Neighborhoods, Family, and Substance Use: Comparisons of the Relations across Racial and Ethnic Groups

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Abstract

This study examines how substance use among adolescents is related to several risk and protective factors derived from two ecological contexts: the neighborhood and the family. It explicitly investigates how the relationships between substance use and the factors vary across different racial and ethnic groups. Findings suggest many common correlates and processes of substance use for adolescents, regardless of race or ethnicity, including that neighborhood safety is associated with substance use. There are also some racial and ethnic group differences in relationships, including that low attachment to and lack of social opportunities in neighborhoods more strongly predict substance use among whites than among other racial and ethnic groups and that family management decreases the relationship between neighborhood safety and substance use among African Americans. A better understanding of the associations among factors that influence substance use across racial and ethnic subgroups can help effectively target preventive interventions for different groups.

Over the past 2 decades, numerous etiological studies have investigated the origins of and pathways to problem behaviors for youth. Such behaviors include substance use, aggressive and nonaggressive delinquent offenses, negative school behaviors, and risky sexual behaviors (e.g., Hawkins, Catalano, and Miller 1992; Hawkins et al. 2000). The studies identify several individual characteristics that predict problem behaviors. These studies also suggest that the developmental context of youth is a source of both risk and protection for such behaviors. Contexts typically include family, peers, school, and neighborhoods (Bogenschneider 1996). For example, neighborhood poverty, lack of neighborhood safety, and lack of social cohesion among neighbors are found to predict problems among youth (Brooks-Gunn et al. 1993; Sampson 1997; Hill and Herman-Stahl 2002). Factors related to the family context, including parenting strategies and youth's affective relationships with parents, also emerge as strong determinants of youth problems (Steinberg, Brown, and Dornbusch 1996; Huebner and Howell 2003). This article, while also considering other factors, focuses on how two of these contexts, neighborhood and family, predict substance use among youth.

Individual, neighborhood, and family factors are known to predict problem behaviors, but it is not clear how these factors operate together to influence the development of problem and positive behaviors among youth (Furstenberg et al. 1998; Griffin et al. 1999; Duncan and Raudenbush 2001; Hill and Herman-Stahl 2002). Moreover, it is not clear how interrelationships among individual, family, and neighborhood factors vary across racial and

ethnic groups in predicting youth problem behaviors (McLoyd et al. 2000). The current study seeks to improve understanding of these issues.

Neighborhood Risk Factors

Numerous studies find that neighborhood factors predict problem behaviors among children and youth. Typical neighborhood factors are neighborhood disorganization, pervasive poverty among neighbors, lack of positive social opportunities, and criminal activity in the community (Brook, Nomura, and Cohen 1989; Hawkins et al. 1992; Griffin et al. 1999; Leventhal and Brooks-Gunn 2000). Social disorganization theory (Sampson 1997) postulates that cohesive social ties among neighbors are eroded by extensive poverty and other disadvantages. Such erosion impedes the development of informal social control networks and of the consensus on norms and standards for youth behaviors. Accordingly, youth behaviors may not be controlled in the neighborhood.

Similarly, the collective socialization model (Jencks and Mayer 1990) hypothesizes that parents' failure to supervise their children extends to the neighborhood, as residents also do not supervise the youth. In addition, the model views the disadvantaged neighborhood as a collective entity that may be unable to supervise children's behavior. Neighborhood disadvantages are also expected to increase the likelihood of association with deviant peers. In turn, such association is one of the prominent predictors of adolescents' engagement in problem behaviors (Brody et al. 2001).

Despite the theories, empirical findings are mixed regarding the effects of neighborhood on substance use (Ramirez-Valles, Zimmerman, and Newcomb 1998). Certain neighborhood factors (e.g., neighborhood deviance and danger) are shown to significantly affect substance use (e.g., Nurco et al. 1996; Bowen and Bowen 1999; Griffin et al. 1999; Duncan, Duncan, and Strycker 2000). Other neighborhood conditions (e.g., resident stability, economic viability, and economic resources) are shown to have no measured effect (e.g., Allison et al. 1999).

Less is known about how problem behaviors are affected by youth's feelings on and perceptions of their own neighborhoods or by the availability of positive social activities provided in the neighborhood.[1] Still, youth's perceptions of the environment are found to predict youth deviance (Jessor and Jessor 1977;Nurco et al. 1996). Youth psychological and behavioral outcomes are predicted by the sense of belonging to a neighborhood (Allison et al. 1999), as well as by encouragement and support that youth perceive from neighbors (Bowen and Chapman 1996). Involvement in (or lack of) positive social activities in the neighborhood is found to be a significant predictor of youth problem behaviors (Ramirez-Valles et al. 1998). This study specifically hypothesizes that lack of neighborhood attachment, lack of involvement in neighborhood social activities, and lack of neighborhood safety are positively associated with substance use.

Family Protective Factors

Despite the increasing influence of such factors as peer relationships and neighborhood influences, parents and family remain important forces in the socialization of adolescents throughout the youth's high school years (Peterson et al. 1994; Catalano and Hawkins 1996; Hill et al. 2005). Tama Leventhal and Jeanne Brooks-Gunn (2000) conclude from their extensive literature review that family factors tend to be more strongly associated with youth behaviors than do neighborhood factors. Emotional support from parents, for example,

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[1]Positive social (or prosocial) opportunities refer to activities that provide youth with chances to develop social skills and a sense of competence (Ramirez-Valles et al. 1998). Examples include church programs, community programs, and school-related activities.

influences youth problem behaviors more strongly than does support from neighborhoods or youth's perceptions about neighborhood environment (Bowen and Chapman 1996).

Children's behaviors, such as interpersonal aggression, are predicted by parenting processes (Griffin et al. 1999). A key component of those processes is family management, which includes parental monitoring of the child's behavior, the establishment of rules, and parent-child bonding. Positive family management practices are likely to be protective factors in youth's social and academic development (Griffin et al. 1999; O'Neil, Parke, and McDowell 2001). Whether parents monitor the behavior of their child is one of the most influential predictors of youth behaviors (e.g., sexual risk taking; Huebner and Howell 2003). Moreover, close and supportive family relationships, exemplified in bonding to and identification with parents who endorse positive behaviors, negatively predict youth engagement in problem behaviors (e.g., substance use, disruptive behaviors, and association with deviant peers; Allison et al. 1999; Greenberg 1999; Brody et al. 2001). Accordingly, this work examines family management and youth's bonding to parents. It is hypothesized that levels of family management and parent-child bonding, respectively, are negatively associated with levels of youth substance use.

A Network of Neighborhood Risk and Family Protection

Recent research questions the complex links between neighborhood risk and the role of family, particularly whether families can protect against contextual adversity (Furstenberg et al. 1998; Burton and Jarrett 2000; Duncan and Raudenbush 2001; Beyers et al. 2003). However, works rarely address the complexity of how neighborhood risk factors and family factors interrelate to influence youth behaviors. Linda Burton and Robin Jarrett (2000) point out that family factors are not adequately accounted for in existing research on the relations between neighborhood factors and youth behaviors.

Parenting processes are embedded in larger neighborhood contexts (Jencks and Mayer 1990; Sampson 1997). Robert Sampson (1997) argues that family management practices, especially monitoring of youth, are closely intertwined with characteristics of community social organization. In neighborhoods characterized by high rates of poverty, pervasive unemployment, high residential mobility, and high levels of ethnic heterogeneity, residents may be unable to develop a community structure through which they realize common values and maintain effective social control over youth behaviors. In these contexts, the effects of family structure and intrafamily interactions between parents and children may be particularly important in the development of effective monitoring of youth behaviors (Sampson 1997).

Greg Duncan and Stephen Raudenbush (2001) further suggest that families have two possible roles in influencing youth development together with neighborhoods. First, the family serves as a mediator, in that neighborhoods influence family functioning, and such functioning, in turn, affects youth behaviors. In this mediating process, if family is able to resist some of the adverse influence of neighborhoods on family functioning, it is possible to mitigate the effects of unfavorable neighborhood conditions on youth behaviors. Second, the family acts as a moderator, such that family and neighborhood conjointly influence youth development. For instance, restrictive parenting style may have a positive effect in reducing youth problem behaviors in a particularly impoverished neighborhood, but such style may not have any effect or may have adverse effects in moderately poor or affluent neighborhoods. However, it is not a simple task to disentangle family's mediating role from its moderating role (Duncan and Raudenbush 2001). In addition, challenges emerge in precisely identifying the ways that families mediate the relationship between neighborhood factors and youth behaviors (Burton and Jarrett 2000). To begin with, only a few existing studies (e.g., Klebanov, Brooks-Gunn, and Duncan 1994; Brody et al. 2001; O'Neil et al. 2001) explicitly examine how neighborhoods

affect parenting behaviors. Findings are also not conclusive about the specific associations between family variables and neighborhood variables (Burton and Jarrett 2000). Thus, more sustained efforts are warranted in this area of research. This article expands on existing research by investigating how family factors mediate neighborhood's influences on a specific youth behavior, substance use.

Figure 1 illustrates a proposed ecological framework to explain the early stages of substance use among ethnically diverse urban adolescents. The model incorporates the social influences of family and neighborhood. The proposed framework hypothesizes mechanisms through which children's perceptions about neighborhood quality are linked to their behaviors. The current study seeks to test the parts of the framework suggesting that family processes mediate the effects of neighborhood characteristics on youth substance use. For the purposes of this study, neighborhood characteristics include availability of, and perceptions about, resources and social opportunities in the neighborhood. Level of neighborhood safety is also included. Family processes include family management and parent-child bonding.

Theoretical and empirical research supports the finding that families play mediating roles in relationships between neighborhoods and youth behaviors (e.g., Brook et al. 1989; Klebanov et al. 1994; Hill and Herman-Stahl 2002). Family factors are often as effective as neighborhood factors at predicting youth behaviors; in the reduced form of equations, family factors significantly diminish the influences of neighborhood on youth behaviors (Brooks-Gunn et al. 1993). Judith Brook and her colleagues (1989), who measure neighborhood characteristics by examining residents' perceptions of neighborhood social cohesion, of personal safety levels, and of satisfaction with the neighborhood, find that neighborhood characteristics have no direct effect on adolescent drug use if the analysis accounts for measures of affection and conflict in the parent-child relationship. Thus, it is possible that a significant proportion of the effects of neighborhood on adolescent substance use are mediated by family factors. Frank Furstenberg and his colleagues (1998) elaborate on the finding, observing that family management practices evolve over time and partly in response to neighborhood conditions. For instance, parents, especially those living in poor neighborhoods, may feel forced to adopt increasingly restrictive family management strategies to shield their children from adverse conditions. They may also pursue social and human capital by seeking resources outside of their neighborhoods (Furstenberg et al. 1998).

Parenting ability can be also diminished by a disadvantaged neighborhood environment (Klebanov et al. 1994; Hill and Herman-Stahl 2002). Pamela Klebanov and associates (1994) show that living in a poor neighborhood is associated with reduced maternal warmth and reduced ability to provide an adequate physical environment for children. It is not difficult to imagine that parents with chronically scarce resources and support eventually become less effective in providing adequate support and capital for their children. In the process of these struggles, the relationships with their children may become distant. Parents may no longer be able to foster positive motivation in their children by instilling beliefs and values. The current study thus suggests two hypotheses.

First, adverse neighborhood conditions are posited to undermine family processes. That is, it is posited that neighborhood risk factors, lack of youth's attachment to their neighborhoods, lack of positive social opportunities available in neighborhoods, and high rate of crime (perceived by youth) in neighborhoods negatively predict the presence of family management practices in the youth's family and bonding to parents. The second hypothesis is that the lower the likelihood that youth report the presence of family management practices in their family and bonding with parents, the lower the level of youth substance use; the relationships between neighborhood factors and youth substance use are posited to decline if analyses take family management practices and bonding to parents into account.

Racial and Ethnic Differences

Different racial and ethnic groups may, on average, be subject to different types of environments (McLoyd et al. 2000). However, there is limited evidence on the way in which environments affect youth from different racial and ethnic groups. To put this in other terms, evidence is lacking on whether different cultural ethnic youth groups have similar risk and protective factors for problem behaviors.[2] Studies highlight that there are group differences in levels of problem behaviors, as well as in likely risk and protective factors (e.g., Catalano et al. 1993; Newcomb 1995). A few studies find some differences in the correlations of potential risk and protective factors with youth behaviors among different ethnic groups (Newcomb 1995; Deater-Deckard et al. 1996). Little research investigates such complex interrelationships as whether the interplay among several risk and protective factors predicts youth behaviors differently across racial and ethnic groups. Studies on neighborhood, in particular, tend to focus on inner-city samples that contain rather homogenous populations (O'Neil et al. 2001) or have subgroups with sample sizes that are too small for meaningful examination of group differences.

The family factors may be particularly strong mediators for ethnic minority youth. The parental roles of protector and gatekeeper are critical for minority children, especially because these children are likely to face structural and social adversities outside the family (Spencer, Swanson, and Cunningham 1991). Ethnic minority youth disproportionately reside in neighborhoods with elevated levels of crime, unemployment, and drug trafficking (Sampson 1997). At the same time, as mentioned above, there are some indications that ethnic minority families living in poor neighborhoods are likely to actively seek resources for their children and be restrictive in parenting to protect children from the undesirable conditions of the neighborhood environment (Furstenberg et al. 1998).

Of studies examining similarities and differences of etiologic factors and correlates across racial and ethnic groups, few examine Americans of Asian Pacific Islander (API) ethnicity (for exceptions, see Catalano et al. 1992; Kim and Ge 2000; Choi et al. 2005). Consequently, although API Americans make up one of the fastest growing ethnic groups in the United States, they remain one of the least studied. The same is also true of multiracial youth (Shakib et al. 2003; Choi et al. 2005, 2006). The numbers of multiracial children and adolescents have grown rapidly. Although these children identify themselves as multiracial, research rarely regards them as part of a distinct group. This study thus includes these racial and ethnic groups, examining how the groups are affected by relationships among neighborhood and family factors and whether neighborhood and family factors are correlates of substance use among these youth. It also investigates whether associations between those factors and substance use are consistent across four racial and ethnic groups: whites, API Americans, African Americans, and those who identify themselves as multiracial.

Efforts to better understand relationships among correlates of substance use by minority youth can be first steps toward examining the etiology of such use. Studies differ in the ways they examine racial and ethnic differences. Although several studies explicitly test the interactions between different correlates and ethnicity (e.g., McLeod and Nonnemaker 2000; Choi et al.

[2]Risk factors are those characteristics, correlates, causes, and conditions that are associated with an increased likelihood of problem behaviors or disorders (Institute of Medicine 1994; Dekovic 1999). Risk factors can reside with the individual but may also reside within the family, community, or institutions (Institute of Medicine 1994). Examples include low self-esteem, poor school motivation, punitive and inconsistent parenting, association with deviant peers, and adverse neighborhood conditions (Dekovic 1999). Unlike that for risk factors, the definition of protective factors has been subject to much debate (Dekovic 1999). Protective factors can be defined as those factors that are simply opposite of risk factors. They are sometimes defined as those factors associated with positive behaviors that foster competence, promote successful development, and thus decrease the likelihood of engaging in problem behavior. Protective factors may also buffer risk but may provide no advantage if risk factors are absent (Institute of Medicine 1994; Dekovic 1999).

2005, 2006), others consider ethnicity to be an exogenous variable or examine each group separately (e.g., Klebanov et al. 1994). The last two of these three approaches do not address investigations of the moderating effects of race and ethnicity. By more explicitly and consistently testing moderating effects of race and ethnicity, researchers will gain a better understanding of how groups differ from one another with respect to the magnitudes of relationships between correlates and youth behaviors.

Methods

Overview of Project and Sample Selection

The data for this study were collected in 1994 as a part of the baseline interview for the Minority Youth Health Project (MY Health).[3] Data used for this article were collected at MY Health's Seattle site. The primary aim of the MY Health study was to improve the health of minority youth by focusing on preventing problem behaviors in four interrelated areas: interpersonal violence, adolescent pregnancy, sexually transmitted disease, and substance use. The Seattle site conducted an experimental test of a community-based program that sought to intervene at neighborhood and individual levels through the creation of community action boards and youth development workshops. The target samples for the project were minority youth between the ages of 10 and 14.

Data were collected using a survey conducted at four middle schools in Seattle. The sample is drawn from four of the middle schools with the highest percentages of ethnic minority students. Families were alerted to the survey by an introductory letter mailed to parents of all enrolled students. Parents could withdraw their child from participation by returning a postcard. Project staff distributed the self-administered survey to students during 50-minute class periods. Staff collected surveys over two separate class days at each of the middle schools. Those students who did not want to participate were asked to remain in the classroom reading other material during the survey. Project staff remained in each of the classrooms during survey administration; teachers did not. Of the total number of enrolled students at the four schools ($N = 3,104$), 562 (18.1 percent) students declined to participate in the study or were absent. As a result, 2,542 (81.8 percent) students completed the survey.

Sample Description

The average age of the students in the study is 12.9 years (SD = 1.00). Approximately one-third of the sample is in each of the sixth, seventh, and eighth grades. Slightly more than 50 percent are boys. Youth identified themselves as API Americans ($n = 584$, 23 percent), African Americans ($n = 561$, 22.1 percent), multiracial ($n = 459$, 18.1 percent), whites ($n = 732$, 28.8 percent), Native Americans ($n = 118$, 4.6 percent), and Hispanics ($n = 70$, 2.8 percent). This analysis omits Hispanics and Native Americans because few youth identified with these groups. The result is a total sample size of 2,336 adolescents. Slightly more than 50 percent of the sample reported that their biological parents were married or living together, 23 percent reported that they were born outside of the United States, and 37 percent were from low-income families.[4]

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[3]Although the data were collected in 1994, studies using this data set are informative. As reported in a recent study (Beyers et al. 2004), risk and protective factors identified in literature, some for the first time as many as 30 years ago, continually emerge in recent and longitudinal studies. It is clearly valid to ask whether the levels of certain risks change over time, but the relationships between these factors and youth behaviors are unlikely to change over time (Beyers et al. 2004). In addition, few studies examine similarities and differences in these relationships across racial and ethnic groups; this data set thus provides a great opportunity to fill gaps in literature with unusually diverse racial and ethnic samples. A second wave of data was collected in 1997 after the intervention was completed. These two data sets are cross-sectional, and no identifiable information was collected to link these cases with the baseline.
[4]Youth are considered to come from low-income families if their household receives food stamps or is eligible for the federal free or reduced-price school lunch program.

Measures

The constructs suggested in figure 1 are examined here as latent variables. These variables are measured by multiple indicators. At least three indicators (but not more than five) are needed per latent construct (Byrne 1994;Kline 1998). Typically, two or three survey items are parceled to create each indicator (see table A1 in the appendix). Parceling involves combining several items into one indicator by averaging or summing the items (Kishton and Widaman 1994). There are two methods of parceling: (1) items in each parcel are selected from a single domain of the construct, or (2) items in each parcel represent the multiple aspects of a construct (Kishton and Widaman 1994). Each method has its unique sphere of application (Kishton and Widaman 1994). The current study takes the second approach in parceling. This is the case because the main focus of the study is to examine the structural model, not the multiple subdomains of the constructs. Moreover, parceling with the second approach helps to reduce the number of parameters to be estimated, thus enabling tests of the model with smaller sample sizes.

In the current analyses, the mean of the items making up an indicator is computed as the value of that indicator if a youth responded to at least half of the items making up an indicator. In all coding, higher scores reflected more of the indicated construct. The alpha reliability coefficients provided below are for the items forming the construct, not the indicators.

Neighborhood Risk Factors

Lack of attachment to neighborhood—This is measured by five items that assess how much students like their neighborhood and whether they have meaningful relationships with people in the neighborhood. For example, survey items include "If I had to move, I would miss the neighborhood I live in now" and "People in my neighborhood care about how things are going in my life." The response categories range from (1) "Very true" to (3) "Not true." The alpha reliability coefficient is 0.78. Three indicators (labeled LAN1, LAN2, and LAN3) are created for this construct.

Lack of involvement in positive social opportunities in the neighborhood—This construct is assessed by asking the students whether they are engaged in opportunities for social activities (e.g., school, church, and community) in the neighborhood. Five items are used. An example is "In your free time, do you spend time doing sports at school?" The response options are (1) "Yes" and (2) "No." The alpha reliability coefficient is 0.47. Three indicators (labeled LON1, LON2, and LON3) are created for this construct.

Lack of neighborhood safety—This is assessed by 11 items that ask the students about their perceptions of their neighborhoods, safety, and crime, as well as about whether they have been hurt or victimized by others in their neighborhood. Items include statements such as "People in my neighborhood get robbed," "People getting shot or stabbed," and "I often feel unsafe in my neighborhood." The response options range from (1) "Not at all" to (4) "A lot." Three indicators (labeled LNS1, LNS2, and LNS3) are created. The alpha reliability coefficient is 0.74.

Family Protective Factors

Family management—Family management is measured by 10 items concerning parental supervision and rules for such behaviors as drinking, smoking, and using drugs. The questions include "In the evenings, how often is there at least one adult with you at home?" and "Does your family have rules about using drugs?" The response categories for parental supervision questions range from (1) "Rarely or never" to (4) "All the time." For questions on family rules, the response options are (1) "No" and (2) "Yes." Three indicators (labeled FM1, FM2, and FM3) make up the construct. The alpha reliability coefficient is 0.76.

Bonding to parents—This construct is assessed by four items for students in single-parent families and eight items for students in two-parent families. The items ask each student to describe the relationships with his or her mother and father, as well as the student's perception of meaningful involvement in the family. Sample items are "How much of the time do you feel very close to your mother/father?" and "How often do you share thoughts and feelings with him/her?" The response options range from (1) "Rarely or never" to (4) "All of the time." Three indicators (labeled BP1, BP2, and BP3) make up this construct. The alpha reliability coefficient is 0.87.

Substance Use

Substance use is assessed by seven items. These items tap how often youth used substances in the month, 3 months, and year prior to the survey.[5] The considered substances include alcohol, tobacco, marijuana, inhalants, cocaine, and crack. Questions also assess the rates of binge drinking, getting high, and getting drunk. Because response options vary, scores for the individual items are standardized to have a distribution with a mean of zero and a standard deviation of one. Three indicators (labeled SUB1, SUB2, and SUB3) make up the substance use construct. The alpha reliability coefficient of the items is 0.89.

The average rate of the seven substance use items is 1.14 (SD = 0.40) for whites, 1.19 (SD = 0.43) for African Americans, 1.11 (SD = 0.29) for API Americans, and 1.29 (SD = 0.68) for multiracial youth. The average rates of substance use are examined in a regression model with racial and ethnic groups dummy coded (white youth are the reference category). The results show that there is no statistically significant difference between whites and African Americans. Rates of reported substance use among API Americans are statistically significantly lower than those among their white counterparts. Multiracial youth report statistically significantly higher rates of use than white youth. The ages of initiation for smoking, drinking, using marijuana, stiffing glue, using crack or cocaine, and being drunk or high, when examined individually, are not statistically significantly different across the racial and ethnic groups in this sample.

Self-Identification of Race and Ethnicity

All respondents were asked "Are you (*a*) black or African American, (*b*) Native American or American Indian or Alaska Native, (*c*) Asian or Pacific Islander, (*d*) Caucasian or white, (*e*) Hispanic or Latino?" Individuals were allowed to answer "Yes" or "No" to each of these questions. Respondents also were given the opportunity to specify a racial and ethnic category other than those identified (hence, the "other" category). A race variable is computed by categorizing students as African American, API American, white, Latin American, Native American, and multiracial (for those youth who identify themselves as being of more than one race or ethnicity).

Analytic Strategy

Structural equation modeling with maximum likelihood estimation is used to estimate the proposed model (fig. 1). The structural equation modeling method is an appropriate framework to test mediational hypotheses (Baron and Kenny 1986;Hoyle and Smith 1994). It is also a useful strategy to simultaneously investigate the combined and the unique effects of each variable (Ramirez-Valles et al. 1998). This study uses the structural equation modeling technique to test the mediating hypotheses proposed by the ecological framework depicted in figure 1. The analyses examine the direct and indirect effects of neighborhood characteristics,

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[5]The items inquire about the number of uses of common substances (e.g., cigarettes and alcohol) within the month prior to survey. Other items inquire about substances used less frequently (e.g., crack or cocaine) within the year prior to survey. Although the time frames are different, each item measures rate of each behavior. There is no case of double counting in any of the indicators because each behavior is measured only once. The response options are standardized, and the latent constructs indicate the degrees of substance use.

considering whether parenting processes mediate the effects of neighborhood characteristics on substance use. The analyses rely on the EQS Structural Equation Modeling program (Bentler 1995).

As recommended by James Anderson and David Gerbing (1988), a two-step estimation process is used. The first step relies on confirmatory factor analysis to examine the fit of the measurement model and, thus, to assess the reliability and validity of the measures (Shumow and Lomax 2002). Using multiple-group confirmatory factor analysis, the authors also determine whether the measurement model is equivalent across racial and ethnic groups. The second step tests the structural model (fig. 1). It determines the fit of the model and uses multiple-group methods to examine whether the hypothesized relationships among the model variables are equivalent across racial and ethnic groups (Byrne 1994).

For both measurement and structural models, multiple-group analyses compare two nested models (i.e., unconstrained and constrained models; Byrne 1994). In each case, the unconstrained model allows all model parameters to be estimated freely for each group. The unconstrained measurement model establishes whether configural invariance exists across groups (Vandenberg and Lance 2000). That is, it assesses whether there is a consistent pattern of factor loadings for each construct across groups. That pattern includes the direction and statistical significance of the factor loadings (Horn and McArdle 1992; Hancock, Stapleton, and Berkovits 1999; Vandenberg and Lance 2000). In the constrained measurement model, cross-group equality constraints are placed on all factor loadings to assess metric invariance. The metric invariance exists across groups if there is no statistically significant difference between the unconstrained measurement model and the constrained measurement model with equality constraints on factor loadings. Covariances among factors are freely estimated for each group (Byrne 1994; Raykov 1997).[6] In the constrained structural models, cross-group equality constraints are placed on all hypothesized paths between factors (Hancock et al. 1999). These constraints enable examination of whether there are statistically significant differences in the magnitudes of path parameters across groups.[7] For both measurement and structural models, the equality constraints are made between the reference group, white youth, and the other three groups, African American, API American, and multiracial youth. In the measurement models, all factor loadings and factor correlations are freely estimated, but factor variances are constrained to 1.00. In the structural models, one of the indicators of each latent variable is fixed to 1.00. This is done in order to scale the factors. Factor variances and the hypothesized paths are freely estimated.

Fit of all models is assessed by examining model chi-square (χ^2), the nonnormed fit index (NNFI; Bentler 1995), the comparative fit indices (CFI; Bentler 1990), and the root mean squared error approximation (RMSEA; Browne and Cudeck 1993). A good fit is indicated by

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[6]Complete measurement and factorial invariance is obtained if there are identical (or corresponding) cross-group factor loadings, factor variances, factor covariances, error variances, and error covariances (Hancock, Stapleton, and Berkovits 1999). However, the equality of error variances and covariances tends to be the least important hypothesis to test (Byrne 1994). With few exceptions (e.g., growth hypotheses), researchers use less restrictive invariance criteria in which only the corresponding factor loadings are equivalent across groups (i.e., metric invariance; Byrne, Shavelson, and Muthen 1989). Thus, tests of invariance usually begin with a test of the equality of factor loadings across groups (Byrne 1994). Some argue that even metric invariance is too rigid and unrealistic for cross-group analysis (Horn and McArdle 1992; Hancock et al. 1999).

[7]In testing structural models across groups, researchers inconsistently handle invariance of measurement. Consensus indicates that configural invariance should be established to proceed to further restrictive testing (Byrne et al. 1989; Horn and McArdle 1992; Vandenberg and Lance 2000). However, opinions vary on how to handle metric invariance (Horn and McArdle 1992; Vandenberg and Lance 2000). Hancock and associates (1999) recommend that, if the focus of research is on the latent structural relations, researchers minimize the use of constraints. They assert that improper constraints can impair the accuracy of structural invariance tests by compromising the integrity of the group's interfactor covariances and by introducing badness of fit. Kenneth Bollen (1989) recommends testing the paths before testing metric invariance if the main focus of the investigation is to see the differences of path coefficients. Several studies follow this guideline (e.g., Kim and Ge 2000; Fleming et al. 2002). In light of the guidelines and published examples, equality constraints are not placed on factor loadings in this study. Measurement invariance testing further justifies the decision.

NNFI and CFI values of greater than 0.90 (Byrne 1994). Values of less than 0.05 for the RMSEA are considered evidence of a good fit, values between 0.05 and 0.08 indicate a fair fit, and values greater than 0.10 represent a poor fit (Browne and Cudeck 1993). The statistical significance of the estimated parameters is examined with z-statistics and a 0.05 level of probability.

Several measures are used to evaluate the statistical significance of the difference between the unconstrained and the constrained models. The statistically significant differences between these models mean that there is statistically significant group invariance in measurement or structural models across racial and ethnic groups compared. The change in χ^2 relative to the change in degrees of freedom indicates whether the constrained model has a statistically significantly worse fit than the unconstrained model. The change in χ^2 is also an indication of statistically significant group invariance (Byrne 1994). However, this test is sensitive to large sample size and may lead to an overly conservative test of invariance (Rosay et al. 2000; Cheung and Rensvold 2002). Thus, following the example of André Rosay and associates (2000), the current analyses examine the ratio of the change in χ^2 to the change in degrees of freedom between the two models ($\Delta\chi^2/\Delta df$). A value of five or greater indicates a significant noninvariance (Rosay et al. 2000), and a change in CFI of greater than 0.01 indicates statistically significant differences (Cheung and Rensvold 2002). The Lagrange Multiplier test on the constrained models is used to show which equality constraints contribute most to degradation in model fit (Bentler 1990).

Results

Measurement Model Testing

The measurement model tests the viability of six latent factors specified by the proposed ecological model (fig. 1). There are three neighborhood risk factors: lack of attachment to neighborhood (F1), lack of involvement in positive social opportunities in neighborhood (F2), and lack of neighborhood safety (F3). There are two family protective factors: family management (F4) and bonding to parents (F5). Substance use (F6) also is measured.

The unconstrained multiple-group confirmatory factor analysis was conducted to compare the factor structure and loadings. It shows that all factor loadings are statistically significant and in the expected directions (loadings range from 0.37 to 0.89) across all four groups. The results also suggest that the factor structure, including direction and significance of factor loadings, is consistent across groups. This indicates configural invariance. The standardized factor loadings and z-statistics are presented in table 1, arrayed by racial and ethnic groups. Correlations among factors are also presented in table 2 for white and African American youth groups and in table 3 for API American and multiracial youth groups.

The analyses suggest that the fit of the unconstrained measurement over all groups is good ($\chi^2[480] = 1,067.42$; NNFI = 0.96; CFI = 0.97; RMSEA = 0.02). Analyses also suggest that the constrained measurement model, with equality constraints placed on factor loadings across groups, showed a good fit ($\chi^2[516] = 1,279.35$; NNFI = 0.95; CFI = 0.96; RMSEA = 0.03). The difference between the unconstrained and the constrained measurement models is statistically significant ($\Delta\chi^2[36] = 211.93$, $p < 0.05$). The change in CFI from the unconstrained measurement model to the constrained measurement model is equal to 0.01, but the ratio of the change in χ^2 ($\Delta\chi^2$) to the change of degree of freedom (Δdf) between the two models is 5.89, providing only modest support for metric noninvariance. The multivariate Lagrange Multiplier test for releasing constraints indicates that the largest differences concern the indicators of substance use ($\chi^2 = 82.34$ for SUB3 and $\chi^2 = 36.70$ for SUB2 between white and multiracial youth, $p < 0.001$; $\chi^2 = 28.21$ for SUB3 between white and API American youth, $p < 0.001$). The size of the largest coefficient differences in factor loadings across groups ranges

from 0.09 to 0.17. Other, smaller differences are observed between the white group and the other three groups on neighborhood safety (LNS2: $\chi^2 = 4.08$ for African Americans, $\chi^2 = 9.72$ for API Americans, $\chi^2 = 4.88$ for those identifying themselves as multiracial, $p < 0.05$; LNS3: $\chi^2 = 4.00$ for African Americans, $\chi^2 = 4.87$ for API Americans, $p < 0.05$). The size of these differences in factor loadings is less than 0.07. Although the ratio of the change in χ^2 to the change of degree of freedom between the unconstrained and the constrained measurement models ($\Delta\chi^2/\Delta df$) indicates modest metric noninvariance, analyses suggest that there is configural invariance for all factor loadings and metric invariance for the majority of factor loadings. The change in model fit measured by the change in CFI indicates invariance, and at least one factor loading per factor is estimated to be invariant across groups. Moreover, the differences in the size of the factor loadings are relatively small across groups. Therefore, the authors conclude that there is sufficient measurement invariance to permit testing of the structural model.

Structural Model Testing

Comparisons of the equality of structural model across racial and ethnic groups are conducted using multiple-group structural equation modeling. The unconstrained structural model fits the data well ($\chi^2[484] = 1,023.22$; NNFI = 0.93; CFI = 0.95; RMSEA = 0.03). The constrained structural model with equality constraints placed on paths also shows a good fit ($\chi^2[517] = 1,097.99$; NNFI = 0.93; CFI = 0.94; RMSEA = 0.03). The difference between the unconstrained and the constrained structural models is statistically significant ($\Delta\chi^2[33] = 74.77$, $p < 0.05$). The change in CFI between the unconstrained and constrained models is equal to 0.01, and the ratio of the change in χ^2 to the change of degree of freedom between the unconstrained structural model and the constrained structural model is 2.2. Thus, the evidence suggests that the ecological framework, and hypotheses generated from it, fit the data well for all racial and ethnic groups. The total variance in substance use accounted for by the model is 41 percent for white youth, 27 percent for African American youth, 26 percent for API American youth, and 38 percent for multiracial youth. Path coefficients of each path are presented in table 4 for each group. Figure 2 presents the ecological framework showing significant paths for groups. For example, if the path from lack of attachment to neighborhood to substance use is significant among a group, the group membership (e.g., white, African American, API American, or multi-racial) is noted on the path.

However, analyses suggest some differences in the magnitude and significance of the direct associations among factors across groups. Results of the multivariate Lagrange Multiplier test indicate that there are some statistically significant differences in the coefficients. White youth's path from family management to substance use differs from that for multiracial youth ($\chi^2 = 28.07$, $p < 0.001$). A similar difference is observed between white and African American youth ($\chi^2 = 6.99$, $p < 0.05$). Statistically significant differences are also found in the coefficients for the paths from lack of neighborhood safety to parent-child bonding and for those from lack of neighborhood attachment to substance use. White youth's path from lack of neighborhood safety to parent-child bonding differs from that for their African American counterparts ($\chi^2 = 8.09$, $p < 0.05$); the path of white youth from lack of neighborhood attachment to substance use also differs from that for multiracial youth in the sample ($\chi^2 = 4.02$, $p < 0.05$).

With respect to indirect relations, the analyses suggest that, among the three minority groups, lack of neighborhood attachment (F1) has statistically significant indirect relations to substance use via family factors among the three minority groups (the standardized coefficients are 0.038 for API Americans, 0.052 for African Americans, and 0.080 for multiracial youth; $p < 0.05$). Lack of neighborhood opportunities has statistically significant indirect relations only among whites (0.048, $p < 0.05$). Finally, lack of neighborhood safety has statistically significant indirect relations (via family factors) with substance use among all groups except API

Americans (0.041 for whites, 0.037 for African Americans, and 0.089 for multiracial youth, $p < 0.05$). To examine more closely whether family protective factors mediate the relations between neighborhood risk and youth substance use, analyses compare results from the structural model testing (table 4) with those from bivariate correlations among the latent constructs (tables 2 and 3). Mediating relations are suggested if there are noticeable reductions in the strengths of the bivariate relationships between neighborhood risks and youth substance use in the structural models, where family protective factors are considered simultaneously with the neighborhood risks and measures of substance use (Baron and Kenny 1986). Contrary to the hypotheses, the strengths of relationships between neighborhood risks and youth substance use do not decrease or change in statistical significance when family protective factors are included. This is the case in all racial and ethnic groups. For example, the bivariate relationships between each of three neighborhood risks and substance use are statistically significant (relationships range from 0.13 to 0.63, $p < 0.05$). The relationships remain so at comparable levels of magnitude (from 0.19 to 0.59, $p < 0.05$) in the structural equations. The strength of the relationships between family protective factors and youth substance use does change when comparing bivariate and structural equation analyses. One of the major changes occurs with respect to white youth. The bivariate relationships including family protective factors either become statistically nonsignificant (the path from family management to substance use changes from −0.42 [$p < 0.05$] to 0.06) or are reduced in size (the path from parent-child bonding to substance use changes from −0.33 [$p < 0.05$] to −0.12). Similar but smaller changes occur with respect to the API American and multiracial groups but not in the African American group, for which the bivariate relationships between family factors and youth substance use remained almost unchanged in the structural equations.

Discussion

The development of effective interventions to prevent or reduce substance use among adolescents should be critically informed by an understanding of the complex network of associations among various ecological contexts. Interventions should also consider whether relationships can be generalized across racial and ethnic groups. This study attempts to add to that understanding by simultaneously examining risk and protective factors associated with neighborhoods and families and by explicitly investigating similarities and differences of these relationships across different racial and ethnic groups.

The ecological framework (fig. 1) hypothesizes that neighborhood risk factors are positively associated with youth's substance use directly. They are also hypothesized to associate indirectly, as they are posited to be mediated by family protective factors. Results of the current analyses suggest that the proposed ecological framework fits the data well but that there are important differences in relations among racial and ethnic groups. Still, there is much that is consistent across groups.

First, the hypotheses suggest that there are direct relationships between neighborhood risk factors and youth's substance use. The results show that lack of neighborhood safety is statistically significantly and positively associated with substance use across all groups. There indeed is strong support for the hypothesis that lack of neighborhood safety and high neighborhood crimes affect youth behaviors, including school performance (Bowen and Bowen 1999), aggressive behaviors (Griffin et al. 1999), and youth alcohol use (Duncan et al. 2000). Studies concur that the presence of high rates of crime and lack of safety indicates lack of rules, monitoring, and social cohesion among neighbors (Brook et al. 1989). The current study confirms that neighborhood safety is strongly associated with the rates of substance use among youth. This relationship is found to be statistically significant and invariant across various racial and ethnic groups.

Another research question is the extent to which neighborhood disadvantages diminish positive family functioning. In general, results suggest that neighborhood risk factors are statistically significantly and negatively related to family protective factors. The findings support the hypothesized relationships and show that the presence of certain neighborhood risks may negatively affect family functioning. For example, lack of attachment to neighborhood is negatively related to bonding to parents. The relations are similar across all racial and ethnic groups. The results also show that the presence of crimes and victimization in the neighborhood is associated with diminished family management in all groups.

The results also include several critical differences across racial and ethnic groups. For example, results show that the relation between substance use and low attachment is statistically significant only among white youth. The same is also true of the relation between substance use and lack of social opportunities. This finding may imply that these neighborhood risks are more influential among white than other groups. However, lack of attachment to neighborhood is only indirectly (through family management) associated with substance use among multiracial youth. Similarly, lack of social opportunities indirectly relates to substance use through family management only for African American youth. These findings require further empirical support, but they tentatively suggest that neighborhood risks may operate differently for youth of various races and ethnicities. Results suggest that neighborhood safety is related to parent-child bonding in all groups except the African American respondents. This may imply that African American families have more resilience than families in the other groups. We hypothesized that the effects of neighborhood risks on positive parenting processes are equally negative across groups, but there may be variations in how neighborhood adversity influences family socialization.

We further hypothesized that neighborhood risk factors are mitigated by family protective factors. Some other studies show that neighborhood effects become modest if analyses account for parenting strategies and family management (O'Neil et al. 2001). Children living in disadvantaged or unsafe neighborhoods are shown to benefit from such firm parenting practices as parental supervision and the establishment of clear rules (Hill and Herman-Stahl 2002). But, to a large extent, the findings from this study do not provide strong support for these claims; the influences of neighborhood risks remain statistically significant after accounting for family protective factors. The results also reveal notable racial- and ethnic-group differences in relationships between family factors and substance use if neighborhood factors are included in the analyses. When neighborhood risk and family protective factors are examined in structural equations, there is a noticeable decrease in the strength of family protection among white and API American youth. But family management remains statistically significantly related to substance use among multiracial youth, and the magnitude of the relation between family management and substance use does not change in African American families. The latter finding may be an indication of the resilience among African American families in comparison to that among white counterparts.

These findings also suggest that neighborhood contexts may be more critical for white and API American youth than for their counterparts in other groups. However, family management, especially in the absence of positive neighborhood environment, may be much more critical for African American and multiracial families than for white and API American families. To examine whether these findings are related to the level of neighborhood adversity (i.e., white and API American families live in safer and more resourceful neighborhoods than African American and multiracial families), analyses examine the means of each neighborhood indicator. Results suggest that African American and multi-racial youth are more likely to report neighborhood risks than white youth but that API American youth are also more likely to report neighborhood risks than white youth. Thus, the differences in racial and ethnic groups are not explained by the differences in the level of neighborhood adversity. Other research

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suggests that family management, measured by parental monitoring and having rules, is one of the strongest determinants of youth behaviors (Huebner and Howell 2003). However, the current study findings indicate that, when neighborhood risks are accounted for, family management only is a protective factor for multiracial and African American youth.

It might be argued that cultural differences of these groups are reflected in the racial and ethnic group differences among correlates of substance use found in this study. Culture often is used to explain racial and ethnic group differences (Sue and Okazaki 1990). However, culture is hard to define. Moreover, it is challenging to distinguish the effects of culture from those of the context in which culture is intertwined. In addition to the differences of cultural elements in each group, there are numerous confounding factors of race and ethnicity. One example is the average level of socioeconomic status of a group. In addition, within the same group, there are variations in immigrant generations in the United States. Caution is advised, and more complex understanding is needed, to explain racial- and ethnic-group differences by cultural differences.

This study has several limitations. First, because cross-sectional data are used, causal claims about the direction of associations cannot be made. Unfortunately, longitudinal data were not available. However, this study may provide a foundation for future predictive studies, which can provide a more rigorous scientific basis for effective preventive interventions, especially those targeting various racial and ethnic groups. Second, other important correlates of substance use are not included in this article because of the unavailability of constructs in the data. These factors include family income and psychopathology of parents. Third, data are self-reported by survey participants, although such reports have generally been found to be reliable and valid for many variables (Johnston, O'Malley, and Bachman 2001). Finally, the respondents of the study are mainly from one geographical location. Caution thus is advised in generalizing the findings.

While additional research is needed to translate the findings into intervention programs, this study has some implications for the development of interventions for ethnic minority youth. First, this study demonstrates that there are common correlates and pathways of substance use for adolescents, regardless of the youth's race and ethnicity. For example, neighborhood safety is associated with substance use, directly and indirectly, across all groups. This implies that preventive interventions should address issues of neighborhood safety and crime when targeting white, African American, API American, and multi-racial youth. At the same time, the findings also demonstrate that there are racial and ethnic group differences in the statistical significance and magnitude of relationships among theoretical constructs. For example, neighborhood risk factors of low attachment to neighborhood and lack of social opportunities may be more influential in predicting substance use among white than among other groups. Second, the protective effect of African American students' relationship with their parents is resilient to the threat of poor neighborhood safety. Further study is warranted to develop a better understanding of the predictive associations among neighborhood and family factors, especially insofar as those associations influence substance use among racial and ethnic subgroups, so that preventive interventions can be appropriately targeted. The contemporary American society is racially and ethnically more diverse than ever. This is primarily due to the dramatic increase in ethnic minority populations, especially children (Portes and Rumbaut 2001). Expansion of etiological comparisons is critical to effectively serve these growing segments of the society.

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Appendix

Table A1

Survey Items for Indicators

Construct and Indicator	Survey Items
Lack of neighborhood attachment:	
LAN1	If I had to move, I would miss the neighborhood I live in now.
	I like the neighborhood I live in.
LAN2	I know many people in my neighborhood by name.
	People in my neighborhood encourage me to do my best.
LAN3	People in my neighborhood care about how things are going in my life.
Lack of positive social opportunities in the neighborhood:	
LON1	In free time, do you spend time doing sports in community?
LON2	In free time, do you spend time doing school-related activity?
	In free time, do you spend time doing activities at youth or community center?
LON3	In free time, do you spend time doing sports at school?
	In free time, do you spend time doing church-related activity?
Lack of neighborhood safety:	
LNS1	Young people hang out in the neighborhood with nothing to do?
	People get shot or stabbed?
	In past 3 months, how many times were you badly hurt in physical fight?
	In past year, did someone cut or stab you?
LNS2	People get robbed?
	How much of the time do you feel unsafe in your neighborhood?
	In past year, how often have you been shot at?
	Has someone ever cut or stabbed you?
LNS3	Has someone ever shot at you?
	People get in fights and get beat up?

| Construct and Indicator	Survey Items
	Have you ever been badly hurt in physical fight?
Family management:	
FM1	How often do your parents know where you are and who with?
	Does your family have rules about when you can start dating?
	Does your family have rules about using drugs?
	Does your family have rules about helping around house?
FM2	In evenings, how often is there one adult at home also?
	Does your family have rules about cigarette smoking?
	Does your family have rules about getting into a physical fight?
FM3	Does your family have rules about completing homework?
	Does your family have rules about drinking alcohol?
	Does your family have rules about a curfew?
Parent-child bonding:	
BP1	How often do you share thoughts and feelings with your female parent?
	How often do you enjoy spending time with her?
	How often do you feel very close to him?
BP2	How often do you want to be the kind of person she is?
	How often do you share thoughts and feelings with your male parent?
	How often do you enjoy spending time with him?
BP3	How often do you feel very close to her?
	How often do you want to be the kind of person he is?
Substance use:	
SUB1	In the past months, how much did you smoke?
	In past year, how often did you use pot?
	In past year, how often did you get drunk or high?
SUB2	In the past months, how often did you drink?
	In past year, how often did you sniff?
SUB3	In the past months, how many times did you have five or more drinks?
	In past year, how often did you use crack or cocaine?
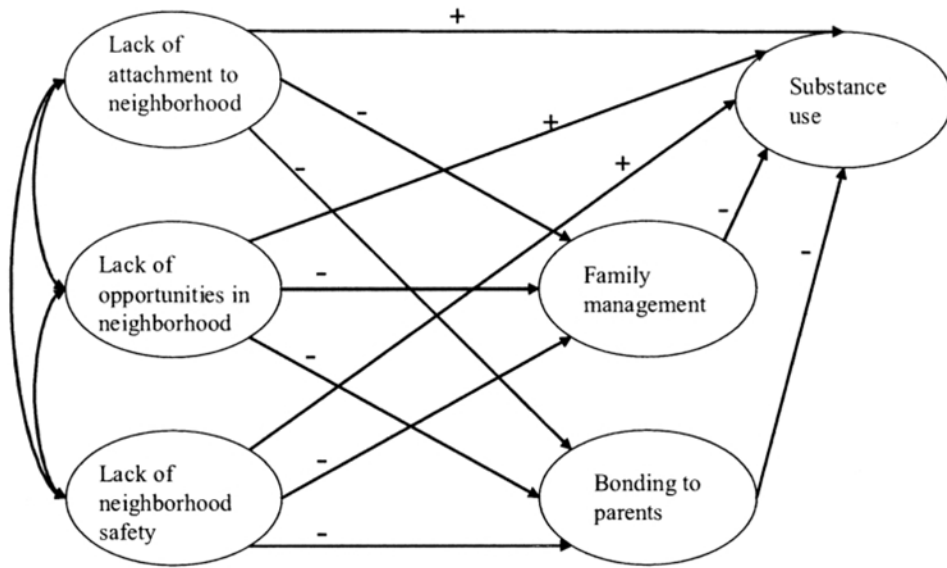
Fig. 1.
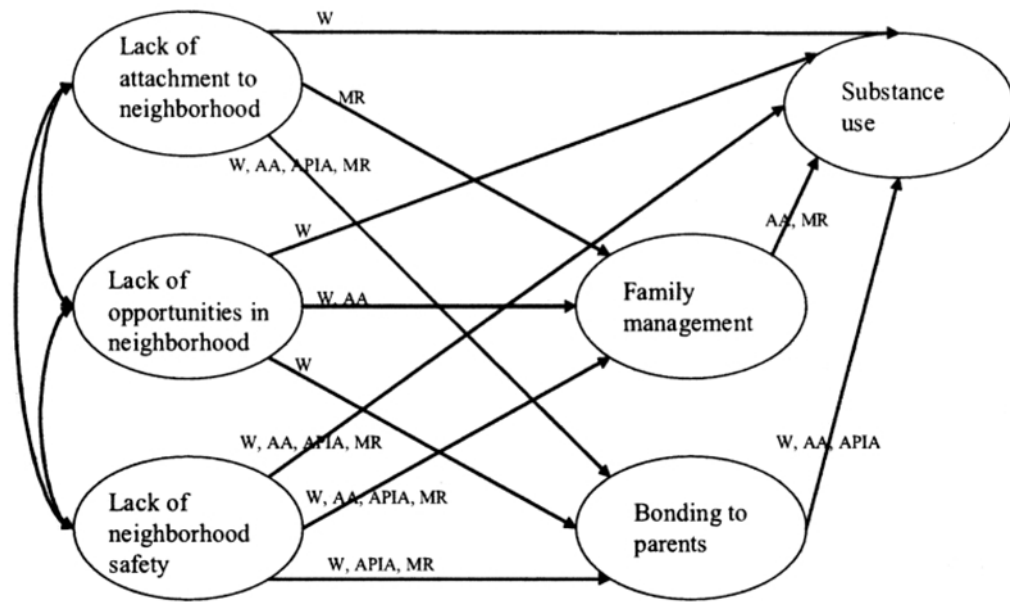Proposed ecological model

Fig. 2.
Ecological model with significant paths noted. W =white youth; AA =African American youth; APIA = Asian Pacific Islander American youth; MR =multiracial youth. Statistical significance at the 0.05 level.

Table 1

Multiple Group Confirmatory Factor Analysis: Standardized Factor Loadings and z-Statistics

FACTOR	White Youth		African American Youth		API American Youth		Multiracial Youth	
	Loadings	z-Statistic	Loadings	z-Statistic	Loadings	z-Statistic	Loadings	z-Statistic
Lack of attachment to neighborhood:								
LAN1	.61	16.77	.42	8.84	.51	11.35	.51	13.41
LAN2	.85	24.60	.78	13.94	.88	18.50	.83	22.06
LAN2	.83	23.99	.76	13.67	.70	15.30	.75	19.98
Lack of opportunities in neighborhood:								
LON1	.42	6.50	.44	6.58	.38	6.49	.43	8.44
LON2	.41	6.39	.53	7.28	.62	8.29	.60	10.27
LON2	.37	5.94	.55	7.36	.56	8.03	.48	9.09
Lack neighborhood safety:								
LNS1	.83	25.08	.79	18.04	.83	22.00	.83	22.96
LNS2	.83	25.16	.76	17.21	.73	18.45	.83	22.86
LNS2	.77	22.94	.74	16.49	.82	21.51	.83	25.84
Family management:								
FM1	.81	23.14	.80	18.18	.80	19.10	.84	24.97
FM2	.73	20.58	.74	16.64	.68	15.99	.70	20.20
FM2	.89	21.80	.78	17.56	.76	18.14	.77	22.94
Bonding to parents:								
BP1	.88	29.56	.91	23.90	.92	27.73	.87	28.70
BP2	.88	29.02	.86	22.20	.88	25.54	.84	26.95
BP2	.89	29.57	.83	20.83	.89	25.87	.87	28.76
Substance use:								
SUB1	.83	24.07	.78	17.59	.76	17.87	.81	25.37
SUB2	.68	18.85	.74	16.66	.75	17.66	.85	27.05
SUB2	.74	20.92	.76	17.14	.60	13.71	.84	29.80

Table 2

Correlation Matrix of Factors Among White and African American Youth

	Factors					
Factor	1	2	3	4	5	6
1. Lack of attachment to neighborhood	...	.25*	.10	-.15*	-.26*	.03
2. Lack of opportunities in neighborhood	.27*	...	-.05	-.18*	-.08	-.05
3. Lack of neighborhood safety	.28*	.04	...	-.19*	.01	.47*
4. Family management	-.19*	-.21*	-.41*	...	.13*	-.29*
5. Bonding to parents	-.33*	-.20*	-.24*	.41*	...	-.11
6. Substance use	.13	.19*	.63*	-.42*	-.33*	...

Note.—White sample results are below the diagonal, and African American sample results are above the diagonal.

*
$p < .05$.

Table 3

Correlation Matrix of Factors Among API American and Multiracial Youth

Factor	FACTORS					
	1	2	3	4	5	6
1. Lack of attachment to neighborhood	...	.33*	.17	-.21*	-.31*	-.18
2. Lack of opportunities in neighborhood	.15*	...	-.06	-.08	-.11	.00
3. Lack of neighborhood safety	.16*	-.06	...	-.19*	-.13	.41*
4. Family management	.01	-.01	-.30*	...	.25*	-.38*
5. Bonding to parents	-.31*	-.05	-.24*	.25*	...	-.16*
6. Substance use	.03	-.01	.61*	-.17	-.24*	...

Note.—API American sample results are below the diagonal, and sample results for multiracial youth are above the diagonal.

*
$p < .05$.

Table 4

Structural Mode: Standardized Path Coefficients and Model Fit

Path	White Youth	African American Youth	API American Youth	Multiracial Youth
Indirect paths to family construct:				
Lack of attachment to neighborhood to family management	.02	−.10[3]	.04	−.20[*]
Lack of opportunities in neighborhood to family management	−.29[*]	−.16[*]	−.05	−.03
Lack of neighborhood safety to family management	−.36[*]	−.19[*]	−.27[*]	−.24[*]
Lack of attachment to neighborhood to bonding to parents	−.19[*]	−.27[*]	−.28[*]	−.30[*]
Lack of opportunities in neighborhood to bonding to parents	−.25[*]	−.02	−.02	−.02
Lack of neighborhood safety to bonding to parents	−.15[*]	.04	−.14[*]	−.13[*]
Direct paths to substance use:				
Lack of attachment to neighborhood to substance use	.19[*]	−.06	−.09	.04
Lack of opportunities in neighborhood to substance use	.19[*]	−.06	.00	−.01
Lack of neighborhood safety to substance use	.59[*]	.43[*]	.48[*]	.39[*]
Family management to substance use	−.06	−.22[*]	.00	−.35[*]
Bonding to parents to substance use	−.12[*]	−.11[*]	−.14[*]	−.04
n	732	561	584	459

[+] $p < .10$.

[*] $p < .05$.