	2.78		43	46.7%	2.97		84	43.4%	2.33	
Urban	2726	10.7%	1.27		1307	11.5%	1.51	1092	9.9%	0.75		200	11.0%	1.74		43	4.5%	1.23		84	6.1%	1.13	
Small town	2726	13.8%	1.41		1307	17.6%	1.81	1092	12.8%	0.84	***	200	0.2%	0.22	***	43	0.0%	0.00	***	84	12.6%	1.56	
Rural	2726	3.6%	0.76		1307	4.6%	0.99	1092	0.7%	0.22	***	200	2.7%	0.91		43	0.0%	0.00	***	84	3.2%	0.83	
Data collected																							
year 1997	2784	23.0%	1.72		1328	22.9%	1.99	1118	24.6%	1.08		209	21.2%	2.26		45	21.9%	2.43		84	26.1%	2.07	
year 2003	2784	43.9%	2.03		1328	43.7%	2.35	1118	50.4%	1.25	**	209	40.3%	2.71		45	26.5%	2.60	**	84	49.3%	2.35	
year 2008	2784	33.1%	1.93		1328	33.4%	2.24	1118	25.0%	1.09	***	209	38.6%	2.69		45	51.6%	2.94	*	84	24.6%	2.03	
N	2784				1328			1118				209				45				84			

*** p< .001, ** p< .01, * p< .05, two-tailed t-test

Data are weighted.

Table 3. Probability of Engaging in Activity at each level for each Subgroup, Five-Latent-Class Model, by Gender										
	Boys						**Girls**			
Item	1 Sports	2 Games	3 TV	4 TV/Visit	5 Academic	1 Sports	2 Games	3 TV	4 TV/Visit	5 Academic
Membership	0.16	0.23	0.42	0.10	0.10	0.25	0.17	0.24	0.24	0.11
No participation[a]										
Electronic games	0.51	0.01	0.44	0.69	0.41	0.60	0.96	0.67	0.63	0.69
TV	0.02	0.03	0.01	0.17	0.13	0.06	0.17	0.00	0.00	0.11
Reading	0.91	0.91	0.78	1.00	0.17	0.65	0.98	0.74	0.70	0.29
Studying	0.39	0.47	0.32	0.85	0.22	0.07	0.48	0.21	0.82	0.07
Chores	0.38	0.40	0.28	0.63	0.18	0.28	0.47	0.31	0.21	0.11
Visiting	0.69	0.69	0.68	0.62	0.66	0.68	0.48	0.79	0.55	0.41
Sports	0.01	0.47	0.57	0.62	0.37	0.61	0.69	0.75	0.63	0.59
Music	0.96	0.95	0.95	0.97	0.72	0.97	1.00	0.97	0.91	0.48
Youth Organization	0.81	0.86	0.67	0.82	0.55	0.71	0.76	0.79	0.71	0.54
Low participation[b]										
Electronic games	0.48	0.02	0.34	0.13	0.33	0.29	0.00	0.27	0.15	0.31
TV	0.57	0.51	0.42	0.24	0.73	0.93	0.35	0.01	0.46	0.71
Reading	0.07	0.04	0.13	0.00	0.31	0.17	0.02	0.11	0.15	0.36
Studying	0.40	0.39	0.35	0.01	0.39	0.42	0.21	0.50	0.18	0.45
Chores	0.34	0.31	0.37	0.15	0.41	0.37	0.31	0.36	0.32	0.40
Visiting	0.22	0.19	0.19	0.04	0.20	0.17	0.14	0.15	0.18	0.30
Sports	0.03	0.19	0.43	0.06	0.29	0.15	0.10	0.20	0.23	0.30
Music	0.02	0.02	0.01	0.00	0.17	0.00	0.00	0.03	0.04	0.35
Youth Organization	0.14	0.09	0.16	0.04	0.22	0.11	0.11	0.11	0.16	0.22
High participation[c]										
Electronic games	0.01	0.97	0.22	0.18	0.26	0.10	0.04	0.06	0.23	0.00
TV	0.41	0.46	0.57	0.59	0.14	0.01	0.49	0.99	0.54	0.18
Reading	0.01	0.04	0.09	0.00	0.52	0.17	0.00	0.15	0.15	0.35
Studying	0.21	0.14	0.34	0.14	0.39	0.52	0.31	0.29	0.01	0.47
Chores	0.27	0.29	0.35	0.22	0.42	0.35	0.22	0.34	0.47	0.49
Visiting	0.09	0.12	0.14	0.33	0.13	0.15	0.38	0.06	0.27	0.29
Sports	0.96	0.34	0.00	0.32	0.34	0.24	0.21	0.05	0.14	0.12
Music	0.03	0.03	0.03	0.03	0.11	0.03	0.00	0.00	0.05	0.17
Youth Organization	0.05	0.05	0.17	0.14	0.22	0.17	0.14	0.10	0.13	0.24

[a] no time spent on activity; [b] spent time on activity below the median; [c] spent time on activity above the median

Table 4. Regression of Probabilities of Latent Class Membership on Class, Capital and Culture [a], All

Variables	Sports				Electronic Games				TV only				TV & Visiting				Academic			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Constant	0.15 ***	0.06	0.00	0.00	0.14 ***	0.25 ***	0.29 ***	0.30 ***	0.41 ***	0.48 ***	0.55 ***	0.52 ***	0.09 ***	0.14 ***	0.13 **	0.15 **	0.20 ***	0.08 ***	0.02	0.03
Child Characteristics																				
Child age (ref: 10-11)																				
12-14	0.00	0.00	0.00	0.00	0.13 ***	0.13 ***	0.13 ***	0.12 ***	-0.06 **	-0.06 **	-0.06 ***	-0.06 **	0.00	0.00	0.00	0.00	-0.07 ***	-0.08 ***	-0.07 ***	-0.07 ***
15-18	-0.02	-0.02	-0.01	-0.01	0.26 ***	0.26 ***	0.25 ***	0.24 ***	-0.19 ***	-0.19 ***	-0.20 ***	-0.20 ***	0.08 *	0.08 *	0.07 *	0.08 *	-0.13 ***	-0.13 ***	-0.12 ***	-0.12 ***
Child race (ref: white)																				
African American	-0.02	-0.01	0.01	0.01	0.03	0.02	-0.01	-0.01	0.10 ***	0.08 ***	0.07 **	0.06 *	0.01	-0.01	-0.01	0.00	-0.11 ***	-0.08 ***	-0.06 ***	-0.06 ***
Latino	0.00	0.01	0.03	-0.02	0.00	-0.02	-0.04	0.00	0.09 **	0.06	0.05	0.02	0.01	-0.02	-0.01	0.04	-0.09 ***	-0.04 *	-0.03	-0.04
Asian	-0.07	-0.06	-0.02	-0.10	-0.05	-0.06	-0.09 *	-0.05	0.15 *	0.14 *	0.11	0.09	-0.04	-0.05	-0.05	0.03	0.01	0.03	0.05	0.03
Other race	0.02	0.03	0.04	0.03	-0.03	-0.05	-0.06	-0.05	0.01	0.00	0.00	-0.01	0.06	0.05	0.05	0.06	-0.06	-0.04	-0.03	-0.03
Girls (ref: boys)	0.11 ***	0.11 ***	0.12 ***	0.12 ***	-0.09 ***	-0.09 ***	-0.09 ***	-0.08 ***	-0.18 ***	-0.18 ***	-0.19 ***	-0.19 ***	0.15 ***	0.15 ***	0.15 ***	0.15 ***	0.00	0.01	0.01	0.01
Class																				
Parent education (ref: less than high school)																				
High school		0.04	0.02	0.01		-0.04	-0.01	-0.02		-0.03	-0.02	-0.02		-0.01	-0.01	0.00		0.03 *	0.03	0.03 *
Some college or more		0.04	0.01	0.00		-0.06 **	-0.03	-0.03		-0.05	-0.03	-0.04		-0.04	-0.04	-0.02		0.11 ***	0.09 ***	0.08 ***
Income/poverty ratio		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00 *	0.00	0.00
Number of children in the HH		0.02 *	0.02 *	0.02 *		-0.02 **	-0.02 **	-0.02 ***		0.00	0.00	0.00		-0.01	0.00	-0.01		0.01 *	0.01 *	0.01 *
Capital																				
Family structure (ref: two working parents)																				
Two parents, One working			-0.06 **	-0.06 **			0.07 ***	0.06 ***			0.00	0.00			-0.01	-0.01			0.01	0.00
Two parents, none working			-0.06	-0.06			0.05	0.05			0.02	0.03			0.03	0.02			-0.03	-0.03
Single parent family			-0.04	-0.04			0.06 **	0.05 *			0.01	0.02			0.01	0.01			-0.03 **	-0.04 **
Parent's school involvement			0.01 *	0.01 *			0.00 *	0.00			0.00	0.00			0.00	0.00			0.00	0.00
Parents know child's friends			0.02 *	0.02 *			-0.02 *	-0.01			-0.02	-0.01			0.00	0.00			0.01 *	0.01 *
Culture																				
Parent foreign born (ref: not foreign born)				0.05				-0.03				0.04				-0.06				0.01
Parent expectation for education (ref: high school or less)																				
Some college or 4 year degree				0.02				-0.04 *				0.00				0.00				0.02
Advanced degree				0.05				-0.09 ***				0.01				-0.03				0.06 **
Parenting values (ref: obey)																				
Popular				0.03				-0.09				-0.02				0.10				-0.02
Thinkself				0.02				-0.02				0.02				-0.01				-0.01
Work hard				0.02				0.00				0.01				-0.01				-0.01
Help others				0.02				-0.02				-0.03				0.00				0.03
Locale of residence (ref: central city)																				
Metropolitan				-0.03				0.02				0.01				0.00				0.00
Urban				-0.09 **				-0.03				0.09 **				0.06				-0.03
Small town				-0.02				0.01				-0.02				0.04				-0.01
Rural				-0.02				0.01				0.02				0.03				-0.04
Year of data collection (ref: 1997)																				
year 2003				-0.01				0.03 *				0.03				-0.03				-0.01
year 2008				0.02				0.05 **				-0.02				-0.02				-0.03
R^2	0.03	0.04	0.05	0.06	0.10	0.11	0.13	0.15	0.11	0.11	0.12	0.13	0.08	0.09	0.09	0.10	0.07	0.12	0.13	0.14

*** $p < .001$, ** $p < .01$, * $p < .05$, two-tailed test

[a] Robust standard errors adjusted for multiple children in a family were used to obtain significance levels

N=2662; Data are weighted.

Variables	Sports		Electronic Games		TV only		TV and Visiting		Academic	
Table 5. Regression of Probabilities of Latent Class Membership on Culture, by Race-Ethnicity [a]										
White (N = 1288)										
Parent foreign born	0.32	*	0.02		-0.10		-0.18	***	-0.06	
Parent expectation for education (ref: high school or less)										
Some college or 4 year degree	0.02		-0.09	**	0.00		0.04	*	0.03	
Advanced degree	0.05		-0.15	***	-0.04		0.05		0.09	**
Parenting values (ref: obey)										
Popular	0.12	*	0.01		-0.21	***	0.39	***	-0.30	***
Thinkself	0.03		0.03		-0.03		0.00		-0.02	
Work hard	0.02		0.06		-0.03		-0.01		-0.04	
Help others	0.02		0.05		-0.07		-0.02		0.02	
R^2	0.08		0.19		0.13		0.11		0.13	
African American (N = 1055)										
Parent foreign born	0.02		0.00		0.02		-0.14	***	0.10	
Parent expectation for education (ref: high school or less)										
Some college or 4 year degree	0.07		0.00		-0.08		-0.02		0.02	**
Advanced degree	0.05		-0.09	*	0.00		0.00		0.05	**
Parenting values (ref: obey)										
Popular	0.15		-0.10		0.01		-0.15	*	0.11	*
Thinkself	-0.01		-0.01		0.08		-0.08	**	0.02	
Work hard	-0.05		0.02		0.07		-0.07	*	0.02	
Help others	0.02		-0.11		0.04		0.04		0.01	
R^2	0.08		0.16		0.12		0.15		0.16	
Latino (N = 198)										
Parent foreign born	-0.06		-0.11		0.03		0.11		0.03	
Parent expectation for education (ref: high school or less)										
Some college or 4 year degree	0.04		-0.04		0.08		-0.09		0.01	
Advanced degree	0.12		-0.14		0.23	*	-0.28	**	0.08	
Parenting values (ref: obey)										
Popular	0.08		-0.15		0.02		0.05		0.00	
Thinkself	-0.05		-0.11		0.07		0.05		0.04	
Work hard	0.07		-0.24	**	0.02		0.11		0.02	
Help others	0.05		-0.08		-0.04		0.05		0.02	
R^2	0.20		0.23		0.23		0.24		0.14	
*** $p < .001$, ** $p < .01$, * $p < .05$, two-tailed test										
[a] Robust standard errors adjusted for multiple children in a family were used to obtain significance levels										

Appendix: Latent Class Analysis

Three, four and five latent class models were tested to determine the optimal number of classes to be retained. Appendix Table 1 shows fit indices for all models. The three-class model had the largest AIC but the smallest BIC (small is most desirable); the five-class model the smallest AIC but largest BIC. Between the three and four-class models and the four and five-class models, the decrease in G^2 was substantial. Entropy is measured on a 0 to 1 scale, with higher values of entropy indicating better classification of individuals into latent classes. The five-class model had the highest entropy value. For these reason, the five-class model was selected as the model with the best fit to the data.

Appendix Table 1. Comparison of Baseline Models

No. of Classes	Likelihood Ratio G^2	Degrees of freedom	AIC	BIC	Entropy
3	4789.86	19626	4907.86	5234.03	0.58
4	4704.48	19607	4854.48	5299.35	0.57
5	4658.49	19588	4846.49	5404.06	0.62

A baseline latent class model with five classes was selected. Child's sex was added to the model as a grouping variable and the result examined to see whether measurement was invariant across sex. The model was run with all parameters freely estimated across the variable of child's gender, and then with all parameters constrained to be equal across the same variable. Appendix Table 2 shows that the G^2 statistic was 6197.68 ($df = 39177$) for the freely estimated model and 6483.59 ($df = 39267$) for the constrained model, resulting in a likelihood-ratio difference test statistic of 285.91 ($df = 90$, $p < .05$). This difference is statistically significant, indicating that there is a significant difference between boys and girls in latent classes. Therefore, all further analyses used the model with measurement variance by gender.

Appendix Table 2. Comparison of Measurement Variance Model vs. Measurement Invariance Models, by Gender

	Likelihood Ratio G^2	*Degrees of freedom*	*AIC*	*BIC*	*Entropy*
Measurement variance	6197.68	39177	6573.68	7688.83	0.64
Measurement invariance	6483.59	39267	6679.59	7260.89	0.68