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**AN EXAMINATION OF THE ORGANISMIC, BEHAVIORAL, AND
CONTEXTUAL COVARIATES OF RISK BEHAVIORS AMONG
DIVERSE GROUPS OF ADOLESCENTS**

By

Daniel Francis Perkins

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ABSTRACT

AN EXAMINATION OF THE ORGANISMIC, BEHAVIORAL, AND CONTEXTUAL COVARIATES OF RISK BEHAVIORS AMONG DIVERSE GROUPS OF ADOLESCENTS

By

Daniel Francis Perkins

This study explored the interrelationship of risk behaviors (i.e., alcohol and drug use, antisocial behavior/delinquency, sexual activity, and school misconduct) and, in turn, their relationships with individual-organismic characteristics (i.e., age, gender, and ethnicity), individual-behavioral characteristics (i.e., involvement in extracurricular activities, religiosity, and view of the future), and contextual characteristics (i.e., family support, parent-adolescent communication, peer group characteristics, and school climate). A sample of 16,375 Michigan adolescents, aged 12 to 17 years, derived from the Community-Based Profile of Michigan Youth study, was administered the Search Institute Profiles of Student Life: Attitudes and Behaviors Questionnaire (ABQ), a self report measure indexing adolescents' attitudes and behaviors.

In almost all cases, correlations among risk behaviors within the entire sample and within the age, gender, and ethnic subgroups were significant. Correlations between males and females and among the racial/ethnic and age groups generally did not differ significantly. However, intercorrelations among European American adolescents were generally higher than was the case for corresponding correlations among African American adolescents.

Multiple regressions were used to assess how the risk behaviors were predicted by the individual and contextual characteristics, and to determine whether

this covariation differed among subgroups. All R^2 's were significant and, across equations, peer group characteristics was the most frequent significant predictor. Age, gender, and religiosity were significant predictors, particularly in the multiple regressions for sexual activity. Self-esteem, parent-adolescent communication, view of the future, and family support were not significant predictors.

Results were discussed in regard to this study's limitations and to directions for future research. Limitations were associated with the study's cross sectional design, and with the need for macrosystem measures and for triangulation of constructs. Future research should involve multivariate, longitudinal, contextually-rich, and triangulated assessments of the individual and contextual characteristics that distinguish youth who do and do not engage in risk behaviors. Such a study would advance the contributions made by the present investigation in regard to in the interrelatedness of risk behaviors and their individual and contextual covariates.

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Chapter I

STATEMENT OF THE PROBLEM

Adolescence is a time in life marked by change and rapid development. In fact, few developmental periods are characterized by so many changes at so many different levels as is the case with adolescence. Those changes are associated with pubertal development and the emergence of reproductive sexuality, with social role redefinitions, with cognitive, emotional, and moral development, and with school transitions (Eccles et al., 1993; B. Hamburg, 1974; Lerner, 1993a, 1995; Lerner & Spanier, 1980; Petersen, 1987; Simmons & Blyth, 1987). Adolescence is also a time when young people are pressed to develop the self-identity and the self-efficacy they need to be healthy contributors to our society as adults (Dryfoos, 1990; Erikson, 1968; D. Hamburg, 1993; Nightingale & Wolverton, 1993).

Normative stressors accompany the age-graded changes and the role transitions that occur during adolescence. For example, normative changes in pubertal development place stress on the adolescent who, with the advent of the physical and physiological alterations of puberty, has to cope with a changed body, with new feelings, and with changed social reactions, evaluations, and expectations afforded to a person who looks older and more adult-like. In turn, role transitions occur in this period and involve, for instance, the new academic expectations afforded a junior high school student as compared to an elementary school student. Many adolescents cope well with these stresses and develop into healthy successful adults (Offer, Ostrov & Howard, 1981); however, a very significant proportion of youth--estimates range between 10% to 50%, depending on particular issues in question--do not manifest healthy developmental changes during this period (Dryfoos, 1990, 1994; Lerner, 1995).

The particular historical niche within which adolescents live also contains challenges accompanying the normative stressors of the period (Elder, 1980). As compared to the situation in prior historical periods, current social circumstances (e.g., regarding a burgeoning of youth poverty; Hernandez, 1993; Huston, 1992), increase the likelihood that many more of today's youth are at risk for adverse developmental outcomes, such as engagement in risk behaviors (e.g., high school dropout, unemployability, prolonged welfare dependency, delinquency and crime; Dryfoos, 1990; Feldman & Elliott, 1990; Schorr, 1988).

Moreover, adolescents growing up in adverse environments (e.g., poverty-stricken neighborhoods and high crime-ridden neighborhoods) are in double jeopardy (Jessor, 1992). Not only are characteristics associated with risk more prevalent in such contexts, but characteristics associated with positive development are less available if not, indeed, absent for many (Jessor, 1992). Dryfoos (1990) found that half of the youth in the United States are at least at moderate risk of not becoming a successful and productive adult as a consequence of engaging in two or more of the following risk behaviors: Adolescent sexual activity and teenage pregnancy; alcohol and drug use/abuse; antisocial behavior and delinquency; and school failure.

Given such a context, the adolescent years in the contemporary United States have been described by many researchers as a time of historically unprecedented individual and social challenges for healthy development (e.g., Dryfoos, 1990; Fuchs & Reklis, 1992; Hamburg, 1992; Huston, 1992; Kids Count, 1993; Lerner, 1993a, 1995; National Research Council, 1993; Schorr, 1988). Indeed, involvement in the risk behaviors prevalent during this period jeopardizes several areas of adolescent development: (1) Physical health and physical growth; (2) the accomplishment of normative developmental tasks; (3) the fulfillment of

expected social roles; (4) the acquisition of essential skills; (5) the achievement of a sense of behavioral adequacy and competence; and (6) the appropriate preparation for the next development period of the life span, (i.e., young adulthood; Jessor, 1992).

Moreover, evidence for the interrelationship among risk behaviors has been provided in the literature (Dryfoos, 1990; Henggeler, 1989; Hawkins, Catalano, & Miller, 1992b; Irwin & Millstein, 1986, 1991; Jessor & Jessor, 1977; Udry 1988). Dryfoos' (1990) meta-analysis is the most recent investigation of the interrelationships among risk behaviors for American adolescents. She found strong evidence for the interrelationship between the four above-noted risk behaviors. Although Dryfoos (1990) was able to conduct an aggregate analysis, no one investigation of a large sample of youth in the United States has examined the co-occurrence of multiple risk behaviors (Dryfoos, 1990).

Extensive research has identified individual-organismic, individual-behavioral, and contextual characteristics that are related to youth involvement in risk behaviors (Dryfoos, 1990; Hawkins, et al., 1992b; Henggeler, 1989; Hogan & Kitagawa, 1984; Luster & Small, 1994). For example, studies have consistently found that the individual-organismic characteristic of age is associated with involvement in risk behaviors such that, the earlier the initiation in any of the four above-noted risk behaviors the more likely that an adolescent will become more heavily involved with multiple risk behaviors (Dryfoos, 1990; Henggeler, 1989; Irwin & Millstein, 1986, 1991; Jessor & Jessor, 1977). In regard to individual-behavioral characteristics, adolescent behavioral engagement in one risk behavior has been linked to later involvement in multiple risk behaviors (Dryfoos, 1990; Irwin & Millstein, 1986; Hawkins et al., 1992b; Jessor & Jessor, 1977). Finally,

contextual characteristics such as parental monitoring have been associated with engagement in risk behaviors: Low parental monitoring is linked with an increase involvement in risk behaviors (Barnes & Farrell, 1992; Dryfoos, 1990; Hawkins et al., 1992b; Henggeler, 1989; Kandel 1985; Jessor & Jessor, 1977). However, despite such evidence, no one study has examined multiple characteristics (organismic, behavioral, and contextual) and multiple risk behaviors among different groups of adolescents in the United States (Dryfoos, 1990; National Research Council, 1993; Schorr, 1988).

Indeed, apart from demographic studies of the occurrence of risk, there is little known about the characteristics among diverse groups of adolescents and within their ecology that result in the actualization of risk behaviors. The limited interest within traditional adolescent research in social problems has, unfortunately, allowed issues of race, ethnicity, and racial discrimination to, more often than not, lie fallow (Graham, 1992; Jessor, 1993; Lerner, 1995; Petersen & Epstein, 1991; Spencer & Dornbusch, 1990). As such, policies and programs aimed at preventing or reducing engagement in risk behaviors among these groups are essentially uninformed by developmental studies of the individual and contextual bases of risk outcomes among diverse groups of adolescents.

As a consequence of this situation, it seems clear that focus on a multivariate study of individual-organismic, individual-behavioral, and contextual characteristics of diverse groups of adolescents engaged in risk behaviors, is critical--both to advance knowledge of potentially diverse developmental trajectories and to design differentiated policies and programs. Indeed, given that the current knowledge base has focused almost entirely on white middle class children, then, it is unknown whether findings from extant adolescent studies are applicable to

United States youth from other racial and ethnic backgrounds. Without adequate understanding of the linkages between risk covariates and risk behaviors among groups of adolescents representing more of the range of social/ethnic backgrounds in America, an increasing number of youth in the United States may continue to succumb to risk.

If application and policy are going to be developed to support positive youth development and to provide adolescents with opportunities for growth, then it is imperative that research about adolescents expand its agenda to concentrate on studying the development of all youth. Specifically, in order to gain the knowledge necessary to foster healthy, positive development among all youth, research is needed that focuses on the characteristics that contribute to individual differences in the occurrence of multiple risk behaviors among diverse groups of adolescents. Social scientists need to identify what characteristics--organismic, behavioral, and contextual--distinguish adolescents who are not engaging in risk behaviors and those who are participating in risk behaviors (e.g., alcohol and drug use; early, unprotected sex; antisocial behavior; school failure). In addition, we need to learn whether these same characteristics (albeit perhaps with a difference valence) are involved in the risk or resiliency of adolescents who differ in regard to ethnicity, age, and gender.

The Present Study

As noted previously, no one investigation of youth in the United States has examined the co-occurrence of multiple risk behaviors and the multiple covariates (organismic, behavioral, and contextual) of risk behaviors among diverse groups of adolescents (Dryfoos, 1990; National Research Council, 1993; Schorr, 1988). The present research can begin to usefully address these issues. This study will

examine the interrelationship of multiple risk behaviors (e.g., adolescent sexual activity, alcohol and drug use/abuse, antisocial behavior and delinquency, and school underachievement and school failure). Moreover, this investigation will identify potential individual-organismic, individual-behavioral, and contextual characteristics associated with adolescent engagement in multiple risk behaviors among diverse groups of adolescents.

Specifically, this study addresses the following questions: (1) How are risk behaviors interrelated, and does this interrelation vary by age, ethnicity, and gender?; (2) What are the individual-organismic, individual-behavioral, and contextual characteristics that covary with risk behaviors among adolescents, and is this variation different among groups differentiated on the basis of age, ethnicity, and gender?; (3) Given that there may be multicollinearity among individual-organismic, individual-behavioral, and contextual characteristics in their association with risk, are there particular characteristics that account for more variance in either selected outcome variables and/or in sets of these variables than do other characteristics?; and (4) Do these patterns of covariance differ across age, ethnicity, and gender? The literature that legitimizes for these questions is reviewed in the next chapter.

Chapter II

LITERATURE REVIEW

Across the life span, health, physical, and mental development rest on meeting the demands of the context or ecology (Bronfenbrenner, 1979; Lerner, Lerner, & Tubman, 1989; Rutter, 1985). The demands of the context constitute presses for adjustment (Lewin, 1935, 1938) that make different physical, or constitutional, and behavioral characteristics of an individual differentially likely to afford fit (Wohlwill, 1983). In turn, the context that the individual lives in possesses characteristics that make it likely that fit will be achieved; for example, some settings have demands that are more difficult to detect, that are unpatterned (and less predictable), or are of a magnitude that surpasses the resources for adjustment prototypic of most individuals (Lerner & Lerner, 1989; Lewin 1935, 1938; Wohlwill, 1983). Therefore, while across the life span healthy behavior and development always involves meeting the demands of the context or ecology, not all individuals' constitutional and behavioral characteristics or all contexts are equivalent in affording good fit and development.

This perspective about individual and contextual differences allows conceptualization of the relevance of the literatures on risk and on adolescent development to be interrelated. As will be explained this interrelation is critical for advancing both scientific understanding, and the use of this knowledge for policies and programs.

Risk Behavior Across the Life Span

The literature on risk in human development is extensive and complex. Within the risk literature there are numerous conceptual frameworks (Garmezy, 1985; Irwin & Millstein, 1986; Jessor, 1993; Rutter, 1985, 1987; Werner & Smith,

1982, 1992). Different frameworks employ distinct constructs and terms.

However, across perspectives, each approach tries to describe characteristics of people or settings associated with a differential probability of meeting the demands of the context and/or of having healthy development (Dohrenwend, Dohrenwend, Pearlin, Clayton, & Hamburg, 1982; Elliott & Eisdorfer, 1982). Indeed, across this literature, it is possible to find commonality in respect to several ideas pertinent to individual and contextual characteristics linked to differential probability of experiencing risk (Elliott & Eisdorfer, 1982; Werner, 1989).

First, the literature forwards the idea that risk is an individual differences dimension pertaining to both persons and contexts (Cohen, et al., 1982; Elliott & Eisdorfer, 1982; Jessor 1992; Werner, 1986, 1989). Second, the literature contains the idea that possession of a particular instance or level of either individual-organismic characteristics, individual-behavioral characteristics, or of embeddedness in a particular instance or level of a specific context affords different probabilities of experiencing risk (Dohrenwend, Dohrenwend, Pearlin, Clayton, & Hamburg, 1982; Elliott & Eisdorfer, 1982; Garbarino, 1994). In other words, as compared to those individuals who possess characteristics or who live in contexts that are associated with the likelihood of positive behavior and development, individuals who are said to be "at risk" possess specific characteristics and/or live in particular contexts that are associated with the likelihood of negative behaviors and development. Risk characteristics refer, then, to those organismic, behavioral, and contextual characteristics associated with a decreased likelihood of healthy psychosocial and physical development.

For instance, possession of congenital malformation of heart valves is an individual-organismic characteristic that makes it less probable that a person will

have a normal life expectancy. In other words, possession of this individual-organismic characteristic places the individual "at risk" for a shortened life span. Similarly, manifesting the individual-behavioral characteristic of difficult temperament makes it more probable that problems of interpersonal conflict will arise in social situations and that social relationships will be marked by negative affect (Chess & Thomas, 1984; Thomas & Chess, 1977). That is, difficult temperament places a person at risk for negative social interactions and, in turn, for the development of poor social relations (Lerner & Lerner, 1989). Furthermore, embeddedness in an individual context characterized by high levels of random violence increases the probability of individuals experiencing fear, anger, and frustration (Talyor, 1990). In other words, an individual living in such a setting is placed at risk for these negative emotional occurrences. Possible outcomes of the actualization of such risk include chronic problems of adjustment and antisocial behavior (Talyor, 1990).

Across and within each period of the life span there are different demands for adjustment and there are constitutional, behavioral, and contextual characteristics associated with a lowered likelihood of adjustment, or fit with these demands; thus there is a risk of negative behaviors and development occurring in such situations. In other words, there are characteristics that are likely to place a person at risk within specific periods of life. Although adolescence shares with other periods of the life span certain general risks (e.g., congenital organismic problems), due to the nature of prototypic developmental changes of this period (Katchadourian, 1977) and, as well, phenomena of adolescence pertinent to contemporary cohorts of youth (Lerner, 1995), this period of life is one in which the study of risk has both basic and applied implications.

Baltes, Reese, and Lipsitt (1980) suggest that there are three major influence patterns that affect person-context relationships across the life span: Normative, age-graded influences; normative, history-graded influences; and nonnormative life events. These influences enable one to identify the age-general and age-specific risks of adolescence.

Normative, age-graded influences consist of biological and environmental determinants that are correlated with chronological age (Baltes, et al., 1980). They are normative to the extent that their timing, duration, and clustering are similar for many individuals (Lerner, 1989; Tubman & Lerner, 1991). In adolescence, pubertal developments and school transitions are examples of biological and environmental normative, age-graded influences, respectively. Normative, history-graded influences consist of biological and environmental processes occurring at a particular point within historical time (Baltes, et al., 1980). They are normative to the extent they are experienced by most members of a cohort (Tubman & Lerner, 1991). In adolescence, examples include the fact that a majority of western youth experience higher education and that, among middle class, youth there is a delay, into adulthood, of marriage and childbearing. Nonnormative life-event influences are not directly indexed by time because they do not occur for all people, or even most people (Baltes, et al., 1980; Lerner, 1986; Tubman & Lerner, 1991). Examples of such events that occur among contemporary adolescent cohorts include experiencing crime and violence, involvement in unsafe sexual acts that can result in disease, and accidents linked to substance abuse.

The three sets of influences discussed by Baltes, et al. (1980) allow discrimination among the types of risks facing adolescents. Accordingly, it is useful to discuss risk behavior among adolescents through the use of the influences

forwarded by Baltes, et al. (1980).

Normative, Age-Graded Development and Risk

Adolescence is a time in life marked by multiple changes and rapid developments. In fact, few developmental periods are characterized by so many changes at so many different levels as is the case with adolescence. These changes are associated with pubertal development and the emergence of reproductive sexuality, with social role redefinitions, with cognitive, emotional, and moral development, and with school transitions (Eccles et al., 1993; B. Hamburg, 1974; Lerner 1993a, 1995; Lerner & Spanier, 1980; Petersen, 1987; Simmons & Blyth, 1987, Zabin, 1991).

Normative stressors accompany the age-graded changes, that is, the changes in the individual-organismic characteristics, individual-behavioral characteristics, and contextual or ecological changes that occur during adolescence. For example, normative changes in the individual-organismic characteristic involved in pubertal development place stress on the adolescent who, with the advent of the physical and physiological alterations of puberty, has to cope with a changed body, with new feelings, and with changed social reactions, evaluations, and expectations afforded to a person who looks older and more adult-like. The developing of sexual maturation is a phenomenon particular to adolescence (Konopka, 1991; Petersen, 1987). There is dramatic physical development that occurs at other periods of the life span (i.e., infancy); however, in adolescence these changes in biological development occur simultaneously with changes in contexts, such as school transitions.

In addition to changes in normative individual-organismic characteristics, there are also changes in individual-behavioral characteristics that occur during

adolescence and that can place a youth at risk. For instance, during adolescence there is a shift in the relative importance of peer relations versus adolescent-parent relations (Baumrind, 1987; Garbarino, 1985; Lerner, 1987; Treboux & Busch-Rossnagel, 1991). Peer relations can be a positive or a negative influence on a youth, depending on the types of behaviors in which the peer group engages (Ståttn & Magnusson, 1990). Another example of a changing individual-behavioral characteristic that is linked to adolescent risk is an emerging sensitivity toward violation of self-respect. Violation of self-respect is detrimental to all human beings. However, in adolescence, because of increasing self-consciousness (Piaget, 1972), anything that violates self-respect (e.g., being disregarded as a significant human being, or being labeled a failure) may be especially hurtful (Konopka, 1991).

Moreover, normative stress in adolescence occurs in relation to changes in contexts, such as occur with a transition from elementary to middle school or junior high school. Such a change places potential stress on the adolescent, as he or she experiences the new academic expectations and social pressures afforded in a middle or junior high school (Simmons & Blyth, 1987).

The uniqueness of adolescence as a period within the life span stems from the multitude of changes that occur simultaneously: Individual-organismic characteristics, individual-behavioral characteristics, and context-specific characteristics all change, and appear to do so interdependently (Lerner, 1981, 1991, 1993b; Petersen, 1987).

Although there are multiple changes at multiple levels in the individual and his or her ecology, many adolescents cope well with these stresses and develop into healthy successful adults (Offer, Ostrov & Howard, 1981). However, accompanying the normative stressors of adolescence are challenges linked to the

particular historical niche within which adolescents live (Elder, 1980).

Normative, History-Graded Development and Risk

Baltes, et al. (1980) suggest that normative, history-graded influences are particularly strong in adolescence and young adulthood because much of an individual's foundation for adulthood (e.g., family life, career) is located and mediated by the social-environmental milieu prototypic within the adolescent period. Today, more so than in the past, involvement in risk behavior is a component of adolescent development (Baumrind, 1987; Dryfoos, 1990; Irwin & Millstein, 1991). Indeed, healthy development of a young person includes experimentation with a variety of behaviors (Baumrind, 1987; Dryfoos, 1990; Irwin, 1987). However, it is critical to distinguish between a normal transitional engagement in behaviors that may be developmentally enhancing (e.g., testing out different life styles, religions, or roles), and engagement in behaviors, with a frequency or in an intensity, that are highly problematic (e.g., substance abuse, criminality) and that show little evidence of gain for the adolescent (Baumrind, 1987; Dryfoos, 1990; Irwin, 1987, 1989; Irwin & Ryan, 1989).

The average age of menarche, in white middle-class females in North America during the 1890s was 14.2 years (Tanner, 1970, 1991). By 1940, the average age of menarche dropped to 12.5 years, and seems to have remained stable since then (Tanner, 1970, 1991). This individual-organismic characteristic change coupled with a change in the context, that is an increase in the apparent societal permissibility of teenage sexuality, due in part to the increased exposure to sexual themes and material on television, radio, and in the movies, is associated with an increase of experimentation in sexual intercourse among adolescents (Brooks-Gunn, & Furstenburg, 1989; Dryfoos, 1990). At earlier periods in history,

adolescents certainly experimented with sexuality; however, this behavior was more clandestine and was not coupled as often with problematic outcomes such as sexually transmitted diseases, pregnancy, and childbearing (Brooks-Gunn, Boyer, & Hein, 1988; Hein & Hurst, 1988; Rotheram-Borus & Koopman, 1991). Indeed, over half of today's age 15 to 19 year old adolescents are experimenting with sexual intercourse; this is a marked increase from the 28.6 percent who engaged in such behavior in 1970 (Centers for Disease Control, 1991a). Understandably, then, the risk of teenage pregnancy is greater now than it was in earlier periods of history.

Another example, of a normative, history-graded change that has occurred in recent historical periods involves the movement of more than 50% of late adolescents into institutions of post-secondary education: Two and four year colleges and universities, trade schools, and vocational education centers (William T. Grant Foundation Commission on Work, Family and Citizenship, 1988). This increase of late adolescents participating in post-secondary education and training is associated with changes in the context--the emergence of an increasingly technologically sophisticated society (William T. Grant Foundation Commission on Work, Family and Citizenship, 1988). These history-graded changes have increased the amount of nonnormative changes with which adolescents must cope.

Non-normative Development and Risk

As compared to the situation in prior historical periods pertinent to the United States, current social circumstances (e.g., regarding a burgeoning of youth poverty; Hernandez, 1993; Huston, 1992), place many more of today's youth at risk for adverse developmental outcomes. These outcomes may often begin with an engagement in risk behaviors beyond those involved in "normal" experimentation. Examples of such problematic behaviors are high school dropout,

delinquency, and crime (Dryfoos 1990; Feldman & Elliott, 1990; Lerner 1995; Offer et al., 1981; Schorr, 1988); these behaviors may result in outcomes such as unemployability, prolonged welfare dependency, and incarceration. Indeed, the context of today's youth involves not only a 40 year high in the level of youth poverty but, as well, wide-spread problems involving health care, poor nutrition, deteriorated neighborhood life, violence, drugs, early and unprotected sexual activity, and teenage pregnancy and parenthood (Benson, 1990; Dryfoos; 1990, 1994; Fuchs & Reklis, 1992; Garbarino, Dubrow, Kostelny, & Pardo, 1992; Hernandez, 1993; Knopp, 1983; Knopp & Krakow, 1983; Lerner, 1993a, 1995; Luster & Small, 1994; Prothrow-Stith, 1991; Schorr, 1988; Takanishi, 1993).

The involvement of adolescents in risk behaviors is an example of individual-behavioral characteristics. Conducting a meta-analysis of the risk behavior research, Dryfoos (1990) found four distinct categories of risk behavior during adolescence: Delinquency, crime and violence; substance use; teenage pregnancy and parenting; and school failure and dropout. Moreover, Irwin and Millstein (1986, 1991) provide support for the findings of Dryfoos' research regarding substance use and teenage pregnancy as major risk behaviors. However, they also suggest that vehicle safety is an important category, given that 60% of deaths during adolescence are caused by unintentional injuries (National Center for Health Services Research, 1989).

Within every period of the life span there are risk behaviors in which an individual can engage (e.g., playing with matches, household chemicals, or medicines in childhood; drug use in adolescence; lack of exercise, eating fatty foods, and high job stress in adulthood). Baltes, et al. (1980) suggest that the number of nonnormative life events increases as an individual progresses through

the life span. However, in adolescence, the chance of involvement in risk behaviors is coupled with a variety of developmental changes that are occurring (e.g., involving pubertal developmental, cognitive development, and peer-relations) which makes it a unique period within the life span in which to examine risk behaviors. Moreover, the importance of adolescence as a key transitional period has been highlighted by many researchers (Baumrind, 1987; Erikson, 1968; B. Hamburg, 1974, 1993; Irwin, 1987; Lerner & Lerner, 1989; Petersen, 1988). An understanding of the interrelations among risk behaviors, and of the association of risk behaviors with individual-organismic, individual-behavioral, and contextual characteristics of the period of adolescence, has important implications for policies and both prevention and intervention programs, implications that are important for enhancing the human capital represented by today's American youth.

Risk Behavior Research in Adolescence

In her book, *Adolescent at risk: Prevalence and prevention*, Dryfoos (1990) examined adolescent risk behavior research in the United States and focused on the interrelation of the above-noted four categories of risk behavior; that is, she reviewed research pertinent to substance use, unsafe sexual activity, delinquency, and school failure. The evidence she presented supports the existence of organized patterns of adolescent risk behaviors (Jessor, 1992). By examining over a hundred different studies, Dryfoos found evidence to suggest that the four above-noted types of risk behaviors covaried among today's adolescents. Moreover, she identified specific variables associated with the probability that an adolescent would participate in one or more of the risk behaviors. For instance, early initiation in any risk behavior or peer influences were related to engagement in multiple risk behaviors.

Dryfoos (1990) estimated that of the approximately 28 million children and adolescents between the ages of 10 and 17 years now living in the United States, about 50% engage in two or more of the above-noted four categories of risk behavior. Moreover, 10% of America's youth engage in all of the four categories of risk behavior (Dryfoos, 1990). As Lerner (1993a, 1995) notes, these data on youth involvement in risk behaviors suggest that a "generational time bomb" (Lerner, 1993a) is confronting American society. Furthermore, according to 1993 Kids Count Data Book, published by the Center for the Study of Social Policy, many key problems of American youth are increasing at relatively rapid rates.

Although there are increasing numbers of adolescents participating in risk behaviors, the possibility for developing knowledge pertinent to prevention or intervention may lie in the risk research which has focused on either: 1. Risk "factors," or variables that seemed to be associated with engagement in specific risk behaviors (Dryfoos, 1990; Horowitz, 1989; Irwin & Millstein 1986,1991; Jessor & Jessor, 1977; Udry, 1988); and/or 2. the variables that are associated with successful development in adolescence (Bernard, 1991; Dryfoos, 1990; Garmezy, 1985; Garmezy, Masten, & Tellgen, 1984; Jessor, 1993; Jessor & Jessor, 1977; Lavery, Siegel, Cousins & Rubovits, 1993; Luster & McAdoo, 1994; Luster & Small, 1994; Luthar, 1991; Rutter 1985, 1987, 1989; Werner, 1990; Werner & Smith, 1982, 1992). Indeed, understanding covariates of engagement and non-engagement in risk behaviors has direct implications for policy and programs.

Social scientists have progressed through several stages in their approach to understanding covariates of risks (Matsen et al., 1988; Werner & Smith, 1992). In the initial history of investigation, researchers emphasized simple bivariate

associations, such as a link between low birth weight or a stressful life event (e.g., parental discord), and a single risk behavior. Borrowing from the field of epidemiology, several social scientists have begun to employ an approach to studying risk behaviors and their covariates which suggests that there are probably many diverse paths to the development of particular risk behaviors (Irwin & Millstein, 1986; Newcomb, Maddahian, Skager, & Bentler, 1986). Indeed, efforts to find a single covariate may not be useful because most behaviors have multiple covariates (Lavery, Siegel, Cousins & Rubovits, 1993; Small & Luster, 1994). Thus, researchers in the social sciences have moved from a bivariate model of risk/vulnerability research to a multivariate model, one that emphasizes the possibility of interactions among variables, such as the co-occurrence of parental addiction (e.g., alcoholism), poverty, and youth problem behaviors (e.g., aggression and school problems; Lavery, Siegel, Cousins & Rubovits, 1993; Werner & Smith, 1992).

Although there are variations in the definition of risk, "risk factors," and risk behavior correlates, the research on risk behaviors provides support for the presence of associations among certain individual-organismic, individual-behavioral, and contextual characteristics and with adolescents' involvement in risk behaviors. These three types of characteristics will be examined here in terms of their relationship with the above-noted four categories of risk behavior put forth by Dryfoos (1990): Teenage sexual activity, alcohol and/or substance use/abuse, delinquency and antisocial behavior, and school failure. These patterns of covariation are summarized in Table 1.

Insert Table 1 about here

Teenage Sexual Activity

Over the past two decades there has been a steady increase in the number of teenagers in the United States who are sexually active (Moore, 1992). Indeed, most people in the United States become sexually active during adolescence. As noted previously, in 1970, 28.6% of American females aged 15 to 19 years had premarital sexual intercourse, compared to 51.5% in 1988 (Centers for Disease Control, 1991). Recent reports concerning the incidence of sexual intercourse among adolescents younger than age 15 report rates ranging from 12% to 55% (Irwin & Millstein, 1986; Orr, Wilbrandt, Brack, Rauch & Ingersoll, 1989; Zelnick & Shah, 1983). By age 20, there is a marked increase in these rates: Over 80% of males and over 70% of females have had sexual intercourse at least once (Hayes, 1987).

This increase in sexual experimentation in adolescence is coupled with adolescents' infrequent use of contraception (Kiser, 1984). Youth who are sexually active overwhelmingly fail to engage in safe sex (e.g., sex with a condom). Thus, they are more likely to contract AIDS and other sexually transmitted diseases (STDs) and become pregnant during adolescence (Brooks-Gunn, Boyer, & Hein, 1988; Centers for Disease Control, 1987; Hein & Hurst, 1988). Indeed, since 1989, the birth rate has increased for 15- to 19-year old females (Moore, 1993). The number of cases of STDs has been increasing since the 1970s (Centers for Diseases Control, 1992b), and adolescents account for one-quarter of the estimated 12 million cases of STDs that occur annually (Moore, 1992).

Table 1

Individual-Organismic, Individual-Behavioral, and Contextual Characteristics That Have Been Associated in the Literature With Adolescent Involvement in Risk Behaviors

<u>Risk Behavior</u>	<u>Individual-Organismic</u>	<u>Individual-Behavioral</u>	<u>Contextual</u>
<u>Sexual Activity</u>	Early pubertal development Age Gender Ethnicity	School Performance Educational Aspirations Involvement in activities View of the future Religiosity Alcohol and marijuana use/abuse Truancy Self-esteem	Parent-adolescent communication Parental Monitoring Family Structure Sexual/Physical Abuse Negative peer relations Nonparental adult relations School climate
<u>Alcohol and Substance Use/Abuse</u>	Age Ethnicity Genetics	School Performance Educational Aspirations Time spent on homework Religiosity Antisocial behavior/delinquency School Failure Self-esteem	Parent-adolescent communication Parental monitoring Parental involvement in activities Parental addiction Peer relations Nonparental adult relations

Table 1 (continued)

<u>Risk Behavior</u>	<u>Individual-Organismic</u>	<u>Individual-Behavioral</u>	<u>Contextual</u>
<u>Antisocial Behavior/ Delinquency</u>	Age Gender Ethnicity	School Performance Educational Aspirations Part-time employment Religiosity Alcohol and drug use/abuse School Failure and Drop out Self-esteem	Parent-adolescent communication Parental monitoring Parental practice of risk behaviors Family support Family Structure Negative peer relations Neighborhood quality Socioeconomic Status
<u>School Under- achievement & Failure</u>	Age Gender Ethnicity	Attitude toward schooling Education aspiration Basic skills Time spent on homework Time spent socializing Involvement in school activities Part-time employment Stress Alcohol and drug use/abuse Antisocial behavior and delinquency Self-esteem	Parent-adolescent communication Parental Monitoring Parental education Negative peer relations School size School Climate Neighborhood quality Socioeconomic status

To address the issue of adolescent pregnancy, an understanding of the factors related to the occurrence of sexual intercourse is important (Small & Luster, 1994). In recent years, research has identified the antecedents and correlates of sexual intercourse during the adolescent years and of the use of contraception (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Flick, 1986; Hayes 1987; Luster & Small, 1994; Small & Luster, 1994). Several studies identified the individual-organismic, individual-behavioral, and contextual characteristics that appear to be associated with the onset of sexual intercourse during adolescence (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Flick, 1986; Hayes 1987; Irwin & Shafer, 1992; Jessor, 1993; Luster & Small, 1994; Small & Luster, 1994).

Individual-Organismic Characteristics Associated with Adolescent Sexual Activity

Individual-organismic characteristics that are associated with adolescent sexual activity include: Gender differences in the initiation of sexual activity; early pubertal development; age; ethnicity; and low self-esteem. (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Flick, 1986; Hayes, 1987; Small & Luster, 1994). It is useful to summarize the nature of these relations.

Several studies have found a gender difference with regard to age of initiation of sexual activity. Generally, boys have sexual intercourse at an earlier age than girls (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Luster & Small, 1994). Timing of pubertal maturation has also been linked to early sexual activity (Brooks-Gunn & Furstenberg, 1989; Irwin & Millstein, 1986; Irwin & Shafer, 1992). Not surprisingly, both males and females who undergo maturation earlier than their peers initiate sexual intercourse earlier than their age-related peers (Brooks-Gunn & Furstenberg, 1989; Irwin, Millstein, & Turner, 1989; Irwin & Shafer, 1992; Udry & Billy, 1987). Similar findings from other research have provided evidence for the

linkage between timing of maturation and engagement in risk behaviors, with the most negative effects being reported for females who undergo early maturation (Lerner & Foch, 1987).

Age of first sexual intercourse is associated with likelihood of adolescent pregnancy or STDs (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990). The earlier the age of initiation the more likely that an adolescent female will become pregnant or contract an STD; and the earlier the age of initiation the more likely an adolescent male is to impregnate a female or contract an STD. This increased health risk is due to the fact that younger adolescents are less likely to use any type of contraception (Dryfoos 1990; Luster & Small, 1994; Moore, 1992; Rotheram-Borus & Koopman, 1991).

The individual-organismic characteristic of ethnicity has also been found to be associated with early sexual activity (Irwin, Brindis, Brodt, Bennett, & Rodriguez, 1991). There is a disproportionate representation of African American adolescents who are sexually active and who experience negative outcomes of sexual activity (e.g., teenage pregnancy or STDs; Day, 1992; Hayes, 1987; Jenkins & Westney, 1991). As previously noted, age of first sexual intercourse is linked with adolescent pregnancy or STDs (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990), and on average African American and Hispanic male adolescents initiate sexual intercourse earlier than their European American counterparts (Irwin, Brindis, Brodt, Bennett, & Rodriguez, 1991; Sonen, Pleck, Ku, & Pratt, 1988). (Here, it should be noted that the terms "Hispanic" and "Latino" do not have the same technical meaning [Fisher, Jackson, & Villarruel, in press]. However, for ease of communication these terms will be interchangeably in this document). African American females are the most likely to become teenage parents, followed by

Latina adolescents and European American adolescent females, respectively (Day, 1992; Dryfoos, 1990; Hayes, 1987; Jenkins & Westney, 1991). Native Americans and Asians Americans have not been systematically studied to date.

Moreover, it should be noted that ethnicity and socioeconomic status (SES) covary. However, when ethnicity is controlled statistically, SES remains associated with adolescent sexual activity. Indeed, low socioeconomic status is associated with earlier onset of sexual activity (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Hogan & Kitagawa, 1984; Irwin & Shafer, 1992; Jenkins & Westney, 1991). In comparison to adolescents from middle and upper income levels, low income adolescents are more likely to engage in early sexual activity (Dryfoos, 1990; Jenkins & Westney, 1991).

Individual-Behavioral Characteristics Associated with Adolescent Sexual Activity

In research on adolescent sexual activity, several individual-behavioral characteristics have been found to be associated with engagement in sexual activity: School performance; educational aspirations; involvement in activities; view of the future; religiosity; alcohol and marijuana use; and truancy (Bingham & Crockett, in press; Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Flick, 1986; Hayes, 1987; Irwin & Shafer, 1992; Small & Luster, 1994). A summary of the nature of these relations is present below.

From her review of the research on adolescence sexual activity, Dryfoos (1990) found that adolescents who were not engaged in school activities, who had low aspirations (e.g., post-secondary education, career), and who did poorly in school were at an increased risk for engaging in sexual activity. Similar findings have been found in regard to the linkage between (a) low aspirations or poor school performance and (b) early engagement in sexual activity (Brooks-Gunn &

Furstenberg, 1989; Hofferth & Hayes, 1987; Small & Luster, 1994). In addition, adolescents who lack hope and do not perceive a positive future are more likely to participate earlier in sexual activity than those who have a positive view of the future (Dryfoos, 1990; Hayes, 1987; Hofferth, 1987).

Religiosity is another individual-behavioral characteristic that is associated with sexual activity in adolescents. Adherence to conventional, religious values is associated with decreased sexual initiation and behavior (Dryfoos, 1990; Jessor & Jessor, 1977; Thornton & Camburn, 1989).

Research findings about the linkage between the individual-behavioral characteristic of self-esteem and sexual activity are mixed. Some evidence suggests that self-esteem is usually not reported as a significant factor associated with sexual activity in adolescence (Cvetokovich & Grote, 1981; Small & Luster, 1994). However, Orr and his colleagues (1989) found gender differences in regard to the linkage between teenage sexual activity and self-esteem. Adolescent males who had high self-esteem have the highest levels of sexual activity; however, the opposite was true for females (Orr, Wilbrandt, Brack, Brauch, & Ingersoll, 1989).

Adolescent sexual behavior is generally associated with or often preceded by other risk behaviors. Examples are alcohol and drug use and truancy (Benson, 1990; Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Hayes 1987; Irwin & Millstein, 1991; Jessor, 1992, 1993; Jessor & Jessor, 1977; Rogers & Ginzburg, 1992).

Contextual Characteristics Associated with Adolescent Sexual Activity

Research has provided evidence for the association between characteristics of the context and engagement in sexual activity. Specifically, those characteristics of the context that are linked to adolescent sexual activity are: Parent-adolescent

relations (e.g., communication, monitoring/supervision); family structure; sexual and/or physical abuse; peer relations; nonparental adult relations; and school climate (Brooks-Gunn & Furstenberg, 1989; Day, 1990; Dryfoos, 1990; Hayes, 1987; Irwin & Shafer, 1992; Jenkins & Westney, 1991; Luster & Small, 1994; Small & Luster, 1994). A summary of the nature of these relations is presented below.

Several studies have provided evidence supporting the association of parental support (i.e., communication, accessibility) with sexual activity (Dryfoos, 1990; Hayes, 1987; Jessor & Jessor, 1977; Luster & Small, 1994). Adolescents who perceive themselves as having parental support are less likely to get involved in sexual activity. In addition, a similar association has been found between parental monitoring and engagement in sexual activity (Benson, 1990; Dryfoos, 1990; Hayes, 1987; Jessor & Jessor, 1977; Small & Luster, 1994). Thus, adolescents who are monitored are less likely to engage in sexual activity (Chilman, 1979; Dryfoos, 1990; Flick, 1986; Hayes, 1987; Small & Luster, 1994).

Family structure has been found to be linked with adolescent engagement in sexual activity. Adolescents from single-parent families are more likely to engage in sexual activity and to engage in those activities at an earlier age than their age-related peers from two parent homes (Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Flick, 1986; Hayes, 1987; Hogan & Kitagawa, 1984). However, this association may be confounded with the fact that single-parent families have, on average, considerably lower incomes than two-parent families and a higher percentage of single parent families are ethnic minorities than is the case with two parents (Benson & Roehlkepartain, 1993). As noted previously, socioeconomic status and ethnicity has been linked to adolescents engagement in sexual activity. Studying a sample of 8,266 adolescents who, live in single-parent families, Benson

and Roehlkepartain (1993) found that the association between family structure and adolescent sexual activity exists even when income and ethnicity are held constant. Moreover, a history of sexual and/or physical abuse has been found to be associated with adolescent engagement in sexual activity (Benson, 1990; Benson & Roehlkepartain, 1993; Boyer & Fine, 1992; Butler & Burton, 1990; Small & Luster, 1994).

There is some evidence that peer relations are associated with sexual behavior in adolescence (Dryfoos, 1990; Irwin & Shafer, 1992; Stattin & Magnusson, 1990). Peer influence is more strongly related to perceived sexual behavior than actual behavior (Cvetokovich & Grote, 1980). Indeed, adolescents, especially girls, who perceive their best friends to be sexually active are more likely to be sexually active themselves (Billy, Rodgers, & Udry, 1985; Billy & Udry, 1985). However, Small and Luster (1994) did not find a significant correlation between peer conformity and sexual behavior in adolescence. They suggest that this may be due, in part, because adolescents' perceptions about what one's peers are doing, or what is normative in one's peer group, were not assessed. In addition, Hayes (1987) suggested that people tend to overestimate the role that peers play in influencing sexual behavior. It seems, then, that the precise role of peer relations in adolescent sexual behavior is not clear.

Poor neighborhood characteristics are associated with the increased probability of early engagement in the sexual activity of adolescents (Moore, Petersen, & Furstenberg, 1986). Moreover, neighborhood monitoring has been linked with early sexual activity in adolescence (Small & Luster, 1994).

Adolescents who lived in neighborhoods with low monitoring were more likely to become sexually active at an earlier age than their peers who lived neighborhoods

characterized by high monitoring. Small and Luster (1994) suggest that nonparental adults in the neighborhood can play an important role supervising the behavior of adolescents.

Numerous studies on the topic of resiliency have provided evidence about the importance of nonparental adults for adolescents (Bernard, 1991; Luthar, 1991; Rutter, 1987; Werner, 1986, 1989, 1992; Werner & Smith, 1982, 1992). However, within the United States no study has specifically examined adolescent-nonparental adult relationships in regard to early sexual activity.

School climate, like nonparental adult relations, has been less extensively studied than the previously mentioned contextual characteristics, but it has been linked to early sexual activity. For example, a lack of positive experiences in school was linked to early sexual activity in adolescence (Quinton & Rutter, 1988; Small & Luster, 1994). Moreover, within the field of resiliency research, there are several studies that support the importance of school climate on adolescence resiliency (Bernard, 1991; Luthar & Ziglar, 1991; Werner & Smith, 1982, 1992).

In sum, the literature provides evidence that a linkage exists between specific individual-organismic, individual-behavioral, and contextual characteristics and adolescent's engagement in sexual behavior. Generally, however, the research to date has not examined in an integrated fashion the association of gender, ethnicity, and age with adolescent sexual activity and other characteristics (i.e., individual-behavioral and contextual). Moreover, with a few notable exceptions, little research to date has investigated this risk behavior in relation to the several other key risk behaviors of the period (Dryfoos, 1990; Irwin & Millstein, 1986; Jessor & Jessor, 1977). This study will examine adolescent sexual activity in interrelationship with three other risk behaviors: Delinquency and anti-social

behavior; school failure; and alcohol and substance use.

Alcohol and Substance Use/Abuse

Although in recent years there have been declines in most alcohol and drug use among adolescents since 1980, the United States still has the highest rates of alcohol and substance use among the industrialized nations (Johnson, O'Malley, & Bachman, 1987; Kandel, 1991). For instance, according to data derived from a national sample of high school seniors (Johnson, O'Malley, & Bachman, 1988), 91% had used alcohol and 66% had smoked cigarettes. Indeed in that same study, over half had tried an illicit drug; over one third used an illicit drug other than marijuana (e.g., 10% had used cocaine and one percent had used heroin; Johnson, O'Malley, & Bachman, 1989). Moreover, many adolescents will experiment with cigarettes, chewing tobacco, alcohol, and marijuana (Johnson, et al., 1989).

The statistics pertinent to adolescents about frequent and/or heavy use of alcohol (e.g., having more than two drinks a day or binge drinking, which is five or more drinks in a row three or more times during the past two weeks), about heavy use of cigarettes (smoking five or more cigarettes a day), and about heavy use of illicit drugs (e.g., smoking marijuana 20 times or more in the past 30 days or using cocaine, crack, heroin, LSD once a week) reflect alarmingly high rates (Newcomb & Bentler, 1989). Johnson, O'Malley, and Bachman (1989) found that 19% of the seniors smoke cigarettes daily, 15% reported heavy drinking (e.g., five or more drinks in a row three or more times during the past two weeks), 5% acknowledged regular use of marijuana (20 times or more in the past 30 days), and 3% had used cocaine three or more times in the last month. Moreover, a third of the tenth through twelfth graders were classified as problem drinkers (have more than two drinks a day or binge drinking; Johnson, O'Malley, & Bachman, 1987). As noted

previously, the abuse of any one of these substances can have harmful short-term and long-term effects on an individual's physical as well as mental health (Hawkins et al., 1992b; Kandel, 1980, 1991).

For adolescents who get heavily involved in drugs (either with one or multiple drugs), the consequences can be devastating, physically and psychologically, and can severely limit educational, career, and marital success (Dryfoos, 1990; Hawkins et al., 1992a) and have been associated with many societal problems (Dryfoos, 1990). Indeed, over 60% of all auto fatalities are alcohol related (Ginzberg, Berliner, & Ostow, 1988). Frequent use of alcohol in the short term is also associated with impaired functioning in school, family problems, depression, and accidental death (e.g., drowning; Newcomb & Bentler, 1988). Cigarette smokers have a 70% higher overall premature death rate than non-smokers, and tobacco has been associated with more than 300,000 premature deaths per year (U.S. Department of Health and Human Services, 1983), thus making smoking a leading cause of morbidity and mortality.

The heavier the use of a seemingly harmless substance in the early years, the more likely that multiple use will occur later (Kandel, 1980, 1991; Newcomb & Bentler, 1989). Alcohol and smoking are characterized as "gateway" drugs, since they lead to more serious substance abuse (Kandel, Kessler, & Margulies, 1978; Kandel, 1980, 1991). As with heavy alcohol use, frequent use of marijuana has been linked with the following short term consequences: Impaired psychological functioning, impaired driving ability, and loss of short-term memory.

Over the past twenty years, research has identified the antecedents and correlates of alcohol and/or drug use/abuse during the adolescent years (Adger, 1992; Cohen, Brook, & Kandel, 1991; Dryfoos, 1990; Jessor & Jessor, 1977;

Kandel, 1991; Newcomb & Bentler, 1988, 1989). Several studies identified the individual-organismic, individual-behavioral, and contextual characteristics that appear to be associated with alcohol and/or substance use/abuse in adolescence (Clayton, 1986; Cohen, Brook, & Kandel, 1991; Dryfoos, 1990; Hawkins, Catalano, & Miller, 1992b; Hawkins et al., 1992a; Jessor & Jessor, 1977; Kandel, 1980, 1982; Kandel, Simcha-Fagan, & Davies, 1986; Newcomb & Bentler, 1988, 1989; Newcomb, Maddahian, & Bentler, 1986; Newcomb, Maddahian, Skager, & Bentler, 1987).

Individual-Organismic Characteristics Associated with Adolescent Alcohol and Drug Use/Abuse

Several individual-organismic characteristics have been associated with adolescents' use of alcohol and drugs. These characteristics, discussed below, include: Age, ethnicity, and self-esteem (Adger, 1992; Clayton, 1986; Chandy, 1991; Cohen, Brook, & Kandel, 1991; Dryfoos, 1990; Hawkins, Catalano, & Miller, 1992b; Hawkins et al., 1992a; Kandel, Simcha-Fagan, & Davies, 1986; Newcomb & Bentler, 1988, 1989; Newcomb, et al., 1986; Newcomb, et al., 1987). It is useful to review the nature of these relations.

The age at which an adolescent initiates cigarette or alcohol use has been linked to involvement with substance abuse. Several investigators have presented data suggesting that experimentation at an early age leads to a higher risk of using more dangerous drugs (Barnes, & Welte, 1986; Battjes, & Jones, 1985; Cohen, et al., 1991; Dryfoos, 1990; Kandel, 1980, 1982, 1991; Murray, & Perry, 1985; Newcomb, et al., 1986; Newcomb, et al., 1987).

The link between ethnicity and alcohol and/or drug use/abuse is complicated by the underrepresentation of adolescent minorities in empirical research (e.g.,

African American inner-city youth; Barnes, Farrell, & Banerjee, 1994; Dryfoos, 1990; Newcomb, & Bentler, 1986). In general, however, European American and Native American adolescents, especially those in urban areas, report the highest rates of alcohol and/or drug use/abuse, Latino and African American adolescents report intermediate rates of use, and Asian American adolescents report the lowest rates of use (Adger, 1992; Barnes, et al., 1994; Dryfoos, 1990; Gersick, Grady, Sexton, & Lyons, 1981; Harper, 1988; Newcomb, & Bentler, 1986; Newcomb, et al., 1986; Newcomb, et al., 1987).

Unlike teenage sexual activity, adolescent alcohol and/or substance use/abuse were not found to be associated with socioeconomic status. Indeed, alcohol and/or substance use/abuse cuts across all income and socioeconomic categories (Adger, 1992; Dryfoos, 1990; Murray & Perry, 1985).

Individual-Behavioral Characteristics Associated with Adolescent Alcohol and Drugs Use/Abuse

Several individual-behavioral characteristics are associated with engagement in alcohol and/or drug use/abuse among adolescents. The following characteristics have been identified in several studies: School performance; educational aspirations; time spent on homework; religiosity; antisocial behavior and delinquency; and school failure (Adger, 1992; Dryfoos, 1990; Hawkins, et al., 1992b; Kandel, 1982; Newcomb, et al., 1986). Performance in school, as measured by grades, has been linked to alcohol and/or drug use/abuse: Low grades in school (especially in junior high school) are associated with an increased likelihood of engagement in alcohol and/or substance use/abuse (Cohen et al., 1991; Dryfoos, 1990, Gersick, et al., 1981; Hawkins, et al., 1992b; Jessor 1976; Kandel, 1982; Newcomb & Bentler, 1988, 1989; Newcomb et al., 1987).

Hundleby and Mercer (1987) found that good school performance reduced the likelihood of frequent drug use in ninth graders.

Moreover, interest in school achievement or educational aspirations is related to alcohol and substance use/abuse among youth. Those adolescents who have low aspirations are more likely to participate in alcohol and/or substance use/abuse than those youth who are interested in school achievement, such as attending a post-secondary institution (Adger, 1992; Cohen, et al., 1991; Johnson, 1985; Johnson, et al., 1989; Kandel, 1982; Murray & Perry, 1985; Newcomb & Bentler, 1988, 1989).

Time spent on homework is another individual-behavioral characteristic that is associated with levels of substance use/abuse. The more time an adolescent spends on homework, the less likely it is that the adolescent is going to engage in alcohol and/or substance use/abuse (Benson, 1990; Friedman, 1983; Dryfoos, 1990; Kandel, 1982).

Several studies have found a linkage between religiosity and substance use/abuse (Barnes et al., 1994; Benson, 1990; Barnes & Welte, 1986; Cohen et al., 1991; Gersick et al., 1981; Kandel, 1982; Murray & Perry, 1985; Newcomb, et al., 1987). Adolescents who have a low attendance at church services are more likely to engage in the use/abuse of alcohol and/or drugs than adolescent who frequently attend church services.

The research regarding the association of self-esteem with alcohol and drug abuse/use is inconsistent. For example, some investigators have found a relationship between low self-esteem and greater alcohol and/or drug use/abuse (Cohen, et al., 1991; Kumpfer, 1989; Newcomb & Bentler, 1989; Rauch & Huba, 1991), while other researchers did not find a significant link between self-esteem

and alcohol and/or drug use/abuse (Dryfoos, 1990; Murray, & Perry, 1985).

Involvement in two specific risk behaviors, school failure and antisocial behavior/delinquency, has been associated with alcohol and substance use/abuse. For instance, adolescents who perform poorly in school and who possess low educational aspirations are more likely to become involved in alcohol and/or substance use/abuse (Dryfoos, 1990; Hawkins, et al., 1992b). Not surprisingly, then, school failure has been linked with engagement in alcohol and drug abuse/use. In many studies, school failure is defined as being two or more grades behind in school, and school failure has been identified as a predictor of adolescent alcohol and/or drug use/abuse (Dryfoos, 1990; Hawkins et al., 1992b; Jessor, 1976; Newcomb et al., 1986). School dropout is also related to alcohol and/or drug use/abuse (Hahn, Danzberger, & Lefkowitz, 1987; McCall, 1991).

The relationship between antisocial behavior (delinquency) and alcohol and drug use/abuse has been well established (Barnes, & Welte, 1986; Dryfoos, 1990; Farrington, 1992, 1993; Farrington, et al., 1990; Gersick, et al., 1981; Jessor, 1992, 1993; Jessor & Jessor, 1977; Kandel 1982; Murray & Perry, 1985; Newcomb, et al., 1986; Newcomb, & Bentler, 1988, 1989). For example, antisocial behavior that is exhibited through fighting, school misbehavior, and truancy in adolescence is linked to an increased likelihood of alcohol and substance abuse (Barnes, & Welte, 1986; Dryfoos, 1990; Jessor & Jessor, 1977; Kandel, 1982; Kandel, Simcha-Fagan, & Davies, 1986, Farrington, 1992, 1993). Moreover, several investigators have found that antisocial behavior in the form of lack of law abidance (i.e., delinquency) is associated with alcohol and drug abuse in adolescence (Hawkins, Jenson, Catalano, & Lishner, 1988; Newcomb & Bentler, 1989).

Contextual Characteristics Associated with Adolescent Alcohol and Drug

Use/Abuse

Finally, a large number of investigations have found evidence for a relationship between several characteristics of the context within which an adolescent is embedded and alcohol and/or drug use/abuse. These contextual characteristics occur at several levels of the ecology and include the following: Parent-adolescent relations (e.g., communication, monitoring/supervision); parental involvement in activities; parental addiction; family structure; nonparental adult relations; and peer relations (Adger, 1992; Barnes et al., 1994; Barnes & Welte, 1986; Dryfoos, 1990; Gersick, et al., 1981; Johnson et al., 1985, 1987, 1988; Kandel, 1982, 1985; Murray, & Perry, 1985; Newcomb & Bentler, 1988, 1989).

Parental-adolescent communication that is characterized by negative patterns (e.g., criticism, lack of praise) has been linked with adolescent engagement in alcohol and/or drug use/abuse (Barnes, et al., 1994; Dishion & Loeber, 1985; Dryfoos, 1990; Hawkins, et al., 1992b; Kandel, et al., 1978). In addition, parental monitoring and supervision have been found to be associated with adolescent alcohol and/or substance use/abuse (Barnes, & Welte, 1986; Baumrind, 1983; Cohen et al., 1991; Dryfoos, 1990; Gersick, et al., 1981; Johnson et al., 1988; Hawkins, et al., 1992b; Kandel & Andrews, 1987; Penning, & Barnes, 1982). Lack of parental monitoring and discipline are related to an increased likelihood of adolescent alcohol and/or substance use/abuse.

A link between parental addiction and adolescent alcohol and substance use/abuse has been found in several investigations (Adger, 1992; Barnes & Welte, 1986; Dishion & Loeber, 1985; Dryfoos, 1990; Johnson et al., 1987; Kandel, et al., 1978; Kandel 1982, 1985; Murray, & Perry, 1985; Newcomb, & Bentler 1988,

1989; Newcomb, et al., 1986). Adolescents who have one or both parents who are addicted to a substance are more likely to engage in alcohol and/or substance use/abuse than adolescents who do not have an addicted parent or parents. In addition, adolescents who have an older addicted sibling are more likely to get involved in such use than are adolescents who do not (Adger, 1992; Brook, Whitehead, Gordon, & Brook, 1988). There is also a link between parental involvement in activities and a decrease in the probability an adolescent will engage in a youth's alcohol and/or drug use/abuse (Jessor & Jessor, 1977; Hundleby & Mercer, 1987; Brook, Brook, Gordon, Whiteman, & Cohen, 1990).

The research on family structure and alcohol and/or drug use/abuse has found inconsistent evidence (Dryfoos, 1990). Some studies suggest that adolescents who come from homes broken by marital discord are at a higher risk for involvement for alcohol and/or drug use/abuse (Baumrind, 1983; Penning, & Barnes, 1982). Yet, other studies have found no relationship between family structure and alcohol and substance use/abuse (Barnes, et al., 1994; Gersick, et al., 1981). However, there is consensus among investigators that quality of the relationship between the parent(s) and the child is more important than the family structure (Dryfoos, 1990). Within the United States, the literature has not examined associations between adolescent-nonparental adult relationships and alcohol and/or drug use/abuse. However, several previously- noted studies of resiliency have suggested the important role that nonparental adults play for adolescent resiliency (Bernard, 1991; Luthar, 1991; Rutter, 1987; Werner, 1986, 1989, Werner & Smith, 1982, 1992).

Consistently, one of the most powerful predictors of adolescent alcohol and/or drug use/abuse is the behavior of a youth's best friend (Barnes & Welte,

1986; Brook, et al., 1990; Dishion & Loeber, 1985; Dryfoos, 1990; Gersick, et al. 1981; Jessor & Jessor, 1977; Kandel, 1985; Kandel, & Andrews, 1987; Newcomb, & Bentler, 1986; Newcomb, et al., 1986). Adolescents whose friends use alcohol and/or drugs are much more likely to use/abuse them than those adolescents whose peers do not engage in such behavior. In fact, there is evidence that initiation of alcohol and drug use is through friends rather than strangers (Brook, et al., 1990; Kandel, 1985; Kandel & Andrews, 1987). Furthermore, several studies have reported that the influence of peers on adolescent alcohol and/or drug use/abuse is stronger than parental influences for most ethnic groups (e.g., among African Americans, Asian Americans, and Hispanics/Latinos) (Hawkins, et al., 1992b; Newcomb & Bentler, 1986). However, Native Americans were not included in these studies.

In conclusion, a linkage exists between specific individual-organismic, individual-behavioral, and contextual characteristics and adolescent alcohol and drug use/abuse. However, gender, ethnicity, and age have not been studied in an integrated way, thus making it impossible to ascertain the combined impact of these variables for adolescent alcohol and drug use and abuse. Moreover, the lack of an integrated study has inhibited the exploration of how these individual-organismic characteristics may relate to other characteristics. In addition, with but a few exceptions, such as antisocial behavior and delinquency (Adger, 1992; Jessor & Jessor, 1977, Hawkins et al., 1992b), only a small amount of the research to date has examined this risk behavior in relation to other risk behaviors. This study will examine in an integrated fashion the interrelationship of adolescent alcohol and drug use/abuse with other risk behaviors, specifically: School failure, adolescent sexual activity, and delinquency and anti-social behavior.

Delinquency and Antisocial Behavior

The terms "antisocial behavior" and "delinquency" suggest a wide range of behaviors, from socially unacceptable but not necessarily illegal acts to violent and destructive illegal behaviors. Two types of offenses will be presented here in regard criminal acts. First, status offenses are those offenses that are illegal acts due to the age of the individual, which is state dependent. Status offenses are sometimes classified as juvenile offenses. Examples of status offenses are: Running away, truancy, drinking under age, sexual promiscuity, and uncontrollability. Second, index offenses are offenses that are always illegal and are not dependent on age. Thus, index offenses are criminal acts whether committed by juveniles or adults and, as categorized by the Federal Bureau of Investigation, include offenses such as robbery, vandalism, aggravated assault, rape, and homicide (Dryfoos, 1990; Kazdin, 1986).

Although most individuals with a history of juvenile delinquency do not go on to become convicted criminals, most convicted criminals do have a history of juvenile delinquency (Dryfoos, 1990; Robins, 1978). Antisocial behavior has been found to be prevalent in general community samples of adolescents (Elliott, Huizinga, & Ageton, 1985; Tolan, 1988). For example, individuals in the 13-21 age range accounted for 35.5% of the arrests for nontraffic offenses in the U.S. in 1985, although they represented only 14.3% of the population (Jamieson & Flanagan, 1986). In 1986, more than 1.4 million juveniles were arrested for status offenses (e.g., vandalism, drug abuse, or runaway) and almost 900,00 for index crimes (e.g., larceny-theft, robbery, or forcible rape; Federal Bureau of Investigation, 1987). In addition, 1.7 million adolescents are estimated to run away from home each year (Dryfoos, 1990); the majority of these youth are female (Dryfoos, 1990;

Flanagan & Maguire, 1991).

About 17% of all arrests in the United States in 1986 were of people under the age of 18, and more than 5% were under the age of 15 (Flanagan & Jamieson, 1987). In comparison, the percent of all arrests in the United States in 1990 of people under age 18 was slightly lower (16%), and again more than 5% of all arrests were under 15 (Flanagan & Maguire, 1992). Indeed, the percentage of all arrests that are among juveniles has decreased since 1975, when 26% of the arrests were of people under the age of 18 to the 1990 frequency of 16%. The number of arrests of juveniles from 1975 to 1986 dropped 15% (U.S. Bureau of the Census, 1989). However, the number of adolescents also dropped dramatically during this period by a similar percent (Dryfoos, 1990).

In 1990, as in the past, there were a disproportionate number of adolescents involved in certain crimes; 11% of all serious charges were to those under 15, particularly for property crimes such as arson, burglary, and larceny-theft (Flanagan & Maguire, 1992). Thirty-one percent of all serious crimes were charged to older adolescents (age 16-17). Moreover, older adolescents are more likely to be involved in violent crimes, comprising about 16% of all the violent crimes (e.g., murder, forcible rape, robbery, and aggravated assault; Flanagan & Maguire, 1992). In 1990, approximately four times as many adolescent males under 18 were arrested for serious crimes than was the case for females under 18 (Flanagan & Maguire, 1992). However, both adolescent males and females account for more than a quarter of all those arrested for serious crimes in their respective gender groups (i.e., adolescent males account for 29% and adolescent females account for 26%; Flanagan & Maguire, 1992; Henggeler, 1989).

Arrest rates are much higher for African American males than for any other

group. When self-reported, only slight differences appear between Whites and African American males (Dryfoos, 1990). African American youth experiences rates of rape, aggravated assault, and armed robbery that are approximately 25% higher than White adolescents. Rates of motor vehicle theft are about 70% higher for African Americans, rates of robbery victimization are about 150% higher, and rates of African American homicide are typically between 600 to 700% higher (Dryfoos, 1990; Flanagan & Maguire, 1992; Hamburg, 1992; Hernandez, 1993; Kids Count, 1992, 1993; Mincy, 1994; National Research Council, 1993). As reported in the Sourcebook of Criminal Justice Statistics --1991, African Americans comprise approximately 15 percent of the juvenile population, yet 26% of juveniles arrested in 1990 were African American as were 51% of those arrested for violent crimes committed by those under 18 (Flanagan & Maguire, 1991). European American adolescents made up the majority of juvenile arrests (71%), followed by African Americans (26%), Asian Americans (2%), and Native Americans (1%).

Self-report data by adolescents indicate a wide gap between rates of self-reported antisocial behavior and juvenile arrest and conviction rates (Dunford & Elliott, 1982; Hindelang, Hirschi, & Weis, 1981). The rates of self-report are consistently much higher than are the arrest rates (Dryfoos, 1990). Indeed, a review of the literature on self-report surveys concluded that no more than 15% of all delinquent acts result in police contact (Farrington & West, 1982). The majority of adolescents report that they have participated in various forms of delinquent behavior (Dryfoos, 1990). In fact, 80% of 11- to 17-year-olds in the National Youth Survey reported that at some time or another they had been delinquent, and a total of 21% had committed index offenses, with physical assaults and thefts leading the list (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983). Dryfoos

(1990) suggests the number of index offenses committed by adolescents may be 10 times greater than the number of cases that are discovered and end up in juvenile court. An estimated six million 10- to 17-year-olds reported that, within a one-year period, they had participated in an act that was against the law; of these 3.3 million youth were under the age of 14 (Dryfoos, 1990).

Delinquency and antisocial behavior can have harmful short-term and long-term effects on an individual's physical as well as mental health. Antisocial behavior has been linked with psychiatric problems, early and heavy alcohol and/or drug use/abuse, and school problems. Over the long term, antisocial behavior is associated with an increased likelihood of adult criminal behavior, unemployment, low occupational status and low income, poor marital adjustment and stability, out-of-wedlock parenting, impaired offspring, and reliance on welfare (Kazdin, 1986; Robins, 1986; Werner, 1986).

Research has identified the antecedents and correlates of antisocial behavior and delinquency during the adolescent years (Barnes & Farrell, 1992; Dryfoos, 1990; Glueck & Glueck, 1968; Hawkins & Lishner, 1987; Henggeler, 1989; Jessor & Jessor, 1977; Kandel, et al., 1986; Kazdin, 1986; Loeber & Stouthamer-Loeber, 1986; Moffit & Silva, 1988; Pakiz, Reinerz, & Frost, 1992; Patterson, DeBaryshe, & Ramsey, 1989). These studies identified the individual-organismic, individual-behavioral, and contextual characteristics that appear to be associated with antisocial behavior and delinquency during adolescence. Consensus among researchers about these antecedents and correlates is substantial (Dryfoos, 1990).

Individual-Organismic Characteristics Associated with Antisocial and Delinquent Behaviors

Several individual-organismic characteristics have been associated with antisocial behavior and delinquency during adolescence: Age, gender, ethnicity, and self-esteem (Dryfoos, 1990; Henggeler, 1989; Jessor & Jessor, 1977; Kandel, et al., 1986; Kazdin, 1986; Pakiz, Reinerz, & Frost, 1992; Patterson, DeBaryshe, & Ramsey, 1989).

Age of initiation in antisocial behaviors has been found to be related to antisocial behavior and delinquency during adolescence. Early onset of adolescent antisocial behavior is associated with high rates of more serious criminal offenses in later adolescence (Dryfoos, 1990; Earls, 1992; Hanson, Henggeler, Haefele, & Rodick, 1984; Henggeler, 1989; Loeber & Dishion, 1983; Tolan, 1987).

Studies that have utilized self-reports and arrest statistics have consistently demonstrated evidence that there are large gender differences in the prevalence and incidence of most antisocial and delinquent behaviors. Adolescent males engage in considerably more delinquent behaviors than adolescent females (Dryfoos, 1990; Elliott, Huizinga, & Morse, 1985; Henggeler, 1989; Hyde, 1984; Kandel et al., 1986). This difference is more pronounced in serious and/or violent crimes. Girls, then, are more likely to be involved in status offenses (e.g., running away) than serious or violent crimes.

Within the studies using arrest statistics, there is a consistent finding that African Americans are disproportionately represented in the arrest data, victimization reports, and incarceration statistics (Earls, 1992; Flanagan & Jamieson, 1987; Flanagan & Maguire, 1992; Henggeler, 1989; Hernandez, 1993; Kids Count, 1992, 1993; Krisberg, et al., 1987; Mincy, 1994). However, self-

report measures have yielded minimal racial differences in antisocial and delinquent behaviors (Fagan, Slaughter, & Hartstone, 1987; Huizinga & Elliott, 1987; Krisberg, et al., 1987). For example, Huizinga and Elliott (1987) reported median African-American/White prevalence ratios for index offenses of only 1.1 for males and 1.7 for females. However, this difference may have to do with methodological variance.

Individual-Behavioral Characteristics Associated with Antisocial and Delinquent Behaviors

Several studies have identified individual-behavior characteristics that are associated with antisocial and delinquent behaviors in adolescence: School performance, educational aspirations, part-time employment, religiosity, alcohol and drug use/abuse, and school failure (Bachman, O'Malley, & Johnson, 1978; Dryfoos, 1990; Hawkins & Lishner, 1987; Henggeler, 1989; Robins, 1978).

There is consistent evidence from both cross-sectional and longitudinal research that poor performance in school is associated with antisocial and delinquent behavior (Bachman, et al., 1978; Elliot & Voss, 1974; Dishion, Loeber, Stouthamer-Loeber, & Patterson, 1984; Dryfoos, 1990; Hawkins & Lishner, 1987). School failure, that is, being two more years behind in school or dropping out of school has been found to be associated with antisocial and delinquent behaviors (Barnes & Farrell, 1994; Dryfoos, 1990; Henggeler, 1989; Hawkins & Lishner, 1987). Furthermore, low educational expectations and aspirations have been linked with an increased likelihood of antisocial and delinquent behaviors in youth (Hawkins & Lishner, 1987; Kandel et al., 1986; Loeber & Stouthamer-Loeber, 1986).

Employment can provide a legitimate means for obtaining material

possessions, acquiring status and career paths, and attenuating the negative effects of poor academic achievement (Duster, 1987). Studies have produced inconsistent data on the association of part-time employment and delinquency. Cross-sectional data provide support for an association between employment and lower levels of antisocial and delinquent behaviors during adolescence (Fagan & Wexler, 1987; Tolan, 1988). In the longitudinal literature, however, there is little evidence supporting this association (Shannon, 1982), and in fact part-time employment may have deleterious effects on adolescent behaviors (Steinberg, Greenberg, Gardduque, Ruggiero, & Vaux, 1982).

Researchers report inconsistent findings with regard to religiosity and antisocial and delinquent behavior (Henggeler, 1989). Some researchers found significant associations between religious involvement and antisocial and delinquent behaviors (Dryfoos, 1990; Higgins & Albrecht, 1977; Stark, Kent, & Doyle, 1982). However, other researchers have not found a significant association (Hirschi & Stark, 1969), or have found that it was mediated by whether the community was religious or secular. Thus, religiosity was significantly related to antisocial and delinquent behaviors in communities that were more secular than religious (Stark, Kent, & Doyle, 1982). This relationship suggests that the importance of the religiosity association with antisocial and delinquent behaviors is tempered by the attitudes that exist in the social environment towards religious conviction (Stark, Kent, & Doyle, 1982). More research is needed before any conclusion can be drawn in regard to the relationship between religiosity and antisocial and delinquent behaviors.

The research findings are mixed with regard to the individual-behavioral characteristic of self-esteem. Comparison between delinquents and nondelinquents

have provided evidence that delinquent adolescents have lower self-esteem (Arbuthnot, Gordon, & Jurkovic, 1987). However, some studies do not provide evidence for the association between self-esteem and delinquency (Henggeler, 1989). For example, self-esteem does not predict subsequent delinquency when the influences of family relations and school performance are considered (Wells & Rakin, 1983). In his review of the literature, Henggeler (1989) suggests that the association between self-esteem and delinquency is due to the association with a third variable (e.g., intelligence quotients, family relations, or school performance).

As noted in the previous section, numerous studies have established the relationship among antisocial and delinquent behaviors with alcohol and drug use/abuse (Barnes, & Welte, 1986; Dryfoos, 1990; Hawkins et al., 1992b; Hawkins & Lishner, 1987; Henggeler, 1989; Jessor, 1992, 1993; Jessor & Jessor, 1977; Kandel, 1982; Kandel et al., 1986; Murray & Perry, 1985; Newcomb & Bentler, 1988, 1989). Indeed, antisocial and delinquent behaviors are associated with early and heavy alcohol and/or substance use/abuse (Barnes, & Welte, 1986; Dryfoos, 1990; Hawkins, et al., 1992b; Hawkins & Lishner, 1987; Jessor & Jessor, 1977; Kandel, 1982; Kandel, et al., 1986).

Contextual Characteristics Associated with Antisocial and Delinquent Behavior

Research on antisocial and delinquent behavior has provided support for the association among several contextual characteristics and the presence or development of antisocial or delinquent behavior in adolescence (e.g., Barnes & Farrell, 1992; Barnes et al., 1994; Dryfoos, 1990; Gove & Crutchfield, 1982; Kandel & Andrews, 1987; Tolan & Lorian, 1988). These characteristics are representative of different levels of the ecology and include: Parent-adolescent relations (i.e., support, communication, monitoring/supervision); parental practice of

high-risk behaviors; family support; family structure; peer relations; neighborhood quality; and socioeconomic status.

In general, researchers have found a negative linear relationship between parental support (e.g., positive communication, affection) and adolescent antisocial and delinquent behaviors, such that the more parental support that exists the less likely the adolescent is going to be involved in antisocial or delinquent behaviors (e.g., Barnes & Farrell, 1992; Barnes et al., 1994; Dryfoos, 1990; Gove & Crutchfield, 1982; Kandel & Andrews, 1987; Tolan & Lorian, 1988). In addition, many of the already-noted studies found that a significant relationship exists between parental control (e.g., monitoring, discipline) and antisocial and delinquent behaviors (e.g., Barnes & Farrell, 1992; Barnes et al., 1994; Cernkovich & Giordano, 1987; Dryfoos, 1990; Gove & Crutchfield, 1982; Henggeler, 1989; Kandel, et al., 1986; Kandel & Andrews, 1987; Loeber & Stouthamer-Loeber, 1986). Higher parental monitoring was associated with low instances of antisocial and delinquent behaviors. Moreover, lax or markedly inconsistent discipline has been linked to high rates of antisocial behavior and delinquency (Barnes & Farrell, 1992; Burgess & Richardson, 1987; Dryfoos, 1990; Glueck & Glueck, 1968; Henggeler, 1989; Hirschi, 1969; Loeber & Stouthamer-Loeber, 1986; Pakiz et al., 1992; Tolan & Lorian, 1988).

Parental practice of high-risk behaviors is another characteristic of the parent-adolescent relationship that has been linked to antisocial and delinquent behaviors (Barnes & Farrell, 1992; Barnes et al., 1994; Burgess, 1987; Glueck & Glueck, 1968; Henggeler, 1989; Kandel, et al., 1986; Kandel & Andrews, 1987; Loeber & Stouthamer-Loeber, 1986; Tolan, 1988). Furthermore, parental physical and sexual abuse of children and adolescents have been found to be associated

with antisocial and delinquent behavior (Benson, 1990, Brown, 1984). Adolescents who are physically or sexually abused by their parent or parents are more likely to participate in delinquent acts (Brown, 1984).

In addition to the parental-adolescent relationship, other characteristics of the family have been linked with antisocial behaviors and delinquency. For example, there is an association between adolescent antisocial and delinquent behaviors and family support. Low family support, as measured by low warmth and affection among family members, has been linked with antisocial behaviors during adolescence (Doane, 1978; Jacob, 1975; Henggeler, 1989; Patterson, et al., 1989). In addition, several studies have found that antisocial and delinquent behavior is associated with low family cohesion and high family conflict (Cernkovich & Giordano, 1987; Pakiz et al., 1992; Tolan, 1988, Tolan & Lorian, 1988).

An association has been found between family structure (whether there exists a two-parent or a single-parent headed household) and antisocial behaviors and delinquency (Barnes & Farrell, 1992; Burgess & Richardson, 1987; Loeber & Stouthamer-Loeber, 1986; Kandel et al., 1986; Patterson, et al., 1989; Steinberg & Silverberg, 1986). For example, adolescents living in mother-only homes and natural parent-stepparent homes were more susceptible to negative peer pressures and engaged in more antisocial behaviors and delinquent acts than did their age-related peers living in homes with two natural parents (Steinberg, 1987). No data have been presented with regard to father-only homes. However, family structure is not as significant in predicting antisocial behavior and delinquency as is the quality of the parent-adolescent relationship (Dryfoos, 1990; Kandel & Andrews, 1987; Steinberg & Silverberg, 1986).

For many adolescents, involvement with deviant peers has become a critical aspect of their own delinquent behavior (Dryfoos, 1990; Henggeler, 1989). Thus, researchers have found evidence for an association between antisocial behavior and delinquency and engagement with peers who participate in antisocial behaviors and delinquent acts (Dishion & Loeber, 1985; Dryfoos, 1990; Elliott et al., 1985; Henggeler, 1989; Kandel & Andrews, 1987; Kandel et al., 1986). In fact, there is evidence that a high percentage of antisocial and delinquent behavior is carried out with peers (Emler, Reicher, & Ross, 1987; Erickson & Jensen, 1977).

Certain types of neighborhoods are linked to adolescent antisocial behaviors, to delinquent behaviors, and to delinquent gang activities (Dryfoos, 1990; Farrington, 1992, 1993; Kandel et al., 1986; Loeber & Stouthamer-Loeber, 1986; Pakiz et al., 1992). Neighborhoods that are located in an area with high-crime, poverty, and dense living conditions are associated with an increased likelihood of adolescent antisocial behavior and delinquent acts, including the emergence of gangs (Dishion & Loeber, 1985; Dryfoos, 1990; Elliott, et al., 1985; Henggeler, 1989; Patterson, et al., 1989).

Finally, it should be noted that the impact of socioeconomic status is unclear. Studies have found evidence for a link between low socioeconomic status and an increased adolescent antisocial behavior and delinquency (Elliott & Huizinga, 1983; Robins & Hill, 1968). However, recent studies have not found socioeconomic status to be of primary importance in adolescent antisocial and delinquent behavior (Dryfoos, 1990; Henggeler, 1989; Loeber & Stouthamer-Loeber, 1986; Quay, 1986; Robins, 1978; Tolan 1988).

In sum, considerable evidence exists in the literature for a linkage among specific individual-organismic, individual-behavioral, and contextual characteristics

and adolescent antisocial behavior and delinquency. Due to a lack of integrated and comprehensive data sets, however, no research to date has been able to examine simultaneously whether individual-organismic, individual-behavioral, and contextual characteristics vary with antisocial behavior and delinquency. With a few notable expectations (e.g., involving a few studies pertinent to school failure and alcohol use), the research to date also has not examined antisocial behavior and delinquency in relation to several other risk behaviors (Dryfoos, 1990; Jessor & Jessor, 1977, Henggeler, 1989).

School Underachievement and Failure

As noted above, low achievement in school has been linked to the three previously mentioned risk behaviors--adolescent sexual activity; alcohol and/or drug use/abuse; and antisocial behavior and delinquency. In addition, many of the individual-organismic characteristics, individual-behavioral characteristics, and characteristics of the context linked with the previously-mentioned behaviors are linked to school underachievement and failure.

Low school achievement, poor grades, or being over-age for grade are often associated with dropping out (Bachman, Green, & Wirtanen, 1971; Dryfoos, 1990). Yet, not everyone who has low grades or is over-age drops out. The consequences for poorly equipped high-school graduates, however, may inhibit their chances for getting into a post secondary school and, in turn, this may limit their chances of getting a good job. High-school dropouts are two to three times more likely to be in marginal jobs and to be employed intermittently (Eccles, 1991). Conversely, each added year of secondary education reduces the probability of public welfare dependency in adulthood by 35 percent (Berlin & Sum, 1988).

School failure here will be defined as possessing poor grades (e.g., half of a

student's grades are D or less in regard to academic content areas) and being retained one or more grades. Falling behind one's age-related peers is strongly predictive of dropping out (Dryfoos, 1990); even when achievement, socioeconomic status and gender are controlled, being held back increases the probability of eventually dropping out of school by 20 to 30% (Smith & Shepard, 1988).

Approximately 20% of adolescents under age 18 in the United States are one year behind their age-related peers with regard to grade. Another 4% are two more years behind (United States Bureau of the Census, 1988). Furthermore, 7.4 million of the 28 million 10 to 17-year-olds are behind their modal grades (Dryfoos, 1990). Twenty percent, or 1.4 million, of these 7.4 million 10 to 17 year olds are two or more years behind modal grade level. This places them at even higher risk of dropping out.

The majority of adolescents who do eventually drop out of school will encounter long-term employment problems. Each year 700,000 youth in the United States drop out of school and approximately 25% of all 18- and 19-year-olds have not graduated high school (Dryfoos, 1990). Over their lifetime, each year's class of dropouts will cost \$260 billion in lost earnings and foregone taxes (Catterall, 1987). Thus, there are devastating long term effects of school failure and dropout.

Antecedents and correlates of school failure and dropout during the adolescent years have been identified in past research (Barnes & Farrell, 1992; Barro & Kolstad, 1987; Bickel, Bond, & LeMahieu, 1986; Dryfoos, 1990; Eccles, 1991; Eccles & Midgley, 1989; Engel, 1994; Powell-Cope & Eggert, 1994; Quinton & Rutter, 1988; Rumberger, 1983; Rumberger, Ghatak, Paulos, Ritter, & Dornbusch, 1988; Smith & O'Day, 1991). There are a substantial number of

similarities in extant findings and in the opinions of researchers about the nature of these antecedents and correlates.

Individual-Organismic Characteristics Associated with School Underachievement and Failure

Several individual-organismic characteristics have been found to be related to school failure and drop out: Age, gender, ethnicity, and self-esteem (Barro & Kolstad, 1987; Dryfoos, 1990; Jessor & Jessor, 1977; Mortenson & Wu, 1990; National Center for Educational Statistics, 1990, 1991; Smith & O'Day, 1991). Many studies found that older adolescents who have been retained (held back) from advancing to the next grade level with their age-related peers are more likely to do poorly in school and to drop out (Barro & Kolstad, 1991; Dryfoos, 1990; Eccles, 1991; Eckstrom, Goertz, Pollack, & Rock, 1986; Powell-Cope & Eggert, 1994; Rumberger, 1983; Rumberger et al., 1988). Furthermore, in general, adolescents' average course grades decline as they move from primary school into secondary school; that decline is especially marked at each of the school transitions points (Simmons & Blyth, 1987).

Overall, females do better in school than males in a majority of academic content areas (Eccles, 1988; McCall, Evahn, Kratzler, 1988; National Science Foundation, 1988). Moreover, females are less likely to be involved in behavior problems in school, and problem behaviors have been linked to school failure and dropout (Barnes & Farrell, 1992; Dryfoos, 1990; Henggeler, 1989; Ingersoll & Orr, 1989; Jessor & Jessor, 1977; National Research Council, 1993; Simmons & Zhou, 1993).

Ethnicity has been linked with trends in achievement, insofar that being a member of a ethnic minority increases probability of school failure and dropout

(except for Asian American youth; Eccles, 1991; Dryfoos, 1990; McCall, Evahn, Kratzler, 1988; National Research Council, 1993; Simmons & Zhou, 1993; Youth Indicators, 1991). Indeed, African American and Latino adolescents have a greater probability of being left behind a grade than European American students (United States Bureau of the Census, 1988; National Research Council, 1993). Latino adolescent males have the highest percentage for having been retained a grade (46.8%), followed by African American males (44%), Latina females (41.2%), African American females (33%), European American males (29.6%), and European American females (22.2%). Since 1975, high school dropout rates for Latinos have been compiled; in every year Latino adolescents have the highest rate of dropouts, followed by African American adolescents, and European American adolescents (33%, 13.8%, and 12.4%, respectively; Youth Indicators, 1991). Simmons and Zhou (1993) obtained similar findings when they examined African American and European American sixth to ninth graders. They found that African American males showed the highest degrees of school problem behavior in general, and probation and suspensions in particular. This higher frequency of minority adolescents failing in school or dropping out may be confounded with the greater incidence of poverty and lower socioeconomic status among ethnic minorities, especially African Americans and Latinos.

Individual-Behavioral Characteristics Associated with School Underachievement and Failure

Several individual-behavior characteristics have been identified as associated with school failure and dropping out: Attitude toward school; educational aspirations; basic skills; time spent on homework; time spent socializing; involvement in school activities (e.g., sports, computer club); part-time

employment; stress; alcohol and drug use/abuse; antisocial behavior and delinquency; and adolescent sexual activity (Barro & Kolstad, 1987; Benard, 1991; Bickel, Bond, & LeMahieu, 1986; Brack, Brack, & Orr, 1994; Eccles, 1988; Dryfoos, 1990; Jessor & Jessor, 1977; Powell-Cope & Eggert, 1994; Rumberger, 1983; Rumberger et al., 1988; Simmons & Blyth, 1987).

Adolescents who value school less or who have a negative attitude about school are more likely to fail or drop out than is the case for adolescents who value school and possess a positive attitude about school (McCall, et al., 1988; Powell-Cope & Eggert, 1994; Rumberger, 1983; Simmons & Blyth, 1987; Steinberg & Darling, 1993). Simmons and Zhou (1993), for example, found that at transitions to junior high school and to high school, African Americans attitudes toward school drop relatively precipitously. Not surprisingly, adolescents who have low educational aspirations are more likely to be failing at school or to drop out of school (Barro & Kolstad, 1987; Eckstrom et al., 1986; Rumberger et al., 1988; Simmons & Blyth, 1987). Moreover, a lack of basic skills and problem solving abilities has been linked with school failure and dropping out of school; adolescents who are deficient in basic and problem solving skills have an increased probability of failing or dropping out of school (Barro & Kalstad, 1987; Dryfoos, 1990; Eccles & Midgley, 1989; McCall, et al., 1988; Rumberger 1983; Rumberger, et al., 1988).

Time spent on homework has been found by Steinberg and Darling (1993) to be associated with school failure. They found that adolescents who spend little or no time on their homework are likely to fail at school. However, Dryfoos (1990) did not find lack of time spent on homework a significant correlate of school failure or dropout. Thus, more research is needed to test the association between time spent on homework and school failure or drop out. In turn, other investigations have

found that potential school failures and dropouts spend more time socializing dating and riding around in cars (Barro & Kolstad, 1987; Eckstrom, et al., 1986; Rumberger, 1983; Rumberger, et al., 1988).

An association has been found between self-esteem and school failure and drop out (Ingersoll & Orr, 1989; Luster & McAdoo, 1994; McCall, 1991; Powell-Cope & Eggert, 1994; Ryan, Stiller, & Lynch, 1994; Simmons & Blyth, 1987). Adolescents that had a low self-esteem were associated with doing poorly in school and/or dropping out. However, Dryfoos (1990) in her review of the literature did not find overwhelming support for the existence of a relationship between self-esteem and school failure and dropping out.

Several researchers have identified an association between involvement in school activities and school failure and dropping out. Low interest in school activities and low participation in school activities are linked with an increased likelihood of school failure and drop out (Barro & Kolstad, 1987; Benard, 1991; Eccles, 1988, 1991; Eckstrom, et al. 1987; McCall, et al., 1988; Rumberger, 1983; Rutter, 1979).

There has been a lack of consensus and consistency of findings in regard to the association between adolescents' part-time employment and school failure and dropout (D'Amico, 1984; Lewin-Epstein, 1981; Marsh, 1991; Steinberg, Lamborn, Dornbusch, & Darling, 1992; Steinberg, et al., 1982). For example, D'Amico's (1984) analysis of the National Longitudinal Study (NLS) youth data demonstrated that employment at low intensity (less than 20 hours per week) lessens dropout rates. However, Greenberger and Steinberg (1986) found that working adolescents were more frequently late for school and engaged in more deviant behavior than those students who were not employed. Furthermore, Mortimer and her colleagues

(1993) found no association between adolescent employment and school failure or dropout (Mortimer, Shanahan, & Ryu, 1993).

A few studies have found some evidence of a positive link between stress/depression and school failure and dropout, such that high stress is associated with school failure and dropout (Barro & Kolstad, 1987; Dryfoos, 1990; Eccles, 1991; Ingersoll & Orr, 1989; McCall, 1991; Rumberger, 1983; Simmons & Blyth, 1987). For example, Brack et al. (1994) found that females who were failing at school had higher levels of reported stress/depression than those females who were doing average or better; however, they did not find a similar relationship for males.

Research has also found a link between school failure and dropout and other risk behaviors: Antisocial behavior and delinquency; alcohol and/or drug use/abuse; and adolescent sexual activity (Barnes & Farrell, 1992; Brack, et al., 1994; Brooks-Gunn & Furstenberg, 1989; Dryfoos, 1990; Hawkins et al., 1992b; Henggeler, 1989; Jessor, 1992, 1993; Jessor & Jessor, 1977; National Research Council, 1993; Newcomb, et al., 1986; Newcomb & Bentler, 1989). As noted previously, adolescent pregnancy is a significant antecedent of dropping out. However, dropping out is also an antecedent of teenage-childbearing (Dryfoos, 1990; Eccles, 1991; Luster & Small, 1994). In addition, antisocial behavior and delinquency has been shown to be associated with an increased likelihood of school failure or dropping out of school (Dryfoos, 1990; Henggeler, 1989; Jessor & Jessor, 1977). Furthermore, adolescents who frequently use and/or abuse alcohol and/or drugs have been found to have a higher probability of failing or dropping out of school (Dryfoos, 1990; Hawkins et al., 1992a, 1992b; Kandel, 1982; Newcomb et al., 1986). The overlapping of these risk behaviors will be discussed in the final section of this literature review.

Contextual Characteristics Associated with School Underachievement and Failure

Several contextual characteristics have been associated with school failure and drop out: Parent-adolescent relations (e.g., support, communication, monitoring/supervision); parental education; family structure; peer relations; school size; school climate; neighborhood; and socioeconomic status (Barro & Kolstad, 1987; Eccles & Midgley, 1989; Eckstrom et al., 1986; Felner, Aber, Primavera, & Cauce, 1985; McCall, 1991; National Research Council, 1993; Powell-Cope & Eggert, 1994; Rumberger, 1983; Rumberger et al., 1988; Simmons & Blyth, 1987; Smith & O'Day, 1991; Steinberg & Darling, 1993).

Investigators have found a link between parental support (e.g., positive communication, affection) and school failure and dropping out. Adolescents who have parental support and are able to discuss issues with their parents are less likely to be failing or dropping out of school (Barnes & Farrell, 1994; Barnes et al., 1994; Barro & Kolstad, 1987; Dryfoos, 1990; Eccles & Midgley, 1989; Felner, et al., 1985; Rumberger, 1983). Moreover, authoritatively-reared adolescents are less likely to fail or drop out of school (Baumrind, 1983; Simmons & Blyth, 1987; Steinberg & Darling, 1993). Low parental monitoring is associated with failing school and dropping out (Barnes & Farrell, 1992). Parental education is strongly related to school failure and drop out. Adolescents whose parents have low levels of education have an increased likelihood of school failure and drop out (Barro & Kolstad, 1987; Eckstrom et al., 1986; Eccles 1991; National Research Council, 1993; Rumberger, 1983; Smith & O'Day, 1991).

There has been inconsistent evidence that family structure is associated with school failure and dropping out. Adolescents who are from larger families (e.g., more than two siblings) are more likely to fail or drop out of school than are

adolescents from smaller families (McCall, 1991). This association may be related to the consistently low socioeconomic status of large families. Adolescents who live in single-parent homes have a higher probability of failing or dropping out of school than do adolescents who live in two parent homes (McCall, 1991, Powell-Cope & Eggert, 1994; Simmons & Zhou, 1993). However, several studies found that the association of family structure with school failure and drop out were minimal when socioeconomic status is accounted for in the analysis (Dryfoos, 1990; National Research Council, 1993; Smith & O'Day, 1991). Thus, the relationship between family structure and school failure and drop out is not clear.

Adolescents who have affiliations with peers who have low expectations for school and/or have friends who have dropped out are more likely to fail at or to drop out of school than is the case for adolescents whose peers have high expectations and positive attitudes toward school (Eckstrom, et al., 1986; Felner, et al., 1985; Powell-Cope & Eggert, 1994; Rumberger, 1983; Smith & O'Day, 1991; Steinberg & Darling, 1993). Moreover, Steinberg and Darling (1993) found that, for Asian American, African American, and Latino adolescents, peers are relatively more influential on their academic achievement than are parents. For European American adolescents, parents were a more potent source of influence (Steinberg & Darling, 1993).

Larger schools and larger classrooms are associated with increased likelihood of school failure and drop out (Barro & Kolstad, 1987; Eckstrom, et al., 1986; Garbarino, 1994; Rumberger, 1983). Moreover, school climate has been found to be associated with school failure and drop out. Schools that emphasize competition, testing, tracking, and have low expectations have a higher number of school failures and dropouts than schools that have high expectations, encourage

cooperation, and have teachers who are supportive (Barro & Kolstad, 1987; Felner, et al., 1985; Powell-Cope & Eggert, 1994; Rutter, 1979; Smith & O'Day, 1991).

Neighborhoods that are characterized as urban, high-density areas, and poverty stricken are associated with adolescent school failure and dropout (Barro & Kolstad, 1987; Dryfoos, 1990; Eccles, 1991; Felner, et al., 1985; National Research Council, 1993; Rumberger et al., 1988; Schorr, 1988; Smith & O'Day, 1991). For example, the national dropout rate is estimated at 11.2%. Yet the average for cities is substantially higher, with many cities losing more than 15% of their students (United States Department of Education, 1992).

Finally, there is consistent evidence from both cross-sectional and longitudinal research that school failure and dropout are associated with low socioeconomic status (Barro & Kolstad, 1987; Dryfoos, 1990; Eccles, 1991; Felner, et al., 1985; National Research Council, 1993; Rumberger et al., 1988; Schorr, 1988; Smith & O'Day, 1991). For example, adolescents from low-income families are three times more likely to drop out of school than are children from middle-income families and are nine times more likely than is the case for students from high-income families (Barro & Kolstad, 1987; National Center for Educational Statistics, 1990, 1991; Smith & O'Day, 1991).

In conclusion, numerous investigations provide strong evidence for a linkage among specific individual-organismic, individual-behavioral, and contextual characteristics and adolescent school failure and drop out. However, no research exists that is inclusive of multiple individual-organismic, individual behavioral, and contextual characteristics and multiple risk behaviors. An examination of the relationship between these characteristics and risk factors would be useful for understanding the interaction of these characteristics. In addition, with but a few

exceptions (Dryfoos, 1990; Jessor & Jessor, 1977), examinations of the interrelationship between this risk behavior and several other risk behaviors have not been conducted. The following section will address the interrelationships of these risk behaviors and the characteristics that are associated with this covariation.

The Co-occurrence of Risk Behaviors

As evidenced above, risk behaviors do not exist in isolation; they tend to covary (Baumrind, 1987; Donovan & Jessor, 1985; Dryfoos, 1990; Irwin & Millstein, 1986; Jessor & Jessor, 1977). Moreover, among the above-noted risk behaviors there are common individual-organismic, individual-behavioral, and contextual characteristics with which they are associated (e.g., early age of initiation, school underachievement, school misconduct, negative peer behaviors, inadequate parent-adolescent relationships, and low quality neighborhoods). The list of common characteristics has been corroborated by several researchers (Baumrind, 1987; Irwin & Millstein, 1986; Hawkins et al., 1992b; Jessor & Jessor, 1977). Dryfoos (1990), for example, in her meta-analysis of the literature on the four above-noted risk behaviors, finds six over-arching characteristics associated with involvement in the four risk behaviors.

First, heavy involvement in risk behaviors and more negative consequences are linked with early initiation or occurrence of any of the risk behaviors. Second, common to all problem behaviors is doing poorly in school and having low expectations of future performance. Third, misconduct in school and other conduct disorders are related to each of the risk behaviors. Fourth, adolescents involved in any of the risk behaviors have peers that engage in the risk behaviors; or these adolescents have a low resistance to peer influence. Fifth, an inadequate parent-

adolescent relationship is common to all risk behaviors. Areas that comprise this relationship are: Lack of communication; lack of monitoring; inadequate discipline; role modeling (e.g., exhibiting risk behaviors); and low parental education. Sixth, low quality neighborhoods are associated with involvement in these risk behaviors. These neighborhoods are characterized by poverty, violence, urbanization, and high-density conditions.

Other characteristics have been found to be associated with several of the risk behaviors. For example, low income adolescents are at a distinct disadvantage and likely to engage in at least three of the four above-noted risk behaviors, with the exception being alcohol and/or drug use/abuse (Dryfoos, 1990; Fuchs, & Reklis, 1992; Hamburg, 1993; Huston, 1992; Jenkins & Westney, 1991). Ethnicity has been shown to be related to the early initiation of sexual intercourse, childbearing, school failure, and dropping out. Adolescents from ethnic minority groups have higher rates in all the previously-mentioned risk behaviors except for Asian Americans (Dryfoos, 1990). In turn, school climate has been found to be related to alcohol and/or drug/abuse, antisocial behavior and delinquency, and school failure and drop out.

However, the literature does not provide strong evidence for the importance of self-esteem (Dryfoos, 1990; Kohn, 1994; Henggeler, 1989; Hawkins, et al., 1992b). Consistently, self-esteem and locus of control measures are not significant in multivariate analyses. After years of research, Rosenberg concluded that global self-esteem appears to have little or no affect on academic performance (Rosenberg, Schooler, & Schoenbach, 1989). Self-esteem does not appear to be of importance in the initiation of risk behaviors.

Several other studies have assessed the co-occurrence of risk behaviors

(Bingham & Crockett, in press; Farrington, 1992, 1993; Farrington & West, 1981; Zucker & Fitzgerald, 1991; Zucker, Fitzgerald, & Moses, 1995). For instance, in their extensive review of research on alcohol use and alcoholism, Zucker et al. (1995) find that, in adolescence, antisocial behavior is consistently related to alcoholic behavior. Moreover, findings from the 18 year-long Michigan State University Longitudinal Study has provided evidence that difficulty in achievement-related activity in adolescence is consistently found in youth who later became alcoholics (Zucker & Fitzgerald, 1991; Zucker & Gombert, 1986; Zucker et al., 1995). Bingham and Crockett (in press), who examined adolescent sexual activity longitudinally, have found similar relationships among adolescent sexual activity and between antisocial behavior, underachievement, and alcohol use. In addition, they found that the later in ontogeny that adolescents initiated sexual intercourse the lower was their involvement in other problem behaviors (e.g., antisocial behaviors, alcoholism, and school misconduct).

In both longitudinal and cross-sectional studies, Farrington and his colleagues have consistently found a relationship among multiple risk behaviors (Farrington, 1992; Farrington & West, 1981; Farrington, Osborne, & West, 1978; Farrington, Gallagher, Morely, St. Ledger, & West, 1986). For example, in the Cambridge Study of Delinquent Development, a prospective longitudinal study of 411 London males, Farrington and West (1981) found that a constellation of adverse family background factors (including poverty, large families, marital disharmony, and ineffective child rearing methods) leads to a constellation of socially deviant factors in adolescence (including drinking, gambling, drug use, reckless driving, sexual promiscuity, and aggression), among which criminality is likely to be one element. Moreover, in a recent review of delinquency, Farrington et al. (1990) found a consistent

relationship between delinquency and several risk behaviors (including, sexual activity, school misconduct, and alcohol and drug use).

While the studies of Bingham, Farrington, and Zucker point to the co-occurrence of both risk behaviors and other potential predictors, there has not been, to date, either a comprehensive assessment of risk and predictors. More specifically, there has not been a study spanning the four, above-noted risk behaviors, especially a study predicated on an integrated understanding of the developing individual and the contextual relationships that may induce, modify, or maintain these patterns of covariation. Such a theoretical presentation would allow greater understanding of the individual and contextual conditions promoting risk and resiliency. In addition, such a theory could lead to policies and programs potentially more sensitive to the diverse individual and contextual conditions involved in risk and resiliency.

Moreover, whereas the studies of Bingham and Crockett (in press), Farrington (1992, 1993; Farrington & West, 1981), and Zucker and Fitzgerald (1991; Zucker, Fitzgerald, & Moses, 1995) provide an initial basis for understanding some empirical instances of co-occurrence of risk factors and their predictors, more systematic research and application will derive from a line of scholarship that includes a larger array of risk and predictor measures, among more diverse participants, than has been available across the extant literature. Such broad-base, programmatic, multi-level scholarship would involve the research and theoretical developments requisite for a more nuanced understanding of risk co-occurrence; such scholarship also would necessarily be longitudinal in nature, in order to best appraise the systematic relations between predictors and outcomes over the course of adolescence. Furthermore, guided by developmental and ecological notion akin

to those framing the current research, this scholarship could provide integrated (theoretical) understanding of the conditions under which diverse individual (including biological), interpersonal, institutional, physical ecological, cultural, and historical variables covary in the development of risk behaviors and/or in development of a behavioral repertoire not characterized by risk.

The conjoint pursuit of such programmatic research and theory development is beyond the scope of present research. However, the present study is embedded in a theoretical frame consonant with such a conceptual advance; as well, this study involves a large and diverse sample of adolescents who will be assessed--albeit cross sectionally--on the above-noted four risk behaviors, as well as on individual and contextual predictors of these risk behaviors. Thus, the present investigation can make an important, albeit initial, contribution to future theory research. Certainly, preliminary formulations about patterns of individual and contextual covariance can be derived from the present research, as can initial ideas for the empirical direction for future longitudinal research. Indeed the present data set, because of its size and the range of variables included within it, may be especially able to contribute to future theory and research about the co-occurrence of risk behaviors.

For instance, in her review of the literature on the above-noted four risk behaviors, Dryfoos (1990) states that no recent survey in the United States has been conducted to examine how often these behaviors co-occur. Thus, it has not been possible to date to examine: (1) The proportion of youth who are simultaneously experiencing trouble in school, antisocial behavior and delinquency, sexual activity, and using/abusing alcohol and/or other drugs; (2) the proportion of youth who do some of these things occasionally; (3) whether distinct patterns of

co-occurrence exist among different groups of adolescents who vary by age, gender, and ethnicity; (4) the association among (a) multiple organismic, behavioral, and contextual characteristics of the individual and (b) the risk behaviors, assessed individually and in combination; and (5) whether these association patterns differ among adolescents who vary by age, gender and ethnicity.

The present investigation attempts to begin to address these five issues by examining the interrelationship of four risk behaviors (i.e., adolescent sexual activity, alcohol and/or drug use/abuse, antisocial behavior and delinquency, and underachievement and school failure). Specifically, this study addresses the following questions: (1) How are risk behaviors interrelated, and does this interrelation vary by age, ethnicity, and gender?; (2) What are the individual-organismic, individual-behavioral, and contextual characteristics that covary with risk behaviors among adolescents, and is this variation different among groups of adolescents differentiated on the basis of age, ethnicity, and gender?; (3) Given that there may be multicollinearity among individual and/or contextual variables in their association with risk, are there particular variables that account for more of the variance in either selected outcome variables and/or in sets of these variables than is the case for other variables?; and (4) Do these patterns of covariation differ across age, ethnicity, and gender? The manner in which these four questions address the five issues raised by Dryfoos (1990) is summarized in Table 2.

Insert Table 2 about here

To implement these analyses, the present study capitalized on data existing in a large statewide cross-sectional study of adolescents development, the

Table 2

How Dryfoos (1990) Five Issues Relate to the Questions Address in This Investigation

Dryfoos Issue	Study Question
1) The proportion of youth who are simultaneously experiencing trouble in school, antisocial behavior and delinquency, sexual activity, and using/abusing alcohol and/or other drugs. 2) The proportion of youth who do some of these things occasionally. 3) Whether distinct patterns of co-occurrence exist among different groups of adolescents who vary by age, gender, and ethnicity. 4) The association among (a) multiple organismic, behavioral, and contextual characteristics of the individual and (b) the risk behaviors, assessed individually and in combination. 5) Whether association patterns differ among adolescents who vary by age, gender and ethnicity.	1) How are risk behaviors interrelated, and does this interrelation vary by age, ethnicity, and gender? 2) What are the individual-organismic, individual-behavioral, and contextual characteristics that covary with risk behaviors among adolescents, and is this variation different among groups of adolescents differentiated on the basis of age, ethnicity, and gender? 3) Given that there may be multicollinearity among individual and/or contextual variables in their association with risk, are there particular variables that account for more variance in either selected outcome variables and/or in sets of these variables than do other characteristics? 4) Do these patterns of covariance differ across age, ethnicity, and gender?

Community-Based Profile of Michigan Youth (Keith & Perkins, 1995). Details about the precise nature of the sample, and the method by which the relationships among risk behaviors, individual-organismic, individual-behavioral, and contextual characteristics were assessed, are presented in the next chapter.

Chapter III

METHOD

Participants

The sample was composed of participants in the Community-Based Profile of Michigan Youth Study (Keith & Perkins, 1995), an assessment of adolescents ages 12-17 years old from 43 middle and high schools in 36 communities throughout the state of Michigan. Through the use of student surveys administered by classroom teachers, in either Fall, 1993, or Winter, 1994, data were collected from 16,375 Michigan youth.

Characteristics of the sample, as well as comparisons to Michigan demographic youth data, are presented in Table 3. The mean age of the sampled adolescents was 14.5 years ($SD = 1.55$). The sample consisted of more female participants (53%) than male participants (46.6%); a few respondents (.4%) did not indicate their gender. Ethnic/racial minorities comprised 31.1% of the sample; as compared to state demographics, minorities are oversampled in the group of youth assessed in this study. African American adolescents comprise 23.8% of this sample, followed by Native American adolescents (3.6%), Hispanic or Latino adolescents (2.7%), and Asian or Pacific Islander adolescents (1.0%). European American adolescents comprise the majority of this sample (67.3%). Finally, 1.6% of the sample left the racial/ethnic identification question blank; these responses were treated as missing data.

Insert Table 3 about here

Table 3
Community-Based Profile of Michigan Youth Sample

	Sample Size	Percent of Total Sample	State of Michigan
Total	16,375	100.0	100.0 (810,000)
Age			
12 ¹	1,858	11.3	16.7 ¹
13	3,220	19.7	16.7
14	3,368	20.6	16.1
15	3,143	19.2	16.6
16	2,699	16.5	16.7
17	2,087	12.7	17.3
Gender			
Male	7,626	46.6	51.0
Female	8,680	53.0	49.0
Race/Ethnicity			
Asian or Pacific Islander	158	01.0	01.0
African American	3,895	23.8	17.0
European American	11,027	67.3	77.0
Hispanic or Latino	440	02.7	03.0
Native American	591	03.6	01.0
Geographic Location			
Rural	7,437	45.4	37.0
Suburban	2,072	12.7	08.0
Urban	6,866	41.9	54.0

¹Ages 12 and 13 are combined in the 1990 census. Thus, the percentage was 33.4 which split evenly between the two ages.

Adolescents were also categorized by either urban, suburban, or rural geographical location. Following usage in the United States Census, locations in a metropolitan statistical area (MSA) that are incorporated are defined as urban areas. Suburban areas are defined by using the Census categories of "urban fringe" and of unincorporated urban areas. Rural areas are not within a MSA. As shown in Table 3 the majority of the youth in this sample live in rural areas (45.4%), followed by urban and suburban areas (41.9%, and 12.7%, respectively). The sample of rural and suburban students are overrepresented as compared to the proportions in the state of Michigan (which are 37% and 8%, respectively); in turn, urban students are underrepresented when compared to the state proportion (which is 54%).

Finally, parental education was assessed, through the use of two items from the Search Institute measure described below. One item elicited the adolescent's report of his/her father's level of educational attainment and the second item elicited his/her report of the mother's level of educational attainment. For both items, possible responses ranged from "1" = "completed grade school or less" to "7" = "Graduate or professional school after college." The mean reported level of educational attainment for fathers was 4.29 (SD = 1.26), and the corresponding scores in regard to the mothers was 4.04 (SD = 1.41). Entwisle and Astone (1994) note that measures of parental education are useful indices of socioeconomic status.

Measures

All participants in the Community-Based Profile of Michigan Youth Study were administered the Search Institute's Profiles of Student Life: Attitude and Behavior Questionnaire (ABQ), a 152-item inventory developed by the Search Institute (Benson, 1990; Blyth, 1993). A copy of the questionnaire is presented in

Appendix 1. Responses to this questionnaire were used as an initial data base. The responses to the ABQ were used as an item pool to develop scales for the assessment of the risk variables and the individual-organismic, individual-behavioral, and contextual variables of interest in this study.

Initial Scale Development

The ABQ has been used by the Search Institute of Minneapolis for several years. However, given the objectives of the present study, it was necessary to conduct some initial analyses of the items in the ABQ in order to develop scales indexing the constructs of concern in this research.

There were 152 items in the ABQ, they are presented in Appendix 1. Three items, 1, 3, and 4, were pertinent to age, sex, and ethnicity, respectively. Response to these three items, which are pertinent to demographic characteristics of the sample, were used in several analyses reported below. In addition, 43 items were designed by Search Institute to index topics not directly relevant to the issues addressed in the present study. That is, as shown in Appendix 1, these 43 items 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 38, 56, 58, 62, 67, 68, 69, 70, 71, 72, 78, 82, 83, 87, 90, 93, 94, 95, 99, 100, 101, 102, 109, 116, 117, 118, 122, 130, 131, 132, 133, 134, 135, 136, 137, 138, 140, 146, 147, 148, 149, 152 were related to prosocial behaviors, prosocial attitudes, vehicle safety, interests, and anxiety.

Accordingly, a total of 82 items in the ABQ were available for use in forming scales pertinent to the 14 constructs relevant to the focus of this study. That is, the 82 items in the ABQ potentially related to the risk categories of adolescent sexual activity; antisocial behavior and delinquency; school misconduct; alcohol and drug use; and individual-organismic; individual-behavioral; and contextual

characteristics were Items 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 57, 59, 60, 61, 63, 64, 65, 66, 73, 74, 75, 76, 77, 79, 80, 81, 84, 85, 86, 88, 89, 91, 92, 96, 97, 98, 103, 104, 105, 106, 107, 108, 110, 111, 112, 113, 114, 115, 119, 120, 121, 123, 124, 125, 126, 127, 128, 129, 139, 141, 142, 143, 144, 145, 150, and 151.

To ascertain if any of these 82 items pertained to these 14 constructs, ratings of items were obtained from 10 Ph.Ds. Six raters held their doctorates in human development, three held their doctorates in developmental psychology, and one held his doctorate in education. In an attempt to establish expert criterion validity, the ten raters were asked to assign each of the 82 items to one of the 14 construct categories. The raters were given the definitions of the constructs (Appendix 2) and were asked to place each item into the category they believed was most associated with the content of the item.

As shown in Table 4, the ten raters had 100% agreement in their categorization of 56 of the 82 items (68.3%). In addition, there were 10 items (12.2%) for which there was 90% agreement (i.e., nine out of ten raters agreed). There was 80% agreement on 8 items (9.8%). Of the remaining 8 items, 90% of the raters recommended that 2 items (2.4%) comprised a fifteenth category about nonparental adult-adolescent relationships. For the remaining 6 items (7.3%), raters showed 70% agreement on 3 items (3.7%), 60% agreement on 1 item (1.2%), and 50% agreement on 2 items (2.4%).

Insert Table 4 about here

Table 4

Item Categories, Cronbach Alphas, Rater Agreement, and Individual Items

Category	Number of participants	Number of Items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
A Self-esteem	15,660	11	.8138	.8298	97.3*
1. I have a number of good qualities ^R					100.0
2. I feel I do not have much to be proud of					100.0
3. I am good at making friends ^R					100.0
4. On a whole, I like myself ^R					100.0
5. I feel no one understands me					90.0
6. At times, I think I am no good at all					100.0
7. All in all, I am glad I am me ^R					100.0
8. I am a lonely person					100.0
9. I care about people's feelings ^R					100.0
10. I feel no one really cares about me					90.0
11. It bothers me when I don't do something well ^R					90.0
B Involvement in structured activities	16,203	4	.3060	.3947	100.0*
1. During an average week, how many hours do you spend in band, choir, orchestra, music lessons or practicing voice or an instrument					100.0
2. During an average week, how many hours do you spend in clubs or organizations outside of school					100.0
3. During an average week, how many hours do you spend in clubs or organizations at school (other than sports)					100.0
4. During an average week, how many hours do you spend playing sports on a school team					100.0

Table 4 (continued)

Category	Number of participants	Number of Items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
C	15,701	3	.8017	.6631	100.0*
1. During an average week, how many hours do you attend services, groups, or programs at a church or synagogue					100.0
2. How often do you attend religious services at a church or synagogue					100.0
3. How important is religion in your life					100.0
D	16,140	3	.2328	.7964	86.7*
1. I worry a lot about my future					100.0
2. Ten years from now, I think I will be very happy ^R					80.0
3. When I am an adult, I think I will be successful in whatever work I choose to do ^R					80.0
E	16,216	4	.8672	.8234	90.0*
1. My family life is happy ^R					100.0
2. There is a lot of love in my family ^R					100.0
3. My parents give me help and support when I need it ^R					80.0
4. My parents often tell me they love me ^R					80.0

Table 4 (continued)

Category	Number of participants	Number of Items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
F Parent-adolescent communication	15,812	4	.8064	.7127	95.0*
1. I have lots of good conversations with my parents ^R					80.0
2. My parents are easy to talk with ^R					100.0
3. If you had an important concern about drugs, alcohol, sex, or some other serious issue, would you talk to your parent(s) about it ^R					100.0
4. How many times in the last month have you had a good conversation with one of your parents that lasted 10 minutes or more					100.0
G Peer group characteristics	15,743	3	.7309	.5989 (5)	92.0*
1. Among the people you consider to be your closest friends, how many would you say drink alcohol once a week or more					80.0
2. Among the people you consider to be your closest friends, how many would you say have used drugs such as marijuana or cocaine					90.0
3. Among the people you consider to be your closest friends, how many would you say get into trouble at school					100.0
4. Among the people you consider to be your closest friends, how many would you say do well in school ^R					90.0
5. Among the people you consider to be your closest friends, how many would you say help other people ^R					100.0

Table 4 (continued)

Category	Number of participants	Number of items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
H School climate	16,180	4	.7094	.7095	97.5*
1. My teachers really care about me ^R					90.0
2. My teachers don't pay much attention to me					100.0
3. I get a lot of encouragement at my school ^R					100.0
4. I like school ^R					100.0
I Alcohol use	16,255	3	.8881	.7703	100.0
1. How many times, if any, have you had alcohol to drink during the <u>last 12 months</u>					100.0
2. How many times, if any, have you had alcohol to drink during the <u>last 30 days</u>					100.0
3. Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row? (A "drink" is a glass of wine, a bottle or can of beer, a shot glass of liquor, or a mixed drink.)					100.0
J Soft Drugs	16,156	6	.8453	.8812	91.7*
1. How many times, if any, in the <u>last 12 months</u> have you used chewing tobacco or snuff					90.0
2. How many times, if any, have you smoked cigarettes during the <u>last 12 months</u>					100.0
3. How many times, if any, have you smoked cigarettes during the <u>last 30 days</u>					100.0
4. During the last two weeks, about how many cigarettes have you smoked					100.0
5. How many times, if any, have you used marijuana (grass, pot) or hashish (hash, hash oil) during the <u>last 12 months</u> .					80.0
6. How many times, if any, have you used marijuana (grass, pot) or hashish (hash, hash oil) during the <u>last 30 days</u>					80.0

Table 4 (continued)

Category	Number of participants	Number of Items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
K Hard Drugs	16,093	12	.8532	.8359	100.0 *
1. How many times, if any, have you used cocaine (crack, coke, snow, rock) during the <u>last 12 months</u>					100.0
2. How many times, if any, in the <u>last 12 months</u> have you used heroin (smack, horse, skag) or other narcotics like opium or morphine					100.0
3. How many times, if any, in the <u>last 12 months</u> have you used a drug known as crack					100.0
4. How many times, if any, in the <u>last 12 months</u> have you used PCP or angel dust					100.0
5. How many times, if any, in the <u>last 12 months</u> have you used LSD ("acid")					100.0
6. How many times, if any, <u>in your lifetime</u> have you used a drug known as crack					100.0
7. How many times, if any, <u>in your lifetime</u> have you used PCP or angel dust					100.0
8. How many times, if any, <u>in your lifetime</u> have you used LSD ("acid")					100.0
9. On how many occasions, if any, have you taken amphetamines on your own-that is, without doctor telling you to take them during the <u>last 12 months</u>					100.0
10. On how many occasions, if any, have you taken amphetamines on your own-that is, without doctor telling you to take them in your <u>lifetime</u>					100.0
11. How many times, if any, have you used cocaine (crack, coke, snow, rock) during the <u>last 30 days</u>					100.0
12. On how many occasions, if any, have you taken amphetamines on your own-that is, without doctor telling you to take them during the <u>last 30 days</u>					100.0

Table 4 (continued)

Category	Number of participants	Number of Items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
L Sexual Activity	15,470	5	.7285	.79832	98.0*
1. Have you ever had sexual intercourse ("gone all the way" "made love")					100.0
2. When you have sex, how often do you and/or your partner use a birth control method such as birth control pills, a condom (rubber), foam, diaphragm, or IUD ^R					100.0
3. The first time you had sex, did you and/or your partner use birth control					100.0
4. Have you ever been pregnant, or made someone pregnant ^R					100.0
5. It is against my values to have sex while I am a teenager					90.0
M Antisocial behavior and delinquency	15,934	6	.7604	.706	98.3*
1. During the last 12 months, how many times have you stolen something from a store					90.0
2. During the last 12 months, how many times have you damaged property just for fun (such as breaking windows, scratching a car, putting paint on walls, etc.)					100.0
3. During the 12 months, how many times have you used a knife or a gun or some other thing (like a club) to get something from a person					100.0
4. During the last 12 months, how many times have you gotten into trouble with the police					100.0
5. During the last 12 months, how many times have you hit or beat up someone					100.0
6. During the 12 months, how many times have you hurt someone badly enough to need bandages or a doctor					100.0

Table 4 (continued)

Category	Number of participants	Number of items	Cronbach Alpha	Cronbach Alpha, when "lowest" item is deleted	Percentage of Expert Rater Agreement for
N School misconduct	16,026	4	.6403	.4934	100.0*
1. During the last four weeks, how many days of school have you missed because you skipped or "cut"					100.0
2. During the last four weeks, how often have you gone to school and skipped a class when you were not supposed to					100.0
3. During the last 12 months, how many times have you gotten into trouble at school					100.0
4. During the last 12 months, how many times have you cheated on a test at school					100.0

* Note: The total percentage of the expert rater agreement for the scale is an average of the percentage of expert rater agreement for each individual item in the scale.

R This item was reversed in scoring so that a high score indicated higher levels of the attribute in question.

To maximize the level of external rater validity obtained by the use of the expert raters it was decided that a minimum level of 80% agreement among raters would be used as the criterion for placement of an item into a category. Seventy-two items met the 80% expert rater agreement criterion. Table 4 indicates, for each of the fourteen categories, the number of items meeting the 100%, 90%, and 80% agreement levels, respectively. Five construct categories had a total expert rater agreement of 100%. They were: Involvement in structured activities; religiosity; alcohol use; hard drugs; and school misconduct. Another five construct categories had a total expert rater agreement between 95 and 99.9%. These included: Self-esteem (97.3%); parent-adolescent communication (95%); school climate (97.5%); sexual activity (98%); and antisocial behavior and delinquency (98.3%). Three construct categories had total expert rater agreement between 90% and 95%. The three categories were: Family support (90%); peer group characteristics (92%); and soft drugs (91.7%). The category "view of the future" had the lowest total expert rater agreement, with an overall agreement level of 86.7%.

To provide further empirical support for the 14 item groupings validated through the above-described procedure, both a principal components analysis and a LISREL analysis were conducted. The results of these analyses are presented in Appendix 3. As shown in this appendix, whereas the findings of the principal components analysis were not supportive of the usefulness of the 14 item groupings, the results of the LISREL analysis did provide such support. Accordingly, the 74 ABQ items pertinent to the 14 categories described above (i.e., self-esteem; involvement in structured activities; religiosity; view of the future; family support; parent-adolescent communication; peer group characteristics;

school climate; alcohol use; soft drugs; hard drugs; sexual activity; antisocial behavior and delinquency; and school misconduct) were used in the present study as the item pool/measurement variable set.

Measurement Variables

The 14 categories of items used in this investigation are grouped into four clusters, or types, of variables: Individual-organismic characteristics; individual-behavioral characteristics; contextual characteristics; and risk behaviors. The measurement of these characteristics (i.e., organismic, behavioral, contextual) and risk behaviors are presented in the subsections that follow. Individual-organismic characteristics are described first, followed by individual-behavioral characteristics and then contextual characteristics. Finally, the individual risk behaviors (i.e., antisocial behavior/delinquency, alcohol use, soft drug use, hard drug, sexual activity, school misconduct) are described.

Individual-Organismic Characteristics

Individual-organismic characteristics are those attributes that are associated with the person's biological or maturational status, for example, age, gender, and ethnicity. These three individual-organismic characteristics were examined in this study.

Age. In this investigation, age was scored as a continuous variable. The range of ages in this sample were from 12 years old through 17 years old. As noted above, the mean age was 14.5 years ($SD = 1.55$).

Gender. Gender is treated as a dichotomous variable. In this sample, there were slightly more females than males: Female participants were 53% of the sample and male participants comprised 46.6% of this sample; a few respondents (.4%) did not indicate their gender, and these responses were treated as missing

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data.

Race/Ethnicity. Ethnicity was measured as a five level categorical variable. The categories were, "1" = "American Indian," "2" = "Asian or Pacific Islander," "3" = "Black or African American," "4" = "Hispanic," and "5" = "White." Ethnic/racial minorities (that is categories 1 to 4) comprised 31.1% of the sample. As noted above, African American were the largest minority group of adolescents sampled in this study, comprising 23.8% of this sample. Native American adolescents (3.6%), Hispanic or Latino adolescents (2.7%), and Asian or Pacific Islander adolescents (1.0%) were also represented in this sample. European American adolescents comprised the majority of the sample (67.3%). Finally, 1.6% of the sample left the racial/ethnic identification question blank; these responses were treated as missing data.

Individual-Behavioral Characteristics

Individual-behavioral characteristics are those attributes pertinent to an adolescent's personality, cognitive, or motoric (action) functioning. Four individual-behavioral characteristics (i.e., self-esteem, involvement in extracurricular activities, religiosity, and view of the future) were examined in this investigation and are described below.

Self-esteem. Adolescent's self-esteem was assessed by using eleven items from the ABQ that, as a "scale," had an expert rater agreement of 97.3%. The scores from the items were derived from a five-point Likert scale ranging from "1" = "strongly agree" to "5" = "strongly disagree." Examples of questions include: "I have a number of good qualities" and "I feel I do not have much to be proud of." The former question and five other items were reversed in scoring so that high scores on items were indicative of more positive self-esteem. The mean of the

scores was calculated after the scores had been standardized. In this sample, the Cronbach Alpha for self-esteem was .81.

Involvement in extracurricular activities. Adolescents' involvement in extracurricular activities was assessed by using four items from the ABQ that, as a "scale," had an expert rater agreement of 100%. The scores from the items were derived from a five-point scale ranging from "0 hours" to "11 or more hours." Example of questions include: "During an average week, how many hours do you ...Spend in band, choir, orchestra, music lessons or practicing voice or an instrument" and "...Spend in clubs or organizations outside of school." High scores on items were indicative of higher involvement in extracurricular activities. The mean of the scores was calculated after the scores had been standardized. The four items dealt with involvement in extracurricular activities in different contexts (i.e., in the school and in community contexts) and, as such, a high Cronbach alpha was not expected; indeed the Cronbach alpha for this scale was .41. However, a combination of the items affords for a holistic measure of involvement in extracurricular activities.

Religiosity. Adolescents' religiosity was indexed by three questions regarding their attendance of religious services and their views of the importance of religion in their lives. This three question "scale" had an expert rater agreement of 100%. The first two questions concerned actual involvement in church activities and services; for example one of the questions was "How often do you attend religious services at a church or synagogue?" A five-point choice was utilized to assess this question. The range of choices were "1" = "Never" to "4" = "About once a week." The third question asked the adolescents about their view of religion: "How important is religion in your life?" For this item, the four-point range

of possible choices was "1" = "Not important" to "4" = "Very important." High scores indicated higher participation in religious activities and greater importance placed on religion. The mean of the scores was calculated after the scores had been standardized. In this sample, the Cronbach Alpha for religiosity was .80.

View of the future. Three questions were used as a "scale" to index an adolescent's view of the future. The expert rater agreement was 86.7%. However, the Cronbach alpha for this scale was .23. The questions were "I worry a lot about my future," "Ten years from now, I think I will be very happy," and "When I am an adult, I think I will be successful in whatever work I choose to do." These questions were scored on a five-point Likert scale, where "1" = "strongly agree" through a "5" = "strongly disagree." The last two items were reversed in scoring so that high scores across items were indicative of a positive view of the future. The mean of the responses of the items was calculated after the scores had been standardized.

Contextual Characteristics

Contextual characteristics involve features of the adolescent's social and physical ecology, e.g., people, institutions, and relationships. Four contextual characteristics were examined in this investigation: Family support, parent-adolescent communication, peer group characteristics, and school climate.

Family support. Adolescents' reports of family support was derived from a four-item "scale" on the ABQ that had an expert rater agreement of 90%. All of the items from this scale were reverse scored using a five point Likert scale where "1" = "strongly agree" through "5" = "strongly disagree." These items were: "My family life is happy," "There is a lot of love in my family," "My parents help me and give me support when I need it," and "My parents often tell me they love me."

All four questions were reversed in scoring so that high scores on items were indicative of more positive family support. The mean of the scores was calculated after the scores had been standardized. In this sample, the Cronbach Alpha for family support was .87.

Parent-adolescent communication. The communication between parents and adolescents was assessed by four items from the ABQ that, as a "scale," had an expert rater agreement of 95%. Two of the items were scored using a five-point Likert scale where "1" = "strongly agree" and "5" = "strongly disagree." Items were: "I have lots of good conversations with my parents" and "My parents are easy to talk with." The third item was, "If you had an important concern about drugs, alcohol, sex, or some serious issues, would you talk to your parent(s) about it?" The five-point scale was "1" = "Yes," "2" = "Probably," "3" = "I'm not sure," "4" = "Probably not," and "5" = "No." The fourth item in the scale differed in format from the other three. The item asked, "How many times in the last month have you had a good conversation with one of your parents that lasted 10 minutes or more?" The choices ranged from "1" = "none" to "5" = "4 or more times." The mean of the responses of the items was calculated after the scores had been standardized. The first three items were reversed in scoring so that high scores were representative of positive parent-adolescent communication. In this sample, the Cronbach Alpha for parental communication was .81.

Peer group characteristics. Five items were used as a "scale" to assess peer group characteristics among adolescents. The expert rater agreement among these items was 92%. Three items were concerned about negative peer group characteristics. They were: "Among the people you consider to be your closest friends, how many would you say ..." "Drink alcohol once a week or more," "Have

used marijuana or cocaine," and "Get in to trouble at school." The other two items were concerned with positive peer group characteristics. They were: "Among the people you consider to be your closest friends, how many would you say ..." "Do well in school" and " Help other people." The possible choices were based on a five-point Likert scale that ranged from "1" = "None" to "5" = "All." Scores for the latter two items were reversed in scoring so that high scores on items were indicative of a more negative peer group characteristics. The mean of the responses of the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for peer group characteristics scale was .73.

School climate. Adolescents' perceptions of school climate were assessed through the use of four items from the ABQ that, as a "scale," had a expert rater agreement of 97.5%. The four items were: "My teachers really care about me," "My teachers don't pay much attention to me," "I get a lot of encouragement at my school," and "I like school." The range of values was on a five-point Likert scale where a "1" = "Strongly agree" through "5" = "Strongly disagree." Scores for the three items were reversed in scoring so that high scores on items were indicative of a more positive school climate. The mean of the responses of the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for the school climate scale was .71.

Risk Behaviors

Risk Behaviors involve actions of the adolescent that decrease the likelihood of healthy psychosocial and physical development, e.g., antisocial behavior/delinquency; alcohol and drug use, and unsafe sexual activity. Six risk behaviors were examined in this investigation: Antisocial behavior/delinquency; alcohol use, hard drug use, soft drug use, sexual activity, and school misconduct.

Alcohol use. Adolescents' alcohol use was measured by three items from the ABQ that, as a "scale," had an expert rater agreement of 100%. Two items dealt with the frequency of alcohol use over extended periods of time. These items were, "How many times, if any, have you had alcohol to drink..." "During the last 12 months," and "In the last 30 days." The range of the scale was from "1" = "0" to "7" = "40+." The third item was concerned with binge drinking. It read, "Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in row? (A 'drink' is a glass of wine, a bottle or can of beer, a shot glass of liquor, or a mixed drink.)" The scale range was "1" = "None" to "6" = "10 or more times." High scores on items were indicative of high involvement in alcohol use. The mean of the responses of the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for the alcohol scale was .88.

Soft drugs. Drugs are divided into two categories within much of the research literature (Hawkins, et al., 1992; Newcomb & Bentler, 1986, 1988, 1989)--soft drugs (e.g, tobacco and Marijuana) and hard drugs (e.g., cocaine, heroin, PCP, LSD, amphetamines). In the present study, the "scale" for soft drugs had an expert rater agreement of 91.7% and was comprised of six items from the ABQ. These items concerned the use of chewing tobacco, cigarettes, and marijuana. Adolescents' use of chewing tobacco is measured with one item from the ABQ. The item is "How many times, if any, in the last 12 months have you used chewing tobacco or snuff?" The possible range is from "1" = "0" to "7" = "40+." A high score was indicative of heavy use of chewing tobacco or snuff.

Adolescent cigarette smoking was assessed from three items on the ABQ. Two items examined the number of cigarettes smoked "During the last 12 months"

and "During the last 30 days." The possible range of choices for these items is from "1" = "0" to "7" = "40+." The third item indexed the number of cigarettes smoked per day. The item asked, "During the last two weeks, about how many cigarettes have you smoked?" The range of choices were from "1" = "None" to "7" = "2 packs or more per day." High scores for these items, were indicative of heavy use of cigarettes. In this sample, the Cronbach alpha for the soft drug use scale was .91.

Adolescent marijuana use was assessed by two items in the ABQ. The items assess the amount of marijuana used "During the last 12 months" and "During the last 30 days." The answers for these items range from "1" = "0" to "7" = "40+." The mean of the responses of the items was calculated after the scores had been standardized. High scores were indicative of heavy use of soft drugs. In this sample, the Cronbach alpha for the soft drug use scale was .85.

Hard drugs. Adolescents use of hard drugs was assessed by twelve items from the ABQ that, as a "scale," had an expert rater agreement of 100% and a Cronbach alpha of .85. Hard drugs that were assessed in this study are: Cocaine, heroin, PCP, LSD, and amphetamines. Adolescents' use of any of these drugs and the amount used were assessed "In your lifetime" and "In the last 12 months." The amount of the adolescent's use of two drugs, cocaine and amphetamines, was also assessed for another time period: "During the last 30 days." The range of answers for these items is from "1" = "0" to "7" = "40+." High scores on items were indicative of heavy hard drug use. The mean of the responses of the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for the hard drug use scale was .81.

Sexual activity. Adolescents' sexual activity was assessed by five items on the ABQ that, as a "scale," had an expert rater agreement of 98%. One item asked "Have you ever had sexual intercourse ("gone all the way," "made love")?" The choices ranged from "1" = "No" to "5" = "4 or more times." Two questions concern the use of contraception: "When you have sex, how often do you and/or your partner use a birth control method such as birth control pills, a condom (rubber), foam, diaphragm, or IUD" and "The first time you had sex, did you and/or your partner use birth control." The five-point scale for the first item concerning contraception ranged from "1" = "Never" to "5" = "Always." The former question about birth control was reversed in scoring so that a high score on the item was indicative of unsafe sexual activity. The fourth item concerned pregnancy: "Have you ever been pregnant, or made someone pregnant." The third and fourth items were a dichotomous variable where "1" represented "Yes" and "2" represented "No." However, the fourth item was reversed so that a high score was indicative of unsafe sexual activity. The last item is concerned with an adolescent's sexual values: "It is against my values to have sex while I am a teenager." Scoring was based on a five-point likert scale where a "1" = "Strongly agree" and "5" = "Strongly disagree." The mean of the responses of the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for the sexual activity use scale was .73.

Antisocial behavior and delinquency. Adolescents' antisocial behavior/delinquency was indexed by six items from the ABQ that, as a "scale," had an expert rater agreement of 98.3%. The items were concerned with behaviors, such as fighting, stealing, vandalism, and trouble with the police, which occurred during the last 12 months. An example of the items is: "During the last

12 months, how many times have you stolen something from a store?" "During the last 12 months, how many times have you damaged property just for fun (such as breaking windows, scratching a car, putting paint on walls, etc.)" and "During the last 12 months, how many times have you used a knife or a gun or some other thing (like a club) to get something from a person." The choices range from "1" = "Never" to "5" = "5 or more times." High scores were indicative of high participation in antisocial behavior or delinquency. The mean of the responses of the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for the antisocial behavior/delinquency scale was .76.

School misconduct. School misconduct was used in this study as a proxy for school underachievement, a relation that has been precedent in the literature (Dryfoos, 1990). School Misconduct is comprised of four items from the ABQ that, as a "scale," had an expert rater agreement of 100%. Two of these items were about skipping class or school. The items were: "During the last four weeks, how many days of school have you missed because you skipped or 'cut'?" and "During the last four weeks, how often have you gone to school and skipped a class when you were not supposed to?" The former question had a response range of "1" = "None" through "7" = "11 days or more." The response range for the second question was "1" = "Not at all" and "6" = "More than 20 times."

The other two items in this scale were concerned with getting into trouble at school and cheating. The questions were: "During the last 12 months, how many times have you gotten into trouble at school" and "During the last 12 months, how many times have you cheated on a test at school." For both items responses ranged from "1" = "Never" through "5" = "5 or more times." High scores were indicative of high involvement in school misconduct. The mean of the responses of

the items was calculated after the scores had been standardized. In this sample, the Cronbach alpha for school misconduct was .64. characteristic.

Procedure

Data collection involved group testing in each of the participating schools. Teachers administered the questionnaire by following a specific script and a 26 page instruction manual from the Search Institute (see Appendix 4 for the script). To avoid contamination, all of the participants, within their respective schools, were administered the questionnaire during one specific time during the school day. All of the participants completed the questionnaires within their respective classrooms.

This ABQ was administered to participants with the assurance of anonymity. This study met the requirement of the University's internal review board (see Appendix 5). Written consent from parents was obtained based on the discretion of the school. In those schools ($N = 5$) where parental consent was sought a letter of consent was used (an example of this letter is presented in Appendix 6). Verbal consent was received from each student, who was informed about the precise nature of the study. Students were told their responses were completely anonymous, that their participation was completely voluntary, and that they could withdraw from the study at any time without penalty. In addition, students were told that after all the questionnaires were completed their teacher would seal the envelope which contained the questionnaires in front of the students; this procedure was intended to provide some concrete assurance of anonymity.

Chapter IV

RESULTS

The purpose of the present study was to explore, within a large and diverse sample of adolescents living Michigan, the relationships among four adolescent risk behaviors--i.e., sexual activity, antisocial behavior and delinquency, alcohol and drug use, and school misconduct--and individual-organismic, individual-behavioral, and contextual characteristics. As suggested by the findings of previous research (Dryfoos, 1990; Irwin, 1987; Jessor, 1992, 1993; National Research Council, 1994; Schorr, 1988), there appears to be a relationship among the above-noted risk factors, and also a relationship among the risk behaviors and individual-organismic, individual-behavioral, and contextual characteristics. However, no study within the United States has examined simultaneously the covariation among these organismic, behavioral, and contextual characteristics and risk behaviors. In addition, it is not known whether these relationships would be the same for different groups of adolescents differentiated on the basis of gender, race/ethnicity, and age.

Accordingly, using the "Community-Based Profile of Youth" data set (Keith & Perkins, 1995), the following questions were addressed:

1. How are risk behaviors (i.e., sexual activity; antisocial behavior and delinquency; alcohol and drug use; and school misconduct) interrelated, and does this interrelation vary by age, ethnicity, and gender? More specifically, are there significant interrelations among the above-noted risk behaviors, and are there significant differences in these interrelations across the variables of gender, ethnicity, and age?

2. What are the individual-organismic, individual-behavioral, and contextual characteristics that covary with risk behaviors among adolescents, and is this variation different among groups of adolescents differentiated on the basis of gender, ethnicity, and age? More specifically, are there individual-organismic, individual-behavioral, and contextual characteristics that significantly predict adolescents involvement in the above-noted risk behaviors? In addition, do those patterns of predictors vary among groups of adolescents differentiated on the basis gender, ethnicity, and age?

3. Given that there may be multicollinearity among individual and/or contextual variables in their association with risk, are there particular variables that best account for the variance in selected outcome variables and/or in sets of these variables?

4. Do these patterns of covariance differ across gender, ethnicity, and age?

Several sets of statistical analyses were conducted in order to address these questions. To address Question 1, zero-order correlations among risk behaviors were calculated for the entire sample and among gender, ethnic, and age subgroups. In addition, a series of tests for differences between independent correlations were calculated to determine whether significant gender, ethnic, or age differences occurred in any of these intercorrelations. To guard against an inflated alpha, a Bonferroni correction was employed.

To address Questions 2, 3, and 4, a total of 84 multiple regression equations were computed. First, in regard to the entire sample, there was a multiple regression computed for each of the six risk behaviors. Second, six multiple regressions were computed for the male subgroup (one for each of the risk behaviors), and a similar number were computed for the female subgroup. Third,

for each of the five racial/ethnic groups in the sample (i.e., African American, Asian American, European American, Latinos/Hispanic, and Native American subgroups) these same six (risk behavior-related) multiple regressions were computed (for a total of 30 equations). Finally, for each of the six age groups in the data set (i.e., for the 12 year old, the 13 year old, the 14 year old, the 15 year old, the 16 year old, and the 17 year old subgroups) these same six (risk behavior-related) multiple regressions were computed (for a total of 36 equations).

The multiple regression analyses included Type III Sums of Squares, that is least-squares analyses. The least square analysis enables one to assess the main effects of each predictor even when significant interactions are present. This analytical method identifies the unique variance accounted for by each individual predictor, thereby providing information pertinent to Question 3. The multiple regressions with the least-squares analysis method were also used to address Question 4 by examining the rank order of the Individual-organismic, individual-behavioral, and contextual characteristics across the subgroups of age, race\ethnicity, and gender. More detailed descriptions of all of the analyses that were conducted, and the results that were obtained from these analyses, are presented below.

Preliminary, Descriptive Analyses

Measures of central tendency and of variation were computed in order to assess whether indices derived from the scales used in this study provided scores for the risk, individual, and contextual constructs, that were consistent with findings from past research (Dryfoos, 1990; Dohrenwend, et al., 1982; Hawkins et al., 1992a; Irwin & Millstein, 1991; Jessor, 1993; Rutter, 1985; Werner & Smith, 1982, 1992). That is, descriptive statistics were computed in order to ascertain

whether the means and standard deviations for the constructs indexed in this study were consistent with what would be expected (based on past research) from assessments of normal samples of youth.

These analyses were conducted for the overall sample; for males and females; and for the different age and racial/ethnic groups. The means and standard deviations for the risk behavior measures are presented in Table 5; the means and standard deviations of individual-organismic, individual-behavioral, and contextual measures are presented in Table 6.

In addition, multiple analyses of variance (MANOVAs) were conducted to examine whether differences existed among the subgroups (i.e., age, gender, and race/ethnicity) for the means of the risk behaviors and for the individual behavior and contextual characteristics. Results of the Wilks Tests show that overall significant differences were found among the subgroups for the risk behaviors and for the individual behavioral and contextual characteristics. However, inspection of the univariate F tests show that there was not a significant difference between males and females for two risk behaviors--alcohol use and hard drug use (see Table 6). In addition, there was no significant differences among the age subgroups for six individual behavioral characteristic--self- esteem, involvement in extracurricular activities, religiosity, view of the future, parent-adolescent communication, and school climate (see Table 8). Moreover, there was no significant differences between males and females for five individual behavioral and contextual characteristics--self-esteem, involvement in extracurricular activities, view of the future, parent-adolescent communication, and school climate. School climate was the only individual-behavioral and contextual characteristic where there was not a significance difference among the racial/ethnic subgroups

Insert Tables 5, 6, 7, and 8 about here

The means and standard deviations for risk behavior measures and individual-organismic, individual-behavioral, and contextual measures appeared to be consistent with what would be expected from assessments of normal samples of youth. Given that the measures are behaving as expected (based on past research), it was appropriate to conduct the primary analyses of this investigation.

Question 1:

How are Risk Behaviors Interrelated,

and Does this Interrelation Vary by Age, Ethnicity, and Gender?

To address Question 1, Pearson product-moment correlation coefficients among the risk behaviors were calculated for the entire sample and for the age, gender, and ethnicity subgroups. Due to the large sample size involved in both full-sample and subgroup analyses, a minimum significance level of .01 was employed in order to help to protect against Type I Error. The power of tests used in this investigation were at a 90% or higher level. As seen in Table 9, for the entire sample all of the intercorrelations among risk behaviors met the criterion for statistical significance.

All the correlations among the risk behaviors were positive. Thus, high levels of participation in any one of these risk behaviors was associated with high levels of participation in the other risk behaviors. As shown in Table 9, a few of the correlations were .6 or higher. The correlation between soft drug use and alcohol use was .65, as was the correlation between school misconduct and antisocial behavior/delinquency. Of all the correlations that met the criterion of

Table 5

Means (and Standard Deviations) of the Standardized Risk Behavior Scales--Sexual Activity; Antisocial Behavior and Delinquency; Alcohol and Drug Use; and School Misconduct--for the Entire Sample and for Subgroups of the Sample

Risk Behavior Measures	Entire Sample (N = 16,375)			European-American (N = 11,027)		
	Total	Males	Females	Total	Males	Females
Sexual Activity	-.00 (.1.00)	.16 (1.00)	-.14 (.98)	-.08 (.94)	.07 (.95)	-.22 (.92)
Antisocial Behavior and Delinquency	.00 (.70)	.17 (.83)	-.15 (.52)	-.09 (.61)	.07 (.73)	-.24 (.42)
Alcohol Use	.00 (.91)	-.04 (.98)	-.04 (.83)	-.02 (.88)	.01 (.94)	-.05 (.83)
Soft Drugs	.00 (.75)	.06 (.83)	-.05 (.67)	.02 (.78)	.07 (.86)	-.03 (.71)
Hard Drugs	.00 (.62)	.01 (.75)	-.01 (.53)	.01 (.64)	.02 (.73)	.01 (.55)
School Misconduct	.00 (.70)	.08 (.73)	-.07 (.66)	-.07 (.65)	.02 (.69)	-.15 (.60)

Table 5 (continued)

Risk Behavior Measures	African American (<u>N</u> = 3,895)			Latino/ Hispanic (<u>N</u> = 440)		
	Total	Males	Females	Total	Males	Females
Sexual Activity	.19 (1.09)	.40 (.1.06)	.02 (1.08)	.11 (1.10)	.31 (1.12)	-.10 (1.06)
Antisocial Behavior and Delinquency	.20 (.83)	.40 (.96)	.05 (.66)	.19 (.86)	.47 (1.03)	-.09 (.53)
Alcohol Use	.03 (.95)	.10 (1.07)	-.03 (.82)	.10 (1.01)	.15 (1.11)	.04 (.89)
Soft Drugs	-.07 (.63)	-.01 (.71)	-.13 (.56)	.00 (.74)	.05 (.82)	-.05 (.66)
Hard Drugs	-.07 (.44)	-.05 (.55)	-.09 (.33)	.04 (.70)	.09 (.78)	.00 (.62)
School Misconduct	.17 (.78)	.21 (.80)	.13 (.75)	.09 (.73)	.16 (.71)	.02 (.75)

Table 5 (continued)

Risk Behavior Measures	Native American (<u>N</u> = 591)			Asian-American (<u>N</u> = 157)		
	Total	Males	Females	Total	Males	Females
Sexual Activity	.17 (.88)	.29 (1.07)	.07 (1.13)	-.14 (.92)	-.07 (.86)	-.21 (.98)
Antisocial Behavior and Delinquency	.22 (.91)	.07 (1.06)	.03 (.71)	-.08 (.61)	.07 (.68)	-.22 (.48)
Alcohol Use	.14 (1.01)	.20 (1.09)	.08 (.92)	-.16 (.73)	-.10 (.84)	-.22 (.61)
Soft Drugs	.17 (.88)	.20 (.95)	.13 (.80)	-.16 (.60)	-.08 (.72)	-.23 (.44)
Hard Drugs	.12 (.95)	.10 (.91)	.14 (.99)	.08 (.86)	.08 (.80)	.09 (.92)
School Misconduct	.11 (.76)	.25 (.82)	-.02 (.70)	-.11 (.68)	-.04 (.68)	-.18 (.67)

Table 6

Means (and Standard Deviations) of the Standardized Individual-Organismic, Individual-Behavioral, and Contextual Characteristics for the Entire Sample and for Subgroups of the Sample

Measures	Entire Sample (N = 16,375)			European-American (N = 11,027)		
	Total	Males	Females	Total	Males	Females
<u>Individual-organismic</u>						
Age *	14.48 (1.56)	14.53 (1.55)	14.44 (1.56)	14.61 (1.58)	14.65 (1.57)	14.58 (1.58)
<u>Individual-behavioral</u>						
Self-esteem	.00 (.73)	.02 (.58)	-.02 (.60)	-.04 (.59)	-.01 (.58)	-.06 (.60)
Involvement in extracurricular activities	.00 (.59)	-.02 (.58)	.01 (.60)	.02 (.59)	-.02 (.56)	.06 (.62)
Religiosity	.00 (.79)	-.08 (.84)	.07 (.86)	-.07 (.84)	-.14 (.83)	-.01 (.85)
View of future	.00 (.65)	.03 (.65)	-.02 (.65)	-.03 (.66)	.02 (.65)	-.07 (.66)
<u>Contextual</u>						
Family support	.00 (.85)	.07 (.79)	-.06 (.89)	-.02 (.85)	.04 (.79)	-.07 (.90)
Parent-adolescent communication	.00 (.80)	.01 (.75)	-.01 (.83)	-.01 (.80)	-.01 (.75)	-.01 (.84)
Negative peer group characteristics	.00 (.66)	.12 (.65)	-.10 (.66)	-.06 (.64)	.08 (.62)	-.18 (.64)
School climate	.00 (.73)	-.06 (.75)	.06 (.72)	.00 (.73)	-.07 (.74)	.06 (.71)

* Note.--This variable was not standardized.

Table 6 (continued)

Measures	African-American (<u>N</u> = 3,895)			Latino/ Hispanic (<u>N</u> = 440)		
	Total	Males	Females	Total	Males	Females
<u>Individual-organismic</u>						
Age *	14.16 (1.45)	14.23 (1.47)	14.09 (1.42)	14.27 (1.50)	14.22 (1.49)	14.33 (1.51)
<u>Individual-behavioral</u>						
Self-esteem	.15 (.56)	.15 (.56)	.15 (.56)	-.08 (.55)	-.08 (.50)	-.09 (.58)
Involvement in						
extracurricular activities	-.05 (.58)	.01 (.63)	-.10 (.53)	-.14 (.54)	-.13 (.52)	-.15 (.56)
Religiosity	.24 (.85)	.16 (.87)	.30 (.83)	-.06 (.77)	-.10 (.73)	-.04 (.81)
View of future	.11 (.62)	.08 (.65)	.13 (.60)	-.11 (.65)	-.08 (.62)	-.14 (.68)
<u>Contextual</u>						
Family support	.10 (.82)	.17 (.79)	.04 (.84)	-.08 (.81)	-.01 (.74)	-.16 (.87)
Parent-adolescent						
communication	.08 (.79)	.12 (.74)	.04 (.82)	-.10 (.78)	-.11 (.74)	-.09 (.83)
Negative peer group						
characteristics	.13 (.70)	.22 (.70)	.06 (.69)	.13 (.69)	.21 (.69)	.06 (.69)
School climate	.01 (.74)	-.02 (.76)	.04 (.72)	-.01 (.68)	-.07 (.69)	.05 (.66)

* Note.--This variable was not standardized.

Table 6 (continued)

Measures	Native American (<u>N</u> = 591)			Asian-American (<u>N</u> = 157)		
	Total	Males	Females	Total	Males	Females
<u>Individual-organismic</u>						
Age *	14.15 (1.45)	14.28 (1.40)	14.04 (1.50)	14.92 (1.68)	14.69 (1.69)	15.14 (1.64)
<u>Individual-behavioral</u>						
Self-esteem	-.14(.63)	-.10 (.60)	-.16 (.66)	-.03 (.50)	.04 (.53)	-.09 (.46)
Involvement in extracurricular activities	-.05 (.62)	-.09 (.59)	-.02 (.65)	.20 (.72)	.18 (.79)	.21 (.64)
Religiosity	-.15 (.85)	-.29 (.75)	-.03 (.91)	-.05 (.77)	-.11 (.78)	.01 (.75)
View of future	-.05 (.68)	.01 (.69)	-.10 (.68)	-.12 (.61)	-.08 (.63)	-.16 (.60)
<u>Contextual</u>						
Family support	-.20 (.94)	-.08 (.85)	-.31 (1.00)	.06 (.76)	.15 (.73)	-.02 (.79)
Parent-adolescent communication	-.11 (.84)	-.03 (.79)	-.17 (.88)	-.03 (.74)	-.02 (.75)	-.04 (.72)
Negative peer group characteristics	.14 (.64)	.23 (.62)	.07 (.65)	-.15 (.63)	-.13 (.60)	-.16 (.66)
School climate	-.10 (.79)	-.19 (.78)	-.01 (.79)	.14 (.77)	.09 (.78)	.18 (.76)

* Note.--This variable was not standardized.

Table 7
Results of Multiple Analyses of Variance of the Standardized Risk Behavior Scales--Sexual Activity, Antisocial Behavior and Delinquency; Alcohol and Drug Use; and School Misconduct--By Age, Gender, and Race/Ethnicity

Risk Behavior Measure	Univariate F		Student Newman-Keuls F		Significance		Wilks Test		Significance	
<u>Age</u>										
Sexual Activity	22.55	.000	89.30	.0000	--	--	--	--	--	--
Alcohol Use	31.95	.000	186.52	.0000	--	--	--	--	--	--
Antisocial Behavior/										
Delinquency	7.46	.000	30.51	.0000	--	--	--	--	--	--
Hard Drug Use	6.19	.000	21.86	.0000	--	--	--	--	--	--
Soft Drug Use	30.09	.000	171.85	.0000	--	--	--	--	--	--
School Misconduct	11.98	.000	51.09	.0000	--	--	--	--	--	--
Total	--	--	--	--	--	12.71	--	35.47	--	.000
<u>Gender</u>										
Sexual Activity	46.81	.000	373.74	.0000	--	--	--	--	--	--
Alcohol Use	9.29	.002	29.53	.0000	--	--	--	--	--	--
Antisocial Behavior/										
Delinquency	167.70	.000	896.76	.0000	--	--	--	--	--	--
Hard Drug Use	.92	.338	4.68	.0305	--	--	--	--	--	--
Soft Drug Use	12.77	.000	87.23	.0000	--	--	--	--	--	--
School Misconduct	33.83	.000	197.25	.0000	--	--	--	--	--	--
Total	--	--	--	--	--	35.47	--	35.47	--	.000

Table 7 (continued)

Risk Behavior Measure	Univariate F	Significance	Student Newman-Keuls F	Significance	Wilks Test	Significance
<u>Race/Ethnicity</u>						
Sexual Activity	91.09	.000	61.80	.0000	--	--
Alcohol Use	16.53	.000	8.23	.0000	--	--
Antisocial Behavior/ Delinquency	135.41	.000	158.33	.0000	--	--
Hard Drug Use	23.76	.000	21.47	.0000	--	--
Soft Drug Use	21.71	.000	19.76	.0000	--	--
School Misconduct	90.49	.000	89.47	.0000	--	--
Total	--	--	--	--	56.75	.000

Table 8

Results of Multiple Analyses of Variance of the Individual-Behavioral, and Contextual Characteristics By Age, Gender, Race/Ethnicity

Measures	Univariate F	Significance	Student Newman-Keuls F	Significance	Wilks Test	Significance
<u>Age</u>						
<u>Individual-behavioral</u>						
Self-esteem	2.148	.058	13.41	.0000	--	--
Involvement in extracurricular activities	.81	.540	2.21	.0513	--	--
Religiosity	3.16	.008	28.48	.0000	--	--
View of future	4.10	.001	26.79	.0000	--	--
Total	--	--	--	--	2.45	.000
<u>Contextual</u>						
Family Support	7.27	.000	50.16	.0000	--	--
Parent-adolescent communication	3.77	.002	17.72	.0000	--	--
Negative peer group characteristics	8.89	.000	70.04	.0000	--	--
School Climate	2.05	.069	21.64	.0000	--	--
Total	--	--	--	--	4.36	.000

Table 8 (continued)

Measures	Univariate F	Significance	Student Newman-Keuls F	Significance	Wilks Test	Significance
<u>Gender</u>						
<u>Individual-behavioral</u>						
Self-esteem	1.83	.176	12.93	.0003	--	--
Involvement in extracurricular activities	.67	.413	10.07	.0015	--	--
Religiosity	20.62	.000	119.91	.0000	--	--
View of future	3.21	.073	27.31	.0000	--	--
Total	--	--	--	--	7.14	.000
<u>Contextual</u>						
Family Support	16.45	.000	86.37	.0000	--	--
Parent-adolescent communication	1.27	.259	3.57	.0590	--	--
Negative peer group characteristics	27.94	.000	439.05	.0000	--	--
School Climate	9.74	.002	105.15	.0000	--	--
Total	--	--	--	--	19.10	.000

Table 8 (continued)

Measures	Univariate F	Significance	Student Newman-Keuls F	Significance	Wilks Test	Significance
<u>Race/Ethnicity</u>						
<u>Individual-behavioral</u>						
Self-esteem	70.34	.000	87.37	.0000	--	--
Involvement in extracurricular activities	19.73	.000	23.39	.0000	--	--
Religiosity	83.60	.000	104.18	.0000	--	--
View of future	25.28	.000	37.84	.0000	--	--
Total	--	--	--	--	45.45	.000
<u>Contextual</u>						
Family Support	17.48	.000	24.83	.0000	--	--
Parent-adolescent communication	11.75	.000	14.42	.0000	--	--
Negative peer group characteristics	69.55	.000	68.45	.0000	--	--
School Climate	4.31	.002	4.29	.0018	--	--
Total	--	--	--	--	27.62	.000

statistical significance, only two relations (i.e., between hard drug use and school misconduct; between hard drug use and sexual activity) was associated with a correlation of less of than .3.

 Insert Table 9 about here

Intercorrelations Among the Risk Behaviors for the Different Age, Race/Ethnic, and Gender Subgroups

Intercorrelations among risk behaviors were calculated separately for six age groups (i.e., for the 12 year old, the 13 year old, the 14 year old, the 15 year old, the 16 year old, and the 17 year- old age groups; see Table 10), for males and females (see Table 11), and for five ethnic groups (African American, Asian American, European American, Hispanic\Latino, and Native American; see Table 12). Tests for differences between independent correlations were calculated to examine whether significant differences in the risk behavior intercorrelations existed for corresponding correlations across the age subgroups, across the racial/ethnic subgroups, and across gender, respectively. In other words, corresponding correlations were compared, first, across the age subgroups (e.g., correlations within the 12 year old groups were compared to the corresponding correlations within every other age group). For each age group comparison 15 corresponding correlations (derived from the interrelation of the six risk behaviors) were compared (see Tables 13 to 27). Second, analogous analyses were conducted in regard to the racial/ethnic subgroups (see Tables 28 to 37). Third, analogous analyses were conducted for the two gender subgroups (and the results of these analyses have been presented in Table 11). Finally, analogous analyses were conducted for each

Table 9
Correlations Among Risk Behaviors for the Entire Sample

Risk Behavior	Antisocial Behavior\ Delinquency (N = 16,368)	Alcohol Use (N = 16,342)	Hard Drug Use (N = 16,349)	Soft Drug Use (N = 16,349)	Sexual Activity (N = 16,348)	School Misconduct (N = 16,368)
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4938 *	---				
Hard Drug Use	.3280 *	.3643 *	---			
Soft Drug Use	.4569 *	.6523 *	.4361 *	---		
Sexual Activity	.3334 *	.3356 *	.2035 *	.3222 *	---	
School Misconduct	.5652 *	.5116 *	.2830 *	.4686 *	.3310 *	---

* Note.--Significance level = .01.

gender X age subgroup (see Tables 38 to 43) and for each gender X race/ethnicity subgroup (see Table 44 to 48). Tables 10 to 48 are presented in Appendix 7.

1. Age Subgroup Comparisons. Intercorrelations among risk behaviors within the six age groups were all positive: High levels of participation in any one of the risk behaviors was associated with high levels of participation in the other risk behaviors. Within each of the 13 year old, the 14 year old, the 15 year old, the 16 year old, and the 17 year-old subgroups, all intercorrelations met the above-noted criterion of statistical significance. However, similar to the finding for the entire sample, the correlation between sexual activity and hard drugs was less than .2. However, in the 12 year old subgroup, all the intercorrelations were significant (and above + .2).

In testing for differences between independent correlations, a Bonferroni correction of the alpha of .01 was employed, such that the critical value of 3.2 z-units or greater indicated a .01 significance level. The Bonferroni correction was calculated by dividing the chosen significance level (i.e., .01) by the number of tests conducted (i.e., 15 t-tests). Results of these tests indicated that the age groups did not systematically significantly differ from each other, on the risk behavior intercorrelations. In fact, for five age group comparisons (i.e., the 12 year olds with the 14 year olds; the 12 year olds with the 15 year olds; the 13 year olds with the 15 year olds; the 13 year olds with the 16 year olds; the 14 year olds and the 16 year olds; and the 15 year olds with the 16 year olds, there were no significant differences in any of the intercorrelations. However, the correlation between school misconduct and antisocial behavior/delinquency was significantly different in six of the fifteen age group comparisons. In all of these cases, the correlation between school misconduct and antisocial behavior/delinquency for the

younger age group was higher than the comparable correlation in the older age group. Thus across the age group comparisons, the intercorrelations were not systematically significantly different across the different age groups, i.e., differences were found for only 26 of the total of 240 comparisons (10.8%).

2. Racial/ethnic Subgroups Comparisons. As with the age subgroup comparisons, correlations were calculated among the risk behaviors for each of the five ethnic groups involved in this study (i.e., African American, Asian American, European American, Hispanic/Latino, and Native American). For Asian American adolescents, all the intercorrelations that involved sexual activity were not statistically significant. Overall, with the exception of the intercorrelations between African American adolescents and European American adolescents, there were few significant differences among the risk behavior intercorrelations across the ethnic groups. Risk behavior intercorrelations of the European Americans did not significantly differ from those associated with the Asian Americans, the Hispanic/Latino adolescents, or the Native Americans. Moreover, intercorrelations among Asian Americans, Hispanic/Latinos, and Native Americans were not significantly different from each other.

African American adolescents and European American adolescents had risk behavior intercorrelations that were significantly different from each other, with the exception of only two correlations--antisocial behavior/delinquency with alcohol use, and antisocial behavior/delinquency with soft drug use. Moreover, 8 of 13 intercorrelations among the risk behaviors were significantly higher for the European Americans; that is, only the correlation of alcohol use and soft drug use was significantly higher for African Americans. In addition, in the African American subgroup there were correlations that were significantly higher than was the case in

the Asian American subgroup (i.e., involving hard drug use with alcohol, and hard drug use with soft drug use), in the Hispanic/Latino subgroup (i.e., involving hard drug use with alcohol, hard drug use with soft drug use, and hard drug use with antisocial behavior/delinquency), and in the Native American subgroup (i.e., involving hard drug use with alcohol, hard drug use with soft drug use, hard drug use with antisocial behavior/delinquency, and hard drug use with school misconduct).

Thus, overall, the intercorrelations were not systematically significantly different across three of the five racial/ethnic groups, i.e., differences were found for only 19 of the total of 150 comparisons (12.7%). In turn, in most cases, significant differences existed in the comparisons between the African American and the European American subgroups.

3. Gender Subgroup Comparisons. Correlations were calculated among risk behaviors for the male and female subgroups. Tests of differences between the male and female risk behavior intercorrelations indicated that four of the risk behavior intercorrelations were significantly different. Three of the intercorrelations concerned the risk behavior of sexual activity. Differences were found between intercorrelations of: sexual activity with antisocial behavior; sexual activity with alcohol use; and sexual activity with soft drug use. For two of these correlations--between sexual activity and alcohol use, and between sexual activity and soft drug use--the correlation among males was significant lower than the corresponding correlation among females. For the third correlation--between sexual activity and antisocial behavior/delinquency--the correlation for males was significantly higher than the corresponding correlation for females. The final intercorrelation involving a significant difference between males and females pertained to the correlation

between antisocial behavior/delinquency and school misconduct. This correlation was higher for males.

Comparisons of the intercorrelations among risk behaviors between males and females within each of the five ethnic/racial groups were also calculated. There were no significant differences found between for males and females within the African American, Asian American, Hispanic/Latino, and Native American subgroups. However, within the European American subgroups a few significant differences between males and females were found. Four correlations were significantly different between European American male adolescents and European American female adolescents. The correlations between antisocial behavior/delinquency and alcohol use, and between antisocial behavior/delinquency and sexual activity, were significantly higher for the European American males than for the European American females. Compared to European American males, European American females had significantly higher correlations in two cases--involving sexual activity with hard drug use, and sexual activity with soft drug use.

Gender comparisons were also calculated within each age subgroup. Significant differences were found among the intercorrelations of risk behaviors for males and females among the 12 year olds. Four intercorrelations were significantly higher for female 12 year olds than for their male age mates. The intercorrelations were: Antisocial behavior/delinquency with alcohol use, antisocial behavior/delinquency with hard drug use, alcohol use with hard drug use, and alcohol use with school misconduct. None of the other gender comparisons within age subgroups were significant at a Bonferroni-corrected .01 level.

Overall, the intercorrelations were not systematically significantly different for males and females, and the intercorrelations were not systematically

significantly different across the age groups, i.e., only four of the total of 15 comparisons (26.7) were significant. In addition, the intercorrelations were not systematically significantly different for males and females within racial/ethnic and age subgroups. Moreover, the intercorrelations were not systematically significantly across the different age subgroups and the ethnic groups, i.e., only four of the total of 90 age-group comparisons (4.4%) were significant, and only four of the total of 75 racial/ethnic-group comparisons (5.3%) were significant.

Question 2:

What are the Individual-Organismic, Individual-Behavioral, and Contextual Characteristics that Covary with Risk Behaviors Among Adolescents, and is this Variation Different Among Groups of Adolescents Differentiated on the Basis of Age, Ethnicity, and Gender?

Several multiple regressions, involving individual-organismic (i.e., age, gender, ethnicity), individual behavioral (i.e., involvement in extracurricular activities, self-esteem, religiosity, and view of the future), and contextual (i.e., parent-adolescent communication, peer group characteristics, family support, and school climate) variables as predictors, were computed. First, for the full sample, multiple regressions were calculated for each of six risk behaviors: antisocial behavior/delinquency, alcohol use, soft drug use, hard drug use, sexual activity, and school misconduct. Second, comparable multiple regressions were calculated for each of the risk behaviors for each of the six age groups. Third, comparable multiple regressions were calculated for each of the risk behaviors for each of the five ethnic/racial groups. Finally, comparable multiple regressions were calculated for each of the risk behaviors for males and females. Across Question 2, Question 3, and Question 4, a total of 84 multiple regressions were computed.

Multiple Regressions for the Entire Sample

The multiple regressions that were calculated for the entire sample were significant for all six of the risk behaviors. This result was not unexpected, given the large sample size ($N = 15,537$).

Each of the multiple regressions involved eleven predictors: Age, gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor within each multiple regression equation are presented in Tables 49 through 54 (see Appendix 8). A presentation of the findings regarding R^2 changes will be made below, in regard to Questions 3 and 4. Here, however, it is useful to note that the range of the R^2 s for the six multiple regressions was .09 to .30. However, five of the six multiple regressions had an R^2 between .30 and .29. The R^2 for the multiple regression with the criterion variable of alcohol use was highest (i.e., $R^2 = .30$), followed by antisocial behavior/delinquency ($R^2 = .30$), soft drug use ($R^2 = .29$), school misconduct ($R^2 = .28$), sexual activity ($R^2 = .19$), and hard drug use ($R^2 = .09$). The F -tests for all six multiple regressions were significant at, at least, the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contributed significantly to the multiple regression equation, the t -tests for each predictor were examined. Considering the sample size, t -values were considered significant if they met the .0001 significance level within this sample. With regard to the multiple regression for antisocial behavior/delinquency, eight variables were significant: Age, ethnicity, gender, involvement in extracurricular activities, religiosity, family support, peer group

characteristics, and school climate. The three variables that were not significant were self-esteem, view of the future, and parent-adolescent communication.

In turn, age, gender, involvement in extracurricular activities, religiosity, family support, peer group characteristics, and school climate were significant in the multiple regression for alcohol use. The t -values of self-esteem, ethnicity, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The multiple regression for hard drug use had six predictors that were significant: Self-esteem, age, involvement in extracurricular activities, religiosity, family support, and peer group characteristics. The predictors that were not significant in this multiple regression were gender, ethnicity, view of the future, parent-adolescent communication, and school climate.

For soft drug use, the predictors that were significant were: Age, ethnicity, religiosity, family support, peer group characteristics, and school climate. Self-esteem, gender, involvement in extracurricular activities, and view of the future did not significantly predict soft drug use.

The multiple regression for sexual activity had seven predictors that were significant: Age, ethnicity, religiosity, family support, parent-adolescent communication, peer group characteristics, and school climate. The predictors that were not significant in this equation were: Involvement in extracurricular activities, gender, self-esteem, view of the future.

Age, gender, ethnicity, involvement in extracurricular activities, family support, peer group characteristics, and school climate were the predictors that were significant for the multiple regression for school misconduct. Self-esteem, religiosity, view of the future, and parent-adolescent communication were not

significant predictors in this multiple regression.

In sum, age, religiosity, and peer group characteristics were significant predictors in the six equations. In turn, one predictor (i.e., view of the future) did not meet the significance criterion for any of the six multiple regressions. Moreover, self-esteem was not a significant predictor for five of the equations. Therefore, in regard to the entire sample, only seven of the 11 predictors appeared to be associated with involvement in risk behaviors.

Multiple Regressions for the Male and Female Subgroups

Multiple regressions analogous to those conducted in regard to the entire sample were conducted for the male and female subgroups. The results of these 12 analyses are presented separately for each gender group.

Males. Multiple regressions were calculated and were significant for all six of the risk behaviors within the male subgroup. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample size of the male subgroup ($N = 7,219$).

Each of the multiple regressions included ten predictors: Age, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 55 through 60 (see appendix 8). The range of the R^2 s for the six multiple regressions was .10 to .31. However, five of the six multiple regressions had R^2 s between .31 and .26. The R^2 for the multiple regression for alcohol use was highest (i.e., $R^2 = .31$), followed by antisocial behavior/delinquency ($R^2 = .31$), soft drug use ($R^2 = .29$), school misconduct ($R^2 = .29$), sexual activity ($R^2 = .15$), and hard drug use ($R^2 = .10$).

The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression equation, the t -tests for each predictor were examined. In light of the sample size, the t -values had to be significant at the .0001 in order to be considered significant within this sample. With regard to the antisocial behavior/delinquency multiple regression, seven variables were significant: Age, ethnicity, involvement in extracurricular activities, religiosity, family support, peer group characteristics, and school climate. Three variables were not significant: Self-esteem, view of the future, and parent-adolescent communication.

The t -values for age, involvement in extracurricular activities, religiosity, family support, peer group characteristics, and school climate were significant for the multiple regression involving alcohol use. Four predictors, self-esteem, ethnicity, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The hard drug use multiple regression had one significant predictor, peer group characteristics. The nine variables that were not significant in this equation were: Age, ethnicity, self-esteem, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, the predictors of age, religiosity, family support, parent-adolescent communication, peer group characteristics, and school climate were significant. Four predictors were not significant in this equation: Self-esteem, ethnicity, involvement in extracurricular activities, and view of the future.

The multiple regression for sexual activity had seven predictors that were

significant: Age, ethnicity, involvement in extracurricular activities, religiosity, family support, peer group characteristics, and school climate. The predictors that were not significant in this equation were: Self-esteem, view of the future and parent-adolescent communication.

Ethnicity, involvement in extracurricular activities, family support, peer group characteristics, and school climate were significant in the multiple regression for school misconduct. Self-esteem, age, religiosity, view of the future, and parent-adolescent communication were not significant in this equation.

In sum, the only significant predictor of the six multiple regressions was peer group characteristics. Religiosity and school climate were significant predictors in five of the six equations. In turn, three predictors (i.e., self-esteem, view of the future, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the male subgroup, only seven of the 10 predictors appeared to be associated with involvement in risk behaviors.

Females. Multiple regressions were significant for all six of the risk behaviors within the male subgroup. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample size of the female subgroup ($N = 8,317$).

Each of the multiple regressions included ten predictors: age, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 61 through 66 (see Appendix 8). The range of the R^2 s for the six multiple regressions was .10 to .30.

Five out of the six multiple regressions had R^2 s between .30 and .25. The R^2 for the multiple regression involving alcohol use was highest (i.e., $R^2 = .29$), followed by soft drug use ($R^2 = .29$), school misconduct ($R^2 = .27$), antisocial behavior/delinquency ($R^2 = .25$), sexual activity ($R^2 = .21$), and hard drug use ($R^2 = .10$). The F -tests for all six multiple regression were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression equation, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample. With regard to the equation for antisocial behavior/delinquency, six predictors were significant: Age, ethnicity, religiosity, family support, peer group characteristics, and school climate. Self-esteem, involvement in extracurricular activities, view of the future, and parent-adolescent communication were not significant in this equation.

Five predictor variables were significant in the equation for alcohol: Age, religiosity, family support, peer group characteristics, and school climate. The t -values for self-esteem, ethnicity, involvement in extracurricular activities, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The multiple regression for hard drug use had three predictors that were significant: Age, family support, and peer group characteristics. The variables that were not significant were: Ethnicity, self-esteem, involvement in extracurricular activities, religiosity, view of the future, parent-adolescent communication, and school climate.

For soft drug use, seven predictors were significant: Age, ethnicity, religiosity, family support, parent-adolescent communication, peer group characteristics, and school climate. The three predictors that were not significant in this equation were: Self-esteem, involvement in extracurricular activities, and view of the future.

The multiple regression for sexual activity had five predictors that were significant: Age, ethnicity, religiosity, family support, and peer group characteristics. Involvement in extracurricular activities, self-esteem, family support, view of the future, school climate, and parent-adolescent communication were not significant in this equation.

In the multiple regression for school misconduct, five predictors were significant: Age, ethnicity, family support, peer group characteristics, and school climate. Self-esteem, involvement in extracurricular activities, religiosity, view of the future, and parent-adolescent communication were not significant in this equation.

In sum, peer group characteristics and age were significant predictors in all six multiple regressions. School climate was a significant predictor in four of the six equations. In turn, three predictors (i.e., self-esteem, view of the future, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the female subgroup only seven of the 10 predictors appeared to be associated with involvement in risk behaviors.

Multiple Regressions for the Racial/Ethnic Subgroups

Multiple regressions analogous to those conducted in regard to the entire sample were conducted for the African American, the Asian American, the European American, The Latino/Hispanic, and the Native American subgroups. The

results of these 30 analyses are presented separately for each racial/ethnic group.

African Americans. Multiple regressions were calculated and were significant for all six of the risk behaviors within the African American subgroup. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample size of the African American subgroup ($N = 3,612$).

Each of the multiple regressions included ten predictors: Age, gender, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 67 through 72 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .04 to .27. Four of the six multiple regressions had R^2 s between .27 and .24. The R^2 for the multiple regression for antisocial behavior/delinquency was highest (i.e., $R^2 = .27$), followed by alcohol use ($R^2 = .26$), school misconduct ($R^2 = .25$), soft drug use ($R^2 = .24$), sexual activity ($R^2 = .16$), and hard drug use ($R^2 = .04$). The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample. With regard to the multiple regression for antisocial behavior/delinquency, six predictors were significant: Age, gender, involvement in extracurricular activities, religiosity, peer group characteristics, and school climate. Self-esteem, family support, view of the future, and parent-adolescent communication were not

significant in this equation.

Five predictors were significant in the multiple regression for alcohol use: Age, involvement in extracurricular activities, religiosity, peer group characteristics, and school climate. The t -values for self-esteem, gender, view of the future, family support, and parent-adolescent communication were not significant in this equation.

The multiple regression for hard drug use had two predictors that were significant: View of the future and peer group characteristics. The predictors that were not significant in this multiple regression were age, gender, self-esteem, involvement in extracurricular activities, religiosity, family support, parent-adolescent communication, and school climate.

For soft drug use, four predictors were significant: Age, involvement in extracurricular activities, religiosity, and peer group characteristics. The six predictors that were not significant were: Self-esteem, gender, view of the future, family support, parent-adolescent communication, and school climate.

The multiple regression for sexual activity had five predictors that were significant: Age, gender, religiosity, self-esteem, and peer group characteristics. Involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, five predictors were significant: Age, self-esteem, involvement in extracurricular activities, peer group characteristics, and school climate. Gender, religiosity, view of the future, family support, and parent-adolescent communication were not significant in this equation.

In sum, the only significant predictor in all six multiple regressions was peer group characteristics. Age and religiosity were significant predictors in five of the six equations. In turn, two predictors (i.e., family support, and parent-adolescent

communication) did not meet the significance criterion for any of the six multiple regressions. Moreover, view of the future was not a significant predictor for five of the equations and self-esteem was not a significant predictor for four of the five equations. Therefore, in regard to the African American subgroup only seven of the 10 predictors appeared to be associated with involvement in risk behaviors.

Asian Americans. Multiple regressions were calculated and were significant for all six of the risk behaviors within the Asian American subgroup ($N = 151$). Each of the multiple regressions included ten predictors: Age, gender, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 73 through 78 (see Appendix 8). The range of the R^2 's for the six multiple regressions was .20 to .38. Four of the six multiple regressions had an R^2 between .30 and .38. The R^2 for the multiple regression for school misconduct was highest at (i.e., $R^2 = .38$), followed by antisocial behavior/delinquency ($R^2 = .37$), sexual activity ($R^2 = .30$), soft drug use ($R^2 = .30$), alcohol use ($R^2 = .22$), and hard drug use ($R^2 = .20$). The F -tests for all six multiple regression were significant at the .0005 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression equation, the t -tests for each predictor were examined. In light of the sample size, the t -values were significant if they met the .01 significance level.

With regard to the multiple regression for antisocial behavior/delinquency, three of the ten predictors were significant: Gender, peer group characteristics, and school climate. Self-esteem, age, involvement in extracurricular activities,

religiosity, view of the future, family support, and parent-adolescent communication were not significant in this multiple regression equation.

One predictor was significant in the multiple regression for alcohol use. The significant predictor was age. The t -values for self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, peer group characteristics, and school climate were not significant for this equation.

The multiple regression for hard drug use had two of the ten predictors were significant: Peer group characteristics and school climate. The predictors that were not significant in this equation were: Age, self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, and parent-adolescent communication.

For soft drug use, two predictors were significant: Age and peer group characteristics. The eight predictors that were not significant in this multiple regression were: Self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate.

The multiple regression for sexual activity had three predictors that were significant: Age, peer group characteristics, and school climate. Self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, three predictors were significant: Age, peer group characteristics, and school climate. Self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future,

family support, and parent-adolescent communication were not significant in this multiple regression.

In sum, peer group characteristics was a significant predictor in five of the six equations. Age was a significant predictor in four of the six equations. In turn, five predictors (i.e., self-esteem, involvement in extracurricular, family support, view of the future, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the Asian American subgroup only five of the 10 predictors appeared to be associated with involvement in risk behaviors.

European Americans. Multiple regressions were calculated and were significant for all six of the risk behaviors within the European American subgroup. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample size of the European American subgroup ($N = 10,795$).

Each of the multiple regressions included ten predictors: Age, gender, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 79 through 84 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .12 to .34. Four out of the six multiple regressions had an R^2 s between .30 and .34. The R^2 for the multiple regression for alcohol use was highest at .32, followed by soft drug use ($R^2 = .32$), school misconduct ($R^2 = .30$), antisocial behavior/delinquency ($R^2 = .29$), sexual activity ($R^2 = .21$), and hard drug use ($R^2 = .12$). The F -tests for all six multiple regression were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample.

With regard to the multiple regression for antisocial behavior/delinquency, seven predictors were significant: Age, gender, involvement in extracurricular activities, religiosity, family support, peer group characteristics, and school climate. Self-esteem, view of the future, and parent-adolescent communication were not significant in this equation.

Seven predictors were significant in the multiple regression for alcohol use: Age, gender, self-esteem, religiosity, family support, peer group characteristics, and school climate. The t -values for involvement in extracurricular activities, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The multiple regression for hard drug use had three predictors that were significant: Gender, family support, and peer group characteristics. The predictors that were not significant in this multiple regression were: Age, self-esteem, involvement in extracurricular activities, view of the future, religiosity, family support, parent-adolescent communication, and school climate.

For soft drug use, seven predictors were significant. The predictors were age, gender, religiosity, family support, peer group characteristics, parent-adolescent communication, and school climate. Self-esteem, involvement in extracurricular activities, and view of the future were not significant in this equation.

The multiple regression for sexual activity had six predictors that were

significant: Age, gender, religiosity, family support, peer group characteristics, and school climate. Involvement in extracurricular activities, self-esteem, view of the future, and parent-adolescent communication were not significant in this multiple regression.

In the multiple regression for school misconduct, four predictors were significant: Gender, family support, peer group characteristics, and school climate. Age, self-esteem, religiosity, view of the future, involvement in extracurricular activities, and parent-adolescent communication were not significant in this multiple regression.

In sum, gender, family support, and peer group characteristics were significant predictors in all six equations. School climate was significant in five of the six equations. In turn, two predictors (i.e., self-esteem, involvement in extracurricular activities, and view of the future) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the European American subgroup only seven of the 10 predictors appeared to be associated with involvement in risk behaviors.

Latinos/Hispanics. Multiple regressions were calculated and were significant for all six of the risk behaviors within the Latino/Hispanic subgroup ($N = 418$). Each of the multiple regressions included ten predictors: Age, gender, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 85 through 90 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .12 to .34. Two out of the six multiple regressions had R^2 s between .34 and .32. The R^2 for the

multiple regression for alcohol use was highest at (i.e., $R^2 = .34$), followed by antisocial behavior/delinquency ($R^2 = .32$), school misconduct ($R^2 = .29$), soft drug use ($R^2 = .25$), sexual activity ($R^2 = .21$), and hard drug use ($R^2 = .12$). The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regressions, the t -tests for each predictor were examined. In light of the sample size, the t -values had to be significant at the .01 level in order to be considered significant within this sample. With regard to the multiple regression for antisocial behavior/delinquency, two predictors were significant: Gender and peer group characteristics. Self-esteem, age, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

Two predictors were significant in the multiple regression for alcohol use. The significant predictors were age and peer group characteristics. The t -values for self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate were not significant for this multiple regression.

The multiple regression for hard drug use had one predictor that was significant: Peer group characteristics. The predictors that were not significant in this multiple regression were: Age, gender, self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, two predictors were significant: Age and peer group characteristics. The eight predictors that were not significant in this equation were:

Self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate.

The multiple regression for sexual activity had four predictors that were significant: Age, gender, religiosity, peer group characteristics. Self-esteem, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, two predictors were significant: Peer group characteristics and school climate. Self-esteem, age, gender, involvement in extracurricular activities, religiosity, view of the future, family support, and parent-adolescent communication were not significant in this equation.

In sum, the only significant predictor in the six multiple regressions was peer group characteristics. Age was a significant predictor in four of the six equations. In turn, five predictors (i.e., self-esteem, view of the future, family support, involvement in extracurricular activities, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the Latino/Hispanic subgroup only five of the 10 predictors appeared to be associated with involvement in risk behaviors.

Native Americans. Multiple regressions were calculated and were significant for all six of the risk behaviors within the Native American subgroup (N = 557). Each of the multiple regressions included ten predictors: Age, gender, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 91 through 96 (see Appendix 8).

The range of the R^2 s for the six multiple regressions was from .15 to .32. Two of the six multiple regressions had R^2 s between .31 and .32. The R^2 for the multiple regression for alcohol use was highest (i.e., $R^2 = .32$), followed by soft drug use ($R^2 = .31$), antisocial behavior/delinquency ($R^2 = .26$), school misconduct ($R^2 = .26$), sexual activity ($R^2 = .20$), and hard drug use ($R^2 = .15$). The F -tests for all six multiple regression were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regressions, the t -tests for each predictor were examined. In light of the sample size, the t -values had to be significant at the .01 level. With regard to the multiple regression for antisocial behavior/delinquency, three predictors were significant: Gender, involvement in extracurricular activities, and peer group characteristics. Self-esteem, age, religiosity, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

Three predictors were significant in the multiple regression for alcohol use: Age, involvement in extracurricular activities, and peer group characteristics. The t -values for self-esteem, gender, religiosity, view of the future, family support, parent-adolescent communication, and school climate were not significant for this multiple regression.

The multiple regression for hard drug use had four predictors that were significant: Involvement in extracurricular activities, view of the future, family support, and peer group characteristics. The predictors that were not significant in this equation were: Age, gender, self-esteem, religiosity, parent-adolescent communication, and school climate.

For soft drug use, two predictors were significant: Age and peer group

characteristics. The eight predictors that were not significant in this multiple regression were self-esteem, gender, involvement in extracurricular activities, religiosity, view of the future, family support, parent-adolescent communication, and school climate.

The multiple regression for sexual activity had three predictors that were significant: Age, religiosity, and peer group characteristics. Self-esteem, gender, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication and school climate were not significant in this equation.

In the multiple regression for school misconduct, four predictors are significant: Gender, involvement in extracurricular activities, peer group characteristics, and school climate. Self-esteem, age, religiosity, view of the future, family support, and parent-adolescent communication were not significant in this equation.

In sum, peer group characteristics was the only significant predictor in all six multiple regressions. Age was a significant predictor in three of the six equations. In turn, two predictors (i.e., self-esteem and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the Native American subgroup only eight of the 10 predictors appeared to be associated with involvement in risk behaviors.

Multiple Regressions for the Age Subgroup

Multiple regressions analogous to those conducted in regard to the entire sample were conducted for the 12 year old, the 13 year old, the 14 year old, the 15 year old, the 16 year old, and the 17 year old subgroups. The results of these 36 analyses are presented separately for each age subgroup.

The 12 Year Old Group. Multiple regressions were calculated and were

significant for all six of the risk behaviors within the 12 year old age group. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample of the 12 year old age group ($N = 1,736$).

Each of the multiple regressions included ten predictors: gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 97 through 102 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .07 to .26. Three out of the six multiple regressions had an R^2 of .26. The R^2 s for the multiple regressions for antisocial behavior/delinquency, for school misconduct, and for sexual activity were highest (i.e., $R^2 = .26$), followed by soft drug use ($R^2 = .19$), alcohol use ($R^2 = .18$), and hard drug use ($R^2 = .07$). The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression, the t -tests for each predictor were examined. In light of the sample size, t values were considered significant if they met the .0001 significance level within this sample. With regard to the multiple regression for antisocial behavior/delinquency, four predictors were significant: Gender, ethnicity, peer group characteristics, and school climate. Self-esteem, involvement in extracurricular activities, religiosity, view of the future, family support, and parent-adolescent communication were not significant in this equation.

Two predictors were significant in the multiple regression for alcohol use:

Involvement in extracurricular activities and peer group characteristics. The t -values for self-esteem, gender, ethnicity, religiosity, view of the future, family support, parent-adolescent communication, and school climate were not significant for this multiple regression.

The hard drug use multiple regression had one predictor that was significant: Peer group characteristics. The predictors that were not significant in this equation were: Gender, ethnicity, self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, two predictors were significant: Religiosity and peer group characteristics. The eight predictors that were not significant in this equation were self-esteem, gender, ethnicity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

The multiple regression for sexual activity had two predictors that were significant: Peer group characteristics and school climate. Self-esteem, gender, ethnicity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, two predictors are significant: Peer group characteristics and school climate. Self-esteem, gender, ethnicity, involvement in extracurricular activities, religiosity, view of the future, family support, and parent-adolescent communication were not significant in this multiple regression.

In sum, the only significant predictors in all six multiple regressions was peer group characteristics. Two other predictors were significant in several of the

equations: Involvement in extracurricular activities and school climate. In turn, four predictors (i.e., self-esteem, view of the future, family support, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the 12 year old subgroup only six of the 10 predictors appeared to be associated with involvement in risk behaviors.

The 13 Year Old Group. Multiple regressions were calculated and were significant for all six of the risk behaviors within the 13 year old age group. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample of the Age 13 year old group ($N = 2,986$).

Each of the multiple regressions included ten predictors: Gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 103 through 108 (see Appendix 8). The range of the R^2 s for the six multiple regressions was .10 to .29. Five of the six multiple regressions had R^2 s between .20 to .29. The R^2 for the multiple regression with for antisocial behavior/delinquency was highest at (i.e., $R^2 = .29$), followed by school misconduct ($R^2 = .28$), soft drug use ($R^2 = .20$), alcohol use ($R^2 = .23$), sexual activity ($R^2 = .19$), and hard drug use ($R^2 = .10$). The F -tests for all six multiple regressions were significant at the .0001 level. In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regressions, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample.

With regard to the multiple regression for antisocial behavior/delinquency, six predictors were significant: Gender, ethnicity, involvement in extracurricular activities, family support, peer group characteristics, and school climate. Self-esteem, religiosity, view of the future, and parent-adolescent communication were not significant in this multiple regression equation.

Four predictors were significant in the multiple regression for alcohol use: Gender, involvement in extracurricular activities, family support, and peer group characteristics. The t -values for self-esteem, ethnicity, religiosity, view of the future, parent-adolescent communication, and school climate were not significant for this equation.

The multiple regression for hard drug use had one predictor that was significant: Peer group characteristics. The predictors that were not significant in this multiple regression were: Gender, ethnicity, self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, two predictors were significant: Family support and peer group characteristics. The eight predictors that were not significant in this multiple regression were: Self-esteem, gender, ethnicity, involvement in extracurricular activities, religiosity, view of the future, parent-adolescent communication, and school climate.

The multiple regression for sexual activity had five predictors that were significant: Gender, ethnicity, religiosity, peer group characteristics, and school climate. Self-esteem, involvement in extracurricular activities, family support, view of the future, and parent-adolescent communication were not significant in this equation.

In the multiple regression for school misconduct, three predictors were significant: Family support, peer group characteristics, and school climate. Gender, ethnicity, Self-esteem, involvement in extracurricular activities, religiosity, view of the future, and parent-adolescent communication were not significant in this equation.

In sum, the only significant predictor in all six multiple regressions was peer group characteristics. Family support was a significant predictor in four of the six equations. In turn, three predictors (i.e., self-esteem, view of the future, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the 13 year old subgroup only seven of the 10 predictors appeared to be associated with involvement in risk behaviors.

The 14 Year Old Group. Multiple regressions were calculated and were significant for all six of the risk behaviors within the 14 year old age group. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample of the 14 year old group ($N=3,161$).

Each of the multiple regressions included ten predictors: Gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 109 through 114 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .07 to .32. Five of the six multiple regressions had R^2 s of .25 to .32. The R^2 for the multiple regression for antisocial behavior/delinquency was highest at (i.e., $R^2 = .32$), followed by school misconduct ($R^2 = .29$), alcohol use ($R^2 = .28$), soft drug

use ($R^2 = .27$), sexual activity ($R^2 = .17$), and hard drug use ($R^2 = .07$). The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample. With regard to the multiple regression for antisocial behavior/delinquency, six predictors were significant: Gender, ethnicity, involvement in extracurricular activities, religiosity, peer group characteristics, and school climate. Self-esteem, family support, view of the future, and parent-adolescent communication were not significant in this multiple regression.

Four predictors was significant in the multiple regression for alcohol use: Involvement in extracurricular activities, religiosity, peer group characteristics, and school climate. The t -values for self-esteem, gender, ethnicity, family support, view of the future, and parent-adolescent communication were not significant for this equation.

The multiple regression for hard drug use had two of the ten predictors: Family support and peer group characteristics. The variables that were not significant in this equation were gender, religiosity, ethnicity, self-esteem, religiosity, involvement in extracurricular activities, view of the future, parent-adolescent communication, and school climate.

For soft drug use, three predictors were significant: Religiosity, peer group characteristics, and school climate. The seven predictors that were not significant in this equation were: Self-esteem, gender, ethnicity, involvement in extracurricular activities, family support, view of the future, and parent-adolescent communication.

The multiple regression for sexual activity had four predictors that were significant: Gender, ethnicity, religiosity, and peer group characteristics. Self-esteem, involvement in extracurricular activities, family support, view of the future, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, two predictors are significant: Peer group characteristics and school climate. Gender, Self-esteem, involvement in extracurricular activities, religiosity, family support, view of the future, and parent-adolescent communication were not significant in this equation.

In sum, the only significant predictor in all six multiple regressions was peer group characteristics. School climate was a significant predictor in four of the six equations and ethnicity was a significant predictor in three of the six multiple regression. In turn, three predictors (i.e., self-esteem, view of the future, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the 14 year old subgroup only seven of the 10 predictors appeared to be associated with involvement in risk behaviors.

The 15 Year Old Group. Multiple regressions were calculated and were significant for all six of the risk behaviors within the 15 year old age group. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample of the 15 year old subgroup (N = 3,023).

Each of the multiple regressions included ten predictors: Gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and

school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 115 through 120 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .12 to .32. Five out of the six multiple regressions had R^2 s between .26 to .32. The R^2 for the multiple regression for antisocial behavior/delinquency was highest (i.e., $R^2 = .32$), followed by alcohol use ($R^2 = .29$), soft drug use ($R^2 = .29$), school misconduct ($R^2 = .28$), sexual activity ($R^2 = .18$), and hard drug use ($R^2 = .12$). The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression equation, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample.

With regard to the multiple regression for antisocial behavior/delinquency, six predictors out of ten predictors were significant: Gender, ethnicity, involvement in extracurricular activities, family support, peer group characteristics, and school climate. Self-esteem, religiosity, view of the future, and parent-adolescent communication were not significant in this equation.

Three predictors were significant in the multiple regression equation for alcohol use. The significant predictors were religiosity, peer group characteristics, and school climate. The t -values for self-esteem, gender, ethnicity, involvement in extracurricular activities, family support, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The multiple regression for hard drug use had one predictor that was significant: Peer group characteristics. The predictors that were not significant in

this multiple regression were gender, ethnicity, self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, four predictors were significant: Religiosity, family support, parent-adolescent communication, and peer group characteristics. The seven predictors that were not significant in this multiple regression were: Self-esteem, gender, ethnicity, involvement in extracurricular activities, view of the future, and school climate.

The multiple regression for sexual activity had four predictors that were significant: Gender, ethnicity, religiosity, and peer group characteristics. Self-esteem, involvement in extracurricular activities, family support, view of the future, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, three predictors are significant: Ethnicity, peer group characteristics, and school climate. Gender, self-esteem, involvement in extracurricular activities, religiosity, family support, view of the future, and parent-adolescent communication were not significant in this equation.

In sum, the only significant predictor in all six multiple regressions was peer group characteristics. School climate and religiosity were significant predictors in four of the six equations. In turn, one predictor (i.e., self-esteem, view of the future) did not meet the significance criterion for any of the six multiple regressions. Therefore, in regard to the 15 year old subgroup nine of the 10 predictors appeared to be associated with involvement in risk behaviors.

The 16 Year Old Group. Multiple regressions were calculated and were significant for all six of the risk behaviors within the 16 year old age group. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample of the 16 year old group ($N = 2,593$).

Each of the multiple regressions included ten predictors: Gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate. The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 121 through 126 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .09 to .30. Five of the six multiple regressions had R^2 s of .25 to .30. The R^2 for the multiple regression for antisocial behavior/delinquency was highest (i.e., $R^2 = .30$), followed by school misconduct ($R^2 = .29$), soft drug use ($R^2 = .29$), alcohol use ($R^2 = .27$), sexual activity ($R^2 = .20$), and hard drug use ($R^2 = .12$). The F -tests for all six multiple regression were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regression, the t -tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample.

With regard to the multiple regression for antisocial behavior/delinquency, five predictors were significant: Gender, ethnicity, involvement in extracurricular activities, peer group characteristics, and school climate. Self-esteem, religiosity, view of the future, family support, and parent-adolescent communication were not significant in this equation.

Three predictors were significant in the multiple regression for alcohol use:

Religiosity, peer group characteristics, and school climate. The t -values for self-esteem, gender, ethnicity, involvement in extracurricular activities, family support, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The hard drug use multiple regression had one predictor that was significant: Peer group characteristics. The predictors that were not significant in this multiple regression were: Gender, ethnicity, self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, three predictors were significant. The three predictors were: Religiosity, peer group characteristics, and school climate. The seven predictors that were not significant in this equation were: Self-esteem, gender, ethnicity, involvement in extracurricular activities, family support, view of the future, and parent-adolescent communication.

The multiple regression for sexual activity had four predictors that were significant: Ethnicity, religiosity, family support, and peer group characteristics. Self-esteem, gender, involvement in extracurricular activities, view of the future, parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, three predictors were significant: Ethnicity, religiosity, and peer group characteristics. Gender, self-esteem, involvement in extracurricular activities, religiosity, family support, view of the future, parent-adolescent communication, and school climate were not significant in this multiple regression.

In sum, the only significant predictor in all six multiple regressions was peer

group characteristics. Religiosity was a significant predictor in four of the six equations. In turn, three predictors (i.e., self-esteem, view of the future, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Three other predictors were significant for one multiple regression (i.e., gender, involvement in extracurricular activities, family support). Therefore, in regard to the 16 year old subgroup only four of the 10 predictors appeared to be associated with involvement in risk behaviors.

The 17 Year Old Group. Multiple regressions were calculated and were significant for all six of the risk behaviors within the 17 year old age group. As with the analyses involving multiple regressions for the entire sample, this result was not unexpected given the large sample of the 17 year old group ($N = 2,033$). The multiple regressions included ten predictors: Gender, ethnicity, involvement in extracurricular activities, self-esteem, religiosity, view of the future, parent-adolescent communication, peer group characteristics, family support, and school climate.

The overall R^2 , F test, significance levels, betas, and the R^2 changes for each individual predictor are presented in Tables 127 through 132 (see Appendix 8). The range of the R^2 s for the six multiple regressions was from .10 to .30. Five of the six multiple regressions had R^2 s of .22 to .30. The R^2 for the multiple regression for alcohol use was highest (i.e., $R^2 = .30$), followed by soft drug use ($R^2 = .30$), school misconduct ($R^2 = .26$), antisocial behavior/delinquency ($R^2 = .25$), sexual activity ($R^2 = .16$), and hard drug use ($R^2 = .10$). The F -tests for all six multiple regressions were significant at the .0001 level.

In order to assess which individual-organismic, individual-behavioral, and contextual characteristics contribute significantly to the multiple regressions, the t -

tests for each predictor were examined. In light of the sample size, t -values were considered significant if they met the .0001 significance level within this sample.

With regard to the multiple regression for antisocial behavior/delinquency, three predictors out of ten predictors were significant: Gender, ethnicity, and peer group characteristics. Self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate were not significant in this equation.

Two predictors were significant in the multiple regression for alcohol use: Peer group characteristics and school climate. The t -values for self-esteem, gender, ethnicity, involvement in extracurricular activities, religiosity, family support, view of the future, and parent-adolescent communication were not significant for this multiple regression.

The multiple regression for hard drug use had one predictor that was significant: Peer group characteristics. The variables that were not significant in this multiple regression were gender, ethnicity, self-esteem, religiosity, involvement in extracurricular activities, view of the future, family support, parent-adolescent communication, and school climate.

For soft drug use, three predictors were significant: Family support, peer group characteristics, and school climate. The seven predictors that were not significant in this multiple regression were: Self-esteem, gender, ethnicity, involvement in extracurricular activities, religiosity, view of the future, and parent-adolescent communication.

The multiple regression for sexual activity had three predictors that were significant: Ethnicity, religiosity, and peer group characteristics. Self-esteem, gender, involvement in extracurricular activities, view of the future, family support,

parent-adolescent communication, and school climate were not significant in this equation.

In the multiple regression for school misconduct, two predictors were significant: Peer group characteristics and school climate. Gender, ethnicity, self-esteem, involvement in extracurricular activities, religiosity, family support, view of the future, and parent-adolescent communication were not significant in this multiple regression.

In sum, the only significant predictor in all six multiple regressions was peer group characteristics. In turn, four predictors (i.e., self-esteem, view of the future, involvement in extracurricular activities, and parent-adolescent communication) did not meet the significance criterion for any of the six multiple regressions. Moreover, three predictors were significant for one multiple regression (i.e., gender, family support, and ethnicity). Therefore, in regard to the 17 year old subgroup only three of the 10 predictors appeared to be associated with involvement in risk behaviors.

Overview of the Findings in Regard to Question 2

Overall, the R^2 from the multiple regressions for the risk behaviors that included the individual-organismic, individual-behavioral, and contextual predictors were significant for the entire sample, for males and females, for the five ethnic groups, and for the six age groups. The range of R^2 s was between .04 and .38. The multiple regression for hard drug use had the lowest R^2 of any of the equations. Overall, the multiple regression for sexual activity had the highest number of significant predictors.

Generally, the same predictors were significant for the majority of the multiple regressions. That is, peer group characteristics was a predictor whose t -

value was found to be significant in 83 of 84 equations. Age was the second most frequent predictor. However, the t -values for two specific characteristics, view of the future and parent-adolescent communication, were consistently found not to be significant in the equations. Across the 84 equations, self-esteem was a significant predictor in only three (3.6%) equations.

Question Three: Given that There May be Multicollinearity Among Individual and/or Contextual Variables in Their Association with Risk, are There Particular Variables that Account for More Variance in Either Selected Outcome Variables and/or in Sets of These Variables Than do Other Characteristics?

As previously noted, multiple regressions were conducted that included Type III Sums of Squares. The Type III Sums of Squares is associated with the partial sums of squares and corresponds to Yate's weighted squares of the means analysis (Steel & Torrie, 1980). This analysis affords an examination of the main effects of each predictor even in the presence of interactions. Thus, the unique variance accounted for by each individual predictor is identified by examining the R^2 change and the F test of that individual predictor.

In addressing Question 3, the above-mentioned 84 multiple regressions were examined with regard to the R^2 changes, F test results, and significance levels attained for each individual predictor. Specifically, the individual-organismic, individual-behavioral, and contextual characteristics that accounted for the most variance are presented below in rank order by the amount of variance each accounted for in the multiple regression equations for each of the six risk behaviors. Only those characteristics that meet the joint criterion of an F -test significance level of $p < .0001$ and of an R^2 change of .01 or more, will be ranked, given that variables with less than a .01 R^2 change account for less than 1% of the variance

(and were thus deemed not to be substantively meaningful). However, for the Asian American subgroup, an F -test significance level of .01 and a R^2 change of .01 or more was used because of the smaller size of the Asian American subgroup ($N = 151$) compared to the other subgroups. Rank ordering was completed for the entire sample and for the gender, ethnicity/race, and age subgroups.

Analyses for the Entire Sample

As shown earlier, in Table 49, the multiple regression for antisocial behavior/delinquency involved eleven predictors with an overall $R^2 = .30$. Three predictors had R^2 changes that were significant and met the R^2 change criterion noted above (of at least a .01 change). Peer group characteristics had the largest R^2 change (.1149), followed by gender (.0250), and ethnicity (.0171).

The multiple regression for alcohol use had an $R^2 = .30$ (see Table 50). Two of the eleven predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1511), followed by the predictor variable of age, which had an R^2 change of .0249.

As presented in Table 51, the multiple regression for hard drug use had the lowest R^2 of the six risk behaviors. The R^2 for this multiple regression was .09. Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0463.

The multiple regression for soft drug use had an $R^2 = .29$ (see Table 52). Two of the eleven predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1357), followed by the predictor variable of age, which had a R^2 change of .0209.

As shown in Table 53, the multiple regression for sexual activity had an $R^2 = .19$ across the 11 predictors. Four predictors had R^2 changes that were

significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0373), followed by religiosity (.0257), age (.0144), and ethnicity (.0121).

The multiple regression for school misconduct had an $R^2 = .28$ across the 11 predictors (see Table 54). Peer group characteristics and school climate were the significant predictors that met the significant criterion for R^2 change. They had an R^2 change of .1087 and .0226, respectively.

In sum, for the entire sample, peer group characteristics accounted for the most variance in all of the multiple regression equations. Moreover, in two equations--for the criterion variables of hard drug use and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Analyses for Male and Female Subgroups

Least square analyses analogous to those conducted in regard to the entire sample were conducted for the male and female subgroups. The results of these 12 analyses are presented separately for each gender group.

Males. The multiple regression for antisocial behavior/delinquency involved 10 predictors with an $R^2 = .30$ (see Table 55). Three predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1526), followed by ethnicity (.0170) and involvement in extracurricular activities (.0103).

As shown in Table 56, the multiple regression for alcohol use had an $R^2 = .31$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1616), followed by the predictor of age, whose R^2 change was .0291.

Similar to the entire sample, the multiple regression for hard drug use had

the lowest R^2 of the six risk behaviors for males (see Table 57). The R^2 for this multiple regression was .10. Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0566.

As presented in Table 58, the multiple regression for soft drug use had an $R^2 = .29$ across 10 predictors. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1430), followed by the predictor of age, whose R^2 change was .0256.

The multiple regression for sexual activity had an $R^2 = .16$ (see Table 59) across the 10 predictors. Three predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0344), followed by religiosity (.0272), ethnicity (.0149),.

As shown in Table 60, the multiple regression for school misconduct had an $R^2 = .29$ across the 10 predictors. Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .1190.

In sum, for the male subgroup, peer group characteristics accounted for the most variance in all of the multiple regression equations. Moreover, in two equations--for the criterion variables of hard drug use and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Females. The multiple regression for antisocial behavior/delinquency had an $R^2 = .25$ (see Table 61) across the 10 predictors. Two predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0985), followed by ethnicity (.0224).

As presented in Table 62, the multiple regression for alcohol use had an $R^2 = .30$ across the 10 predictors. Two of the 10 predictors had R^2 changes that

were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1412), followed by the predictor of age, which had an R^2 change of .0207.

As with the males, the multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for females. The R^2 for this multiple regression was .10 (see Table 63). Peer group characteristics was the only one of the predictors that met the significant criterion for R^2 change. It had an R^2 change of .0373.

As shown in Table 64, the multiple regression for soft drug use had an $R^2 = .29$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1299), followed by the predictor of age, which had an R^2 change of .0165.

The multiple regression for sexual activity had 10 predictors with an $R^2 = .21$ (see Table 65). Four predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0409), followed by age (.0251), and religiosity (.0251).

As presented in Table 66, the multiple regression for school misconduct had an $R^2 = .27$ across the 10 predictors. The predictors of peer group characteristics, school climate, and ethnicity had R^2 changes of .1013, .0207, and .0100, respectively.

In sum, for the female subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Age accounted for the most variance for that risk behavior. Moreover, in one equation--for the criterion variables of hard drug use--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Analyses for the Racial/Ethnic Subgroups

Least square analyses analogous to those conducted in regard to the entire sample were conducted for the African American, the Asian American, the European American, the Latino/Hispanic, and the Native American subgroups. The results of these 30 analyses are presented separately for each gender group.

African Americans. The multiple regression for antisocial behavior/delinquency had an $R^2 = .27$ (see Table 67) across the 10 predictors. Four predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1060), followed by gender (.0201), involvement in extracurricular activities (.0193), and religiosity (.0143).

As shown in Table 68, the multiple regression for alcohol use had an $R^2 = .31$. Four of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1340), followed by the predictors of religiosity (.0135), involvement in extracurricular activities (.0112), and age (.0102).

The multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for African American adolescents. The R^2 for this multiple regression was .04 (see Table 69). Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0136.

As presented in Table 70, the multiple regression for soft drug use had an $R^2 = .29$. Peer group characteristics was the only predictor that met the significant criterion for R^2 change. Peer group characteristics R^2 change was .1339.

The multiple regression for sexual activity had an $R^2 = .16$ (see Table 71) across the 10 predictors. The predictors of peer group characteristics, age, and gender had R^2 changes of .0355, .0143, and .0132, respectively.

As shown in Table 72, the multiple regression for school misconduct had an $R^2 = .25$. The predictors of peer group characteristics and school climate had R^2 changes of .0812 and .0149; respectively.

In sum, for the African American subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Age accounted for the most variance for that risk behavior. Moreover, in two equations--for the criterion variables of hard drug use and soft drug use--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Asian Americans. The multiple regression for antisocial behavior/delinquency had an $R^2 = .37$ (see Table 73) across the 10 predictors. Three predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1716), followed by school climate (.0472), gender (.0426).

As presented in Table 74, the multiple regression for alcohol use had an $R^2 = .22$ across the 10 predictors. One of the 10 predictors had R^2 change that was significant and met the R^2 change criterion. Age R^2 change was .1107.

Similar to the entire sample, the multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for Asian American adolescents. The R^2 for this multiple regression was .20 (see Table 75). School climate and peer group characteristics were the predictors that met the significant criterion for R^2 change. They had R^2 changes of .0892 and .0390, respectively.

As shown in Table 76, the multiple regression for soft drug use had an $R^2 = .30$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Age had the largest R^2 change (.0533), followed by the

predictor of peer group characteristics (.0503).

The multiple regression for sexual activity had an $R^2 = .30$ (see Table 77) across the 10 predictors. Three predictors had R^2 changes that were significant and met the R^2 change criterion. Parent-adolescent communication had the largest R^2 change (.0929), followed by age (.0511), school climate (.0469), and self-esteem (.0307).

As presented in Table 78, the multiple regression for school misconduct had an $R^2 = .38$. The predictors of school climate, peer group characteristics, and age had R^2 changes of .0777, .0706, .0439, respectively.

In sum, for the Asian American subgroup, age accounted for the most variance in three multiple regressions (i.e., alcohol use, soft drugs use, and sexual activity). School climate accounted for the most variance in two of the equations (i.e., hard drug use, school misconduct), and peer group characteristics accounted for the most variance in one multiple regression (i.e., antisocial behavior/delinquency).

European Americans. The multiple regression for antisocial behavior/delinquency had an $R^2 = .29$ (see Table 79) across the 10 predictors. Two predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1195), followed by gender (.0258).

As shown in Table 80, the multiple regression for alcohol use had an $R^2 = .32$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1585), followed by the predictor of age (.0293).

Similar to the entire sample, the multiple regression for hard drug use had

the lowest R^2 of the six risk behaviors for European American subgroup. The R^2 for this multiple regression was .12 (see Table 81). Peer group characteristics was the only one of the predictors that met the significant criterion for R^2 change. It had an R^2 change of .0662.

As presented in Table 82, the multiple regression for soft drug use had an $R^2 = .32$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1468), followed by the predictor of age, which had an R^2 change of .0229.

The multiple regression for sexual activity had an $R^2 = .21$ (see Table 83). The predictors of religiosity, peer group characteristics, and age had R^2 changes of .0393, .0312, and .0141, respectively.

As presented in Table 84, the multiple regression for school misconduct had an $R^2 = .30$. Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .1168.

In sum, for the European American subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Age accounted for the most variance for that risk behavior. Moreover, in one equation--for the criterion variable of hard drug use--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Latinos/Hispanics. The multiple regression for antisocial behavior/delinquency had an $R^2 = .32$ (see Table 85) across the 10 predictors. Two predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0926), followed by age (.0810).

As Shown in Table 86, the multiple regression for alcohol use had an $R^2 = .34$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1824), followed by the predictor of age (.0288).

The multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for Latino/Hispanic adolescents. The R^2 for this multiple regression was .12 (see Table 87). Peer group characteristics was the only one of the predictors that met the significant criterion for R^2 change. It had an R^2 change of .0714.

As presented in Table 88, the multiple regression for soft drug use had an $R^2 = .25$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1181), followed by the predictor of age (.0253).

The multiple regression for sexual activity had an $R^2 = .21$ (see Table 89) across the 10 predictors. Five predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0581), followed by gender (.0170), age (.0164), and religiosity (.0152).

As shown in Table 90, the multiple regression for school misconduct had an $R^2 = .29$. The predictor of peer group characteristics was significant and had R^2 change of .1186.

In sum, for the Latino/Hispanic subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Gender accounted for the most variance for that risk behavior. Moreover, in two equations--for the criterion variables of hard drug use and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Native Americans. The multiple regression for antisocial behavior/delinquency an $R^2 = .26$ (see Table 91) across the 10 predictors. Three predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1037), followed by gender (.0295), and involvement in extracurricular activities (.0257).

As shown in Table 92, the multiple regression for alcohol use had an $R^2 = .32$. Three of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1137), followed by the predictors of age (.0593), and involvement in extracurricular activities (.0355).

The multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for Native American adolescents. The R^2 for this multiple regression was .12 (see Table 93). Peer group characteristics was the only significant predictor that met the significant criterion for R^2 change. It had R^2 changes of .0311.

As presented in Table 94, the multiple regression for soft drug use had $R^2 = .15$. Four of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0951), followed by the predictor of age (.0768).

The multiple regression for sexual activity had 10 predictors with an $R^2 = .20$ (see Table 95). Three predictors had R^2 changes that were significant and met the R^2 change criterion. Age had the largest R^2 change (.0521), followed by peer group characteristics (.0444), and religiosity (.0115).

As shown in Table 96, the multiple regression for school misconduct had an $R^2 = .26$. One of the 10 predictors had R^2 change that was significant and met the R^2 change criterion. Peer group characteristics' R^2 change was .0816).

In sum, for the Native American subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Age accounted for the most variance for that risk behavior. Moreover, in two equations--for the criterion variables of hard drug use and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Analyses for the Age Subgroups

Least square analyses analogous to those conducted in regard to the entire sample were conducted for the 12 year old, the 13 year old, the 14 year old, the 15 year old, the 16 year old, the 17 year old subgroups. The results of these 36 analyses are presented separately for each age subgroup.

The 12 Year Old Group. The multiple regression for antisocial behavior/delinquency an $R^2 = .26$ (see Table 97) across the 10 predictors. Two predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0830), followed by ethnicity (.0288)

As shown in Table 98, the multiple regression for alcohol use had an $R^2 = .18$. Peer group characteristics was the only one of the 10 predictors that had an R^2 change that was significant (.0958) and met the R^2 change criterion.

Similar to the entire sample and the subgroups thus far, the multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for the 12 year old group. The R^2 for this multiple regression was .07 (see Table 99). Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0289.

As presented in Table 100, the multiple regression for soft drug use had an

$R^2 = .19$. Peer group characteristics was the only one of the 10 predictors that had an R^2 change that was significant (.0857) and met the R^2 change criterion.

The multiple regression for sexual activity had an $R^2 = .26$ (see Table 101) across the 10 predictors. The predictors of peer group characteristics and school climate had R^2 changes of .0934 and .0160, respectively.

As shown in Table 102, the multiple regression with school misconduct had an $R^2 = .26$. The predictors of peer group characteristics and school climate had R^2 changes of .0934 and .0160, respectively.

In sum, for the 12 year old subgroup, peer group characteristics accounted for the most variance in all six multiple regression equations (i.e., in all equations except for the one for sexual activity). Moreover, in three equations--for the criterion variables of alcohol use, hard drug use, and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

The 13 Year Old Group. The multiple regression for antisocial behavior/delinquency had an $R^2 = .29$ (see Table 103) across the 10 predictors. Four predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1176), followed by gender (.0159), ethnicity (.0129), and involvement in extracurricular activities (.0109).

As shown in Table 104, the multiple regression for alcohol use had an $R^2 = .23$ and 10 predictors. Peer group characteristics was the only predictor that had an R^2 change that was significant (.1322) and met the R^2 change criterion.

The multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for the 13 year old subgroup (see Table 105). The R^2 for this multiple regression .07. Peer group characteristics was the only predictor that met the

significant criterion for R^2 change. It had an R^2 change of .0569.

As present in Table 106, the multiple regression for soft drug use had an $R^2 = .20$ across the 10 predictors. One of the 10 predictors had an R^2 change that was significant and met the R^2 change criterion. Peer group characteristics had an R^2 change of .1211.

The multiple regression for sexual activity had an $R^2 = .19$ (see Table 107) across the 10 predictors. The predictors of peer group characteristics and gender had R^2 changes of .0393 and .0252, respectively.

As shown in Table 108, the multiple regression for school misconduct had a $R^2 = .28$. The predictors of peer group characteristics and school climate had R^2 changes of .1077 and .0170, respectively.

In sum, for the 13 year old subgroup, peer group characteristics accounted for the most variance in all of the six multiple regression equations. Moreover, in three equations--for the criterion variables of alcohol use, hard drug use, and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

The 14 Year Old Group. The multiple regression for antisocial behavior/delinquency had an $R^2 = .32$ (see Table 109) across the 10 predictors. Three predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1243), followed by gender (.0306), and ethnicity (.0169).

As shown in Table 110, the multiple regression for alcohol use had an $R^2 = .28$. Peer group characteristics was the only one of the 10 predictors which had an R^2 change that was significant (.1621) and met the R^2 change criterion.

Similar to the entire sample, the multiple regression for hard drug use had

the lowest R^2 of the six risk behaviors for the 14 year old subgroup. The R^2 for this multiple regression was .07 (see Table 111). Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0257.

As presented in Table 112, the multiple regression for soft drug use had an $R^2 = .27$. Peer group characteristics was the one predictor which had an R^2 change that was significant (.1506) and met the R^2 change criterion.

The multiple regression for sexual activity had 10 predictors with an $R^2 = .17$ (see Table 113). The predictors of peer group characteristics, ethnicity, and gender had R^2 changes of .0417, .0142, and .0131, respectively.

As shown in Table 114, the multiple regression for school misconduct had an $R^2 = .29$. The predictors of peer group characteristics and school climate had R^2 changes of .1239 and .0215, respectively.

In sum, for the 14 year old subgroup, peer group characteristics accounted for the most variance in all of the six multiple regression equations. Moreover, in three equations--for the criterion variables of alcohol use, hard drug use, and school misconduct--the R^2 change for peer group characteristics was the only predictor that met the criterion.

The 15 Year Old Group. The multiple regression for antisocial behavior/delinquency had an $R^2 = .32$ (see Table 115) across the 10 predictors. Three predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1302), followed by gender (.0276), and ethnicity (.0219).

As presented in Table 116, the multiple regression for alcohol use had an $R^2 = .29$. Two of the 10 predictors had R^2 changes that were significant and met

the R^2 change criterion. Peer group characteristics had an R^2 change of .1704, followed by religiosity with an R^2 change of .0113.

Similar to the entire sample and the subgroups, the multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for the 15 year old group. The R^2 for this multiple regression was .12 (see Table 117). Peer group characteristics was the one predictor that met the significant criterion for R^2 change. It had an R^2 change of .0716.

As shown in Table 118, the multiple regression for soft drug use had an $R^2 = .29$. Peer group characteristics was the only one of the 10 predictors which had an R^2 change that was significant (.1633) and met the R^2 change criterion.

The multiple regression for sexual activity had 10 predictors with an $R^2 = .18$ (see Table 119). The predictors of peer group characteristics and religiosity had R^2 changes of .0388 and .0354, respectively.

As presented in Table 120, the multiple regression for school misconduct had an $R^2 = .28$. The predictors of peer group characteristics, school climate, and ethnicity had R^2 changes of .1044, .0310, and .0142, respectively.

In sum, for the 15 year old subgroup, peer group characteristics accounted for the most variance in all of the six multiple regression equations. Moreover, in two equations--for the criterion variables of hard drug use and soft drug use--the R^2 change for peer group characteristics was the only predictor that met the criterion.

The 16 Year Old Group. The multiple regression for antisocial behavior/delinquency had an $R^2 = .30$ (see Table 121) across the 10 predictors. Four predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.0962), followed by gender (.0350), ethnicity (.0148), and school climate (.0136).

As shown in Table 122, the multiple regression for alcohol use had an $R^2 = .27$. Peer group characteristics was the only predictor which had an R^2 change that was significant (.1598) and met the R^2 change criterion.

The multiple regression for hard drug use had the lowest R^2 of the six risk behaviors for the 16 year old subgroup. The R^2 for this multiple regression was .09 (see Table 123). Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0374.

As presented in Table 124, the multiple regression with soft drug use had an $R^2 = .29$. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had an R^2 change of .1300, followed by religiosity (.0124).

The multiple regression for sexual activity had an $R^2 = .20$ (see Table 125) across the 10 predictors. The predictors of religiosity, peer group characteristics, and ethnicity had R^2 changes of .0411, .0373, and .0186, respectively.

As shown in Table 126, the multiple regression for school misconduct had an $R^2 = .29$. The predictors of peer group characteristics, school climate, and ethnicity had R^2 changes of .1053, .0263, and .0139, respectively.

In sum, for the 16 year old subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Religiosity accounted for the most variance for that risk behavior. Moreover, in two equations--for the criterion variables of alcohol use and hard drug use--the R^2 change for peer group characteristics was the only predictor that met the criterion.

The 17 Year Old Group. The multiple regression for antisocial behavior/delinquency had an $R^2 = .25$ (see Table 127) across the 10 predictors.

Two predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had the largest R^2 change (.1017), followed by gender (.0330).

As presented in Table 128, the multiple regression for alcohol use had an $R^2 = .30$ across the 10 predictors. Two of the 10 predictors had R^2 changes that were significant and met the R^2 change criterion. Peer group characteristics had an R^2 change of .1830, followed by school climate (.0120).

Similar to the entire sample, the multiple regression for hard drug use had the lowest R^2 out of the six risk behaviors for the 17 year old group. The R^2 for this multiple regression was .10 (see Table 129). Peer group characteristics was the only predictor that met the significant criterion for R^2 change. It had an R^2 change of .0562.

As presented in Table 130, the multiple regression for soft drug use had an $R^2 = .30$. Peer group characteristics was the only one of the 10 predictors which had an R^2 change that was significant (.1644) and met the R^2 change criterion.

The multiple regression for sexual activity had an $R^2 = .16$ (see Table 131) across the 10 predictors. The predictors of religiosity, peer group characteristics, and ethnicity had R^2 changes of .0354, .0289, and .0234, respectively.

As shown in Table 132, the multiple regression for school misconduct had an $R^2 = .26$. The predictors of peer group characteristics and school climate had R^2 changes of .0991 and .0259, respectively.

In sum, for the 17 year old subgroup, peer group characteristics accounted for the most variance in five of the six multiple regression equations (i.e., in all equations except for the one for sexual activity). Religiosity accounted for the most variance for that risk behavior. Moreover, in two equations--for the criterion

variables of hard drug use and soft drug use--the R^2 change for peer group characteristics was the only predictor that met the criterion.

Overview of the Findings in Regard to Question 3

Overall, the findings of the multiple regressions for the risk behaviors were similar for the entire sample, for males and females, for the five ethnic groups, and for the six age groups. Peer group characteristics was a predictor whose t -value was found to be significant for 83 of the 84 equations. The exception was the equation for sexual activity for the Asian American subgroup. The R^2 change for peer group characteristics accounted for the most variance in 74 of the 84 (88.1%) of the multiple regressions and was a significant predictor in an additional 9 equations (10.7%).

Age was the second most frequent predictor. Age was a significant predictor in 35 equations (i.e., age was in essence controlled in the 36 within-age-group equations). However, in the equations in which it was a predictor, age accounted for the most variance in three of the 48 equations (6.3%). It was a significant predictor in an additional 25 equations (52.1%). Gender was a significant predictor in an additional 25 equations (34.7%) (in turn, gender was in effect controlled in 12 of the equations). The predictors of religiosity and school climate each accounted for the most variance in three (3.6%) and in two (2.4%) of the 84 equations, respectively. The predictor of ethnicity was significant in 21 of the 54 (38.9%) equations in which was involved (ethnicity in effect was controlled in 30 of the equations). Ethnicity accounted for the most variance in one of the 54 equations. In addition, religiosity, school climate, family support, and involvement in extracurricular activities were significant predictors in 28 (33.3%), 35 (41.7%), 22 (26.2%), and 16 (19.0%) of the 84 equations, respectively. Moreover, view of

the future was significant in two (2.4%) of the 84 equations, and self-esteem and parent-adolescent communication were significant in three (3.6%) and five (6.0%) of the 84 equations.

Question Four

Do these Patterns of Covariance Differ Across Gender, Ethnicity, and Age?

The information used to answer Question 4 was derived from the analyses used to address Question 3. Question 4 was addressed by examining the pattern of significant individual-organismic, individual-behavioral, and contextual predictors for the subgroups of gender, ethnicity/race, and age. For example, are the significant predictors for females the same as for males in regard to the amount of variance each predictor accounts for in the multiple regression equation for each of the risk behaviors? Thus, the rank order of the characteristics are compared across the subgroups of gender, ethnicity/race, and age. Predictors were considered significant if they met the joint criterion of an F -test significance level of $p < .0001$ and of an R^2 change of .01 or more. However, for the Asian American subgroup, an F -test significance level of .01 and a R^2 change of .01 or more was used because of the smaller size of the Asian American subgroup ($N = 151$) compared to the other subgroups.

Other than for three of the five ethnic subgroups (i.e., the Asian American, the Latin/Hispanic, and the Native American subgroup) the size of the samples being compared meant that even relatively small differences in R^2 values were significant; that is, when N s were at least 1,000 in the two groups being compared (a situation that existed in regard to all comparisons other than for those within involving the three above-noted ethnic subgroups), R^2 differences of 1.16 were significant at $p < .01$. Obviously, with such small differences being statistically

significant, issues of substantive meaningfulness must be considered along with those of statistical significance. Moreover, even within the Asian American subgroup, R^2 differences of 1.45 were significant at $p < .01$.

Comparison of Patterns of Significant Predictors for the Male and the Female Subgroup

The R^2 of the multiple regression for antisocial behavior/delinquency in the male and the female subgroups was .30 and .25, respectively. For both males and females, peer group characteristics accounted for the most variance, followed by ethnicity. In addition, for males, but not for females, involvement in extracurricular activities was a significant predictor.

Males and females had R^2 s of .31 and .30, respectively, in the multiple regression for alcohol use. Both peer group characteristics and age were significant predictors for this multiple regression for males and females.

Both males and females had an $R^2 = .10$ in the multiple regression for hard drug use. It was the lowest R^2 of the multiple regressions for the six risk behaviors for both the male and female subgroups. The only predictor that significantly predicted hard drug use for males and females was peer group characteristics.

The R^2 of the multiple regression for soft drug use for males and for females was .29. For both males and females peer group characteristics account for the most variance, followed by the predictor of age.

Males and females had an R^2 of .16 and .21, respectively, in the multiple regression for sexual activity. Peer group characteristics, ethnicity, and religiosity were significant predictors for this equation for males. Peer group characteristics, age, and religiosity were significant predictors for this equation for females. For males peer group characteristics accounted for the most variance, followed by

religiosity, and ethnicity. In comparison for females peer group characteristics accounted for the most variance, followed by age, and religiosity.

Males had an $R^2 = .29$, while females had an $R^2 = .27$ in the multiple regression for school misconduct. The only predictor that significantly predicted school misconduct for males was peer group characteristics. In comparison, for females there were three significant predictors: Peer group characteristics; school climate; and ethnicity.

In sum, males and females have very similar patterns of predictors on three out of the six multiple regressions--involving the criterion variables of alcohol use, hard drug use, and soft drug use. In regard to the two of the three other multiple regressions, the equations for females had more significant predictors; however, the R^2 s for the equations for males and for females differed by no more than .05.

Comparison of Patterns of Significant Predictors for the Five Ethnic Subgroups

Comparison of patterns of significant predictors analogous to those conducted in regard to the entire sample were conducted for the African American, the Asian American, the European American, the Latino/Hispanic, and the Native American subgroups. The results of these 30 analyses are presented separately for each racial/ethnic subgroups.

African Americans and Asian Americans. The R^2 of the multiple regression for antisocial behavior/delinquency in the African American and the Asian American subgroups was .27 and .37, respectively. For the equations for African American adolescents there were four significant predictors: Peer group characteristics, which accounted for the most variance; followed by gender; involvement in extracurricular activities; and religiosity. In comparison, in the equations for Asian American adolescents there were three predictors: Peer group characteristics;

school climate; and gender.

In the multiple regression for alcohol use, African American adolescents and Asian American adolescents had an R^2 of .31 and .22, respectively. In the equations for both the African American adolescents and the Asian American adolescents there were four predictors: Peer group characteristics; religiosity; involvement in extracurricular activities; and age. Age was the only significant predictor in the equation for Asian American adolescents.

In the multiple regression for hard drug use, the equation for African American adolescents had an $R^2 = .04$, and the equation for Asian American adolescents had an $R^2 = .20$. The R^2 for the equation for hard drug use was the lowest R^2 for both subgroups. However, the Asian American adolescents had the largest R^2 for hard drug use of all the racial/ethnic groups. The only predictor of hard drug use for African American adolescents was peer group characteristics. There were two predictors for Asian Americans adolescent drug use: School climate and peer group characteristics.

The R^2 s of the multiple regression for soft drug use in the equations for African American adolescents and Asian American adolescents were .29 and .30, respectively. In the equation for African American adolescents there was one significant predictor: Peer group characteristics. In comparison, in the equation for Asian American adolescents there were two predictors: Age and peer group characteristics.

In the multiple regressions for sexual activity, the equation for African American adolescents and the equation for Asian American adolescents had an R^2 of .16 and .30, respectively. Age, peer group characteristics, and gender were significant predictors for this multiple regression for both the African American

adolescents and for the Asian American adolescents. In addition, self-esteem was also a significant predictor of sexual activity for Asian Americans, in comparison, religiosity was a significant predictor of sexual activity for African Americans.

In the multiple regressions for school misconduct, the equation for African Americans adolescents had an $R^2 = .25$, while the equation for Asians American adolescents had an $R^2 = .38$. Two predictors significantly predicted school misconduct for African Americans adolescents: Peer group characteristics and school climate. In comparison, for Asians American adolescents there were three significant predictors: School climate; peer group characteristics; and age.

In sum, in five of the six multiple regressions for the Asian American adolescents there were higher R^2 s than occurred in the multiple regressions for African American adolescents. The only equation in which this did not occur was the for the criterion variable of alcohol use. Peer group characteristics was a stronger predictor in the equations for the African American sample than it was in the equations for the Asian American subgroup. It was the strongest predictor in five of the six multiple regressions for the African American adolescents and in one equation for the Asian American adolescents. Age was the strongest predictor in three of the six multiple regressions for the Asian American adolescents and in one multiple regression for the African American adolescents. School climate was the strongest predictor in two of the multiple regressions for the Asian American sample and in none of the multiple regressions for the African American sample.

African Americans and European Americans. The R^2 of the multiple regression for antisocial behavior/delinquency in the African American and the European American subgroups was .27 and .29, respectively. In the equations for African American adolescents there were four significant predictors: peer group

characteristics, which accounted for the most variance; followed by gender; involvement in extracurricular activities; and religiosity. For the equations for European American adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by gender.

In the multiple regressions for alcohol use, the equation for African American adolescents and European American adolescents had an R^2 of .31 and .32, respectively. In the equations for African American adolescents there were four significant predictors of alcohol use: Peer group characteristics; religiosity; involvement in extracurricular activities; and age. For the equation for European American adolescents peer group characteristics and age were the significant predictors.

In the multiple regressions for hard drug use, the equation for African American adolescents had an $R^2 = .04$ and the equation for European American adolescents had an $R^2 = .12$. The R^2 for the equation for hard drug use was the lowest R^2 for both subgroups. The only predictor of hard drug use in the equation for African American adolescents and in the equation for European American adolescents was peer group characteristics.

The R^2 s of the multiple regression for soft drug use in the equations for African American adolescents and for European American adolescents was .29 and .32, respectively. In the equation for African American there was one predictor: Peer group characteristics. In the equation for European American adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance; followed by the predictor of age.

In the multiple regressions for sexual activity, the equations for African American adolescents and the equation for European American adolescents had R^2 s

of .16 and .21, respectively. Age, peer group characteristics, religiosity, and gender were significant predictors in the equation for African American adolescents. In the equation for European American adolescents there were three predictors: Age; religiosity; and peer group characteristics.

In the multiple regressions for school misconduct, the equations for African Americans adolescents had an $R^2 = .25$, while for the equation for European American adolescents had an $R^2 = .30$. Two predictors significantly predicted school misconduct in the equation for African Americans adolescents: Peer group characteristics and school climate. In comparison, in the equation for European American adolescents there was one predictor: Peer group characteristics.

In sum, in the multiple regressions for the European American adolescents R^2 was higher than was the case in the multiple regressions for African American adolescents. Peer group characteristics was strongest predictor in the multiple regressions for both the African American subgroup and for the European American subgroup. It was the strongest predictor in five of the six multiple regressions in the equations for both subgroups. Age was the strongest predictor in one multiple regression for the African American adolescents and in one equation for the European American adolescents.

Africans Americans and Latinos/Hispanics. The R^2 of the multiple regression for antisocial behavior/delinquency for African American adolescents and for Latino/Hispanic adolescents was .27 and .32, respectively. In the equation for African American adolescents there were four significant predictors: Peer group characteristics, which accounted for the most variance; followed by gender; involvement in extracurricular activities; and religiosity. In comparison, for the equations for Latino/Hispanic adolescents there were two predictors: Peer group

characteristics and age.

In the multiple regressions for alcohol use, the equation for African American adolescents and Latino/Hispanic adolescents had an R^2 of .31 and .34, respectively. In the equation for the African American adolescents there were four predictors of alcohol use: Peer group characteristics; religiosity; involvement in extracurricular activities; and age were significant predictors. Peer group characteristics and age were significant predictors, in that order, in the equation for the Latino/Hispanic adolescents.

In the multiple regressions for hard drug use, the equation for African American adolescents had an $R^2 = .04$ and for equation for Latino/Hispanic adolescents had a $R^2 = .12$. The R^2 for the equation for hard drug use was the lowest R^2 for both subgroups.

The only predictor that significantly predicted hard drug use for African American adolescents and for Latino/Hispanic adolescents was peer group characteristics.

The R^2 s of the multiple regression for soft drug use in the equations in the African American subgroup and the Latino/Hispanic subgroup were .29 and .25, respectively. In the equation, for African American adolescents there was one predictor: Peer group characteristics. In the equation, for Latino/Hispanic adolescents there were two significant predictors, peer group characteristics, which accounted for the most variance, followed by the predictor of age.

In the multiple regressions for sexual activity, the equation for African American adolescents and the equation for Latino/Hispanic adolescents had an R^2 of .16 and .21, respectively. Age, peer group characteristics, religiosity, and gender were significant predictors in the equation for the African American adolescents and in the equation for Latino/Hispanic adolescents. However, in the equations for

Latino/Hispanic adolescents the predictors were in a different order: Gender; age; peer group characteristics; and religiosity.

In the multiple regressions for school misconduct, the equation for African Americans adolescents had an $R^2 = .25$, while Latino/Hispanic adolescents had an $R^2 = .29$. Two predictors which significantly predicted school misconduct in the equation for African American adolescents were: Peer group characteristics and school climate. Peer group characteristics was the only significant predictor for the equation for Latino/Hispanic adolescents.

In sum, in five of the six multiple regressions for the Latino/Hispanic adolescents R^2 was higher than was the case in the multiple regressions for African American adolescents. The only equation in which this did not occur was for the criterion variable of soft drug use. Peer group characteristics was the strongest predictor in five of the six multiple regressions for the African American adolescents and for the Latino/Hispanic adolescents. Age was the strongest predictor in one of the six multiple regressions for the African American adolescents, while gender was the strongest predictor for one equation for Latinos/Hispanics.

African Americans and Native Americans. The R^2 of the multiple regression for antisocial behavior/delinquency in the African American and the Native American subgroups was .27 and .26, respectively. In the equations for African American adolescents there were four significant predictors: Peer group characteristics, which accounted for the most variance; followed by gender; involvement in extracurricular activities; and religiosity. In comparison, for the equation for the Native American adolescents there were three predictors: Peer group characteristics; gender; and involvement in extracurricular activities.

In the multiple regressions for alcohol use, the equation for African

American adolescents and the equation for Native American adolescents had an R^2 of .31 and .32, respectively. For African American adolescents significant predictors were peer group characteristics, religiosity, involvement in extracurricular activities, and age. Peer group characteristics, age, and involvement in extracurricular activities were significant predictors, in that order, in the equations for Native American adolescents.

In the multiple regressions for hard drug use, the equation for African American adolescents had an $R^2 = .04$, and the equation for Native American adolescents had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. The only predictor that significantly predicted hard drug use for African American adolescents and for Native Americans adolescents was peer group characteristics.

The R^2 s of the multiple regression for soft drug use in the equations for the African American subgroup and the Native American subgroup were .29 and .15, respectively. In the equation, for African American there was one predictor: Peer group characteristics. In the equation for Native American adolescents there were two significant predictors: Peer group characteristics and age.

In the multiple regressions for alcohol use, the equations for African American adolescents and Native American adolescents had R^2 s of .16 and .20, respectively. Age, peer group characteristics, religiosity, and gender were significant predictors in the equation for African American adolescents. However, in the equation for Native American adolescents there were two predictors: Peer group characteristics and age.

In the multiple regressions for school misconduct, the equation for the African American subgroup had an $R^2 = .25$, while the equation for the Native

American subgroup had an $R^2 = .26$. Two significant predictors occurred in the equation for school misconduct for the African American subgroup: Peer group characteristics and school climate. In the equation for the Native American subgroup, age was followed by peer group characteristics as the two significant predictors.

In sum, in four of the six multiple regressions for the Native American adolescents R^2 was higher than was the case in the multiple regressions for the African American adolescents. The two equations in which this did not occur were the for criterion variables of: antisocial behavior/delinquency and soft drug use. Peer group characteristics was the strongest predictor in the equations for both the African American and the Native American subgroup. It was the strongest predictor in five of the six multiple regressions for the African American adolescents and the Native American adolescents. Age was the strongest predictor in one of the six multiple regressions in the equations for both the African American adolescents and the Native American adolescents.

Asian Americans and European Americans. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for Asian American adolescents and for European American adolescents was .37 and .29, respectively. In the equation for the Asian American subgroup there three predictors: Peer group characteristics; school climate; and gender. In comparison, in the equation for the European American subgroup there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by the predictor of gender.

In the multiple regressions for alcohol use, in the equations for Asian American adolescents and for European American adolescents had R^2 s of .22 and

.32, respectively. Age was a significant predictor for Asian American adolescents. The equation for the European American adolescents had two predictors of alcohol use: Peer group characteristics and age.

In the multiple regressions for hard drug use, the equation for Asian American adolescents had an $R^2 = .20$, and the equation for European American adolescents had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. There were two significant predictors for Asian Americans adolescents: School climate and peer group characteristics. Peer group characteristics was the only predictor of hard drug use in the equation for European Americans.

The R^2 's of the multiple regression for soft drug use in the equations for the Asian American and the European American subgroups were .30 and .32, respectively. In the equation for Asian American adolescents there were two significant predictors: Age and peer group characteristics. In comparison, in the equation for European Americans there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by age.

In the multiple regression for sexual activity, the equations for Asian American adolescents and for European American adolescents had R^2 's of .30 and .21, respectively. Self-esteem, age, peer group characteristics, and school climate were significant predictors in the equation for Asian American adolescents. In the equation for European American adolescents there were three predictors: Age; religiosity; and peer group characteristics.

In the multiple regression for school misconduct, the equation for Asian Americans adolescents had an $R^2 = .38$, while the equation for European American adolescents had an $R^2 = .30$. Three predictors were significantly involved in school

misconduct in the equation for Asian American adolescents: School climate; peer group characteristics; and age. In comparison, in the equation for European American adolescents there was one predictor: Peer group characteristics.

In sum, in three of the six multiple regressions for the European American subgroup R^2 was lower than was the case in the multiple regressions for the Asian American subgroup. The three equations in which this did not occur were for the criterion variable of alcohol use, soft drug use, and sexual activity. Peer group characteristics was a stronger predictor in the equations for the European American subgroup than in the equation for the Asian American subgroup. Peer group characteristics was the strongest predictor in five of the six multiple regressions for the European American adolescents and in one equation for the Asian American adolescents. Age was the strongest predictor in three of the six multiple regressions for the Asian American adolescents and in one multiple regression for the European American adolescents. School climate was the strongest predictor in two of the multiple regressions for Asian Americans and in none of the multiple regressions for the European Americans.

Asian Americans and Latinos/Hispanics. The R^2 of the multiple regression for antisocial behavior/delinquency in the Asian American and the Latino/Hispanic subgroups was .37 and .32, respectively. In the equation for Asian American adolescents there was three predictors: Peer group characteristics; school climate; and gender. In comparison, in the equation for Latino/Hispanic adolescents there was two predictors: Peer group characteristics and age.

In the multiple regression for alcohol use, the equation for Asian American adolescents and the equation for Latino/Hispanic adolescents had R^2 s of .22 and .34, respectively. In the equation for Asian American adolescents there was one

significant predictor: Age. Peer group characteristics and age were significant predictors, in that order, in the equations for Latino/Hispanic adolescents.

In the multiple regression for hard drug use, the equation for Asian American adolescents had an $R^2 = .20$, and the equation for Latino/Hispanic adolescents had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. There were two significant predictors in the equation for Asian Americans adolescents: School climate and peer group characteristics. One significant predictor occurred in the equation for hard drug use for Latino/Hispanics adolescents: Peer group characteristics.

The R^2 s of the multiple regression with soft drug use in the equations for Asian American adolescents and for Latino/Hispanic adolescents were .30 and .25, respectively. In the equation for Asian American adolescents there three were predictors: Age; peer group characteristics; and school climate. In comparison, in the equation for Latino/Hispanics adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by the predictor of age.

In the multiple regression for school misconduct, the equations for the Asian American adolescents and for the Latino/Hispanic adolescents had R^2 s of .30 and .20, respectively. Self-esteem, age, peer group characteristics, and school climate were significant predictors in the equation for Asian American adolescents. In the equation for Latino/Hispanic adolescents there were four predictors: Gender; age; peer group characteristics; and religiosity.

In the multiple regression for school misconduct, the equation for Asian Americans adolescents had an $R^2 = .38$, while the equation for Latino/Hispanic adolescents had an $R^2 = .29$. Three significant predictors occurred in the equation

for school misconduct for Asian American adolescents: School climate; peer group characteristics; and age. In the equation for Latino/Hispanic adolescents peer group characteristics was the only significant predictor.

In sum, in five of the six multiple regressions for the Asian American adolescents R^2 was higher than was the case in the multiple regressions for Latino/Hispanic adolescents. The only equation in which this did not occur was the for the criterion variable of alcohol use. Peer group characteristics was the strongest predictor in the equations for the Latino/Hispanic subgroup. It was the strongest predictor in five of the six multiple regressions for the Latino/Hispanic subgroup and in one for the Asian American subgroup. Age was the strongest predictor in three out of the six multiple regression for the Asian American adolescents. In comparison, gender was the strongest predictor in one multiple regression for the Latino/Hispanic subgroup. School climate was the strongest predictor in two of the multiple regressions for the Asian American subgroup and in none of the multiple regressions for the Latino/Hispanic subgroup.

Asian Americans and Native Americans. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for the Asian American and for the Native American subgroups was .37 and .26, respectively. In the equation for Asian American adolescents there were three predictors: Peer group characteristics; school climate; and gender. In comparison, in the equation for Native American adolescents there three predictors: Peer group characteristics; gender; and involvement in extracurricular activities.

In the multiple regression for alcohol use, the equation for Asian American adolescents and the equation for Native American adolescents had an R^2 of .22 and .32, respectively. Age was a significant predictor in the equation for Asian

American subgroup. Peer group characteristics, age, and involvement in extracurricular activities were significant predictors in the equation for Native American adolescents.

In the multiple regression for hard drug use, the equation for Asian American adolescents had an $R^2 = .20$, and the equation for Native American adolescents had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. There were two predictors in the equation for Asian American adolescents: School climate and peer group characteristics. One significant predictor occurred in the equation for hard drug use for Native American adolescents: Peer group characteristics.

The R^2 s of the multiple regression for soft drug use in the equations for Asian American adolescents and for Native American adolescents were .30 and .15, respectively. In the equation for Asian American adolescents there were two predictors: Age and peer group characteristics. In comparison, in the equation for Native American adolescents there were two significant predictors: Peer group characteristics and age.

In the multiple regression for sexual activity, the equations for Asian American adolescents and for Native American adolescents had an R^2 of .30 and .20, respectively. Self-esteem, age, peer group characteristics, and school climate were significant predictors in the equation for Asian American adolescents. However, in the equation for Native American adolescents there were three predictors: Age, peer group characteristics and religiosity.

In the multiple regression for school misconduct, the equation for Asian Americans adolescents had an $R^2 = .38$, while the equation for Native American adolescents had an $R^2 = .26$. Three significant predictors occurred in the equation

for school misconduct for Asian American adolescents: School climate; peer group characteristics; and age. In the equation for Native Americans age was followed by peer group characteristics.

In sum, in five of the six multiple regressions for the Asian American adolescents R^2 was higher than was the case in the multiple regressions for the Native American adolescents. The one equation in which this did not occur was for the criterion variable of alcohol use. Peer group characteristics was a stronger predictor in the equations for the Native American sample than in the equations for the Asian American sample. It was the strongest predictor in five of the six multiple regressions for the Native American adolescents and in one equation for the Asian American sample. Age was the strongest predictor in three of the multiple regressions for the Asian American adolescents and in one multiple regression for Native American adolescents. School climate was the strongest predictor in two of the multiple regressions for Asian Americans and in none of the multiple regressions for the Native American.

European Americans and Latinos/Hispanics. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for the European American subgroup and for the Latino/Hispanic subgroup was .29 and .32, respectively. In the equation for European American adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by the predictor of gender. In comparison, in the equation for Latino/Hispanic adolescents there were two predictors: Peer group characteristics and age.

In the multiple regression for alcohol use, the equations for European American adolescents and for Latino/Hispanic adolescents had R^2 s of .32 and .34.

Peer group characteristics and age were significant predictors in the equations for both the European American subgroup and the Latino/Hispanic subgroup.

In the multiple regression for hard drug use, the equations for the European American adolescents and the Latino/Hispanic adolescents each had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for European American adolescents and for Latino/Hispanics adolescents.

The R^2 s of the multiple regression for soft drug use in the equation for European American adolescents and for Latino/Hispanic adolescents were .32 and .25, respectively. In the equations for European American and for Latino/Hispanics adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by age.

In the multiple regression for sexual activity, the equations for European American and for Latino/Hispanic adolescents each had an R^2 of .21, respectively. Religiosity, peer group characteristics, and age were significant predictors for the equation for European American adolescents. However, in the equation for Latino/Hispanic adolescents there were four predictors: Peer group characteristics, gender; age, and religiosity.

In the multiple regression for school misconduct, the equation for European Americans adolescents had an $R^2 = .30$, while the equation for Latino/Hispanic adolescents had an $R^2 = .29$. Peer group characteristics significantly predicted school misconduct in the equations for both the European American adolescents and the Latino/Hispanic adolescents.

In sum, in three of the six multiple regressions for the Latino/Hispanic adolescents R^2 was lower than was the case in the multiple regressions for the

European American adolescents. The two equations in which this did not occur were for the criterion variables of antisocial behavior/delinquency and alcohol use. The R^2 was the same for hard drug use in the equations for both subgroups. Peer group characteristics was the strongest predictor in the equations for both the European American subgroup and the Latino/Hispanic subgroup. It was the strongest predictor in five of the equations for both the European American and the Latino/Hispanic subgroups. Age was the strongest predictor in one of the six multiple regressions for the European American subgroup, while gender was the strongest predictor in one of the six multiple regressions for Latino/Hispanic subgroup.

European Americans and Native Americans. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for European American and for Native American subgroups was .29 and .26, respectively. In the equation for European American adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by the predictor of gender. In comparison, in the equation for Native American adolescents there were three predictors: Peer group characteristics; gender; and involvement in extracurricular activities.

In the multiple regression for alcohol use, the equations for European American adolescents and Native American adolescents each had an R^2 of .32. In the equation for European American adolescents, peer group characteristics, religiosity, involvement in extracurricular activities, and age were significant predictors. Peer group characteristics, age, and involvement in extracurricular activities were significant predictors, in that order, for Native American adolescents.

In the multiple regression for hard drug use, the equations for European

American and for Native American adolescents each had R^2 s of .12. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics was the only significant predictor of hard drug use in the equation for both subgroups.

The R^2 s of the multiple regression for soft drug use in the equations for European American adolescents and for Native American adolescents were .32 and .15, respectively. In the equations for European American adolescents and for Native American adolescents there were two significant predictors: Peer group characteristics, which accounted for the most variance, followed by age.

In the multiple regression for sexual activity, the equations for European American and for Native American adolescents had R^2 s of .21 and .20, respectively. Religiosity, peer group characteristics, and age were significant predictors in the equation for European American adolescents. In the equation for Native American adolescents there were three significant predictors: Age, peer group characteristics, and religiosity.

In the multiple regression, the equations for the European Americans and the Native American adolescents had an $R^2 = .25$ and $R^2 = .26$, respectively. Peer group characteristics significantly predicted school misconduct in the equations for both the European Americans adolescents and the Native American adolescents.

In sum, in four of the six multiple regressions for the Native American adolescents R^2 was lower than was in the case for the European American adolescents. The R^2 was the same for alcohol use and hard drug use in the equations for both subgroups. Peer group characteristics was the strongest predictor in five of the six multiple regressions for both the European American and the Native American subgroups. Age was the strongest predictor in one of the

multiple regressions for both the European American subgroup and the Native American subgroup.

Latinos/Hispanics and Native Americans The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for Latino/Hispanic adolescents and for Native American adolescents was .32 and .26, respectively. In the equation for Latino/Hispanic adolescents there were two significant predictors, peer group characteristics, which accounted for the most variance, followed by age. In comparison, in the equation for Native American adolescents there were three predictors: Peer group characteristics; gender; and involvement in extracurricular activities.

In the multiple regression alcohol use, the equations for the Latino/Hispanic adolescents and the Native American adolescents had R^2 s of .34 and .32, respectively. In the equation for Latino/Hispanic adolescents there were two predictors of alcohol use: Peer group characteristics and age. Peer group characteristics, age, and involvement in extracurricular activities were significant predictors, in that order, in the equation for Native American adolescents.

In the multiple regression for hard drug use, the equation for Latino/Hispanic adolescents had an $R^2 = .12$ and the equation for Native American adolescents had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both subgroups.

The R^2 s of the multiple regression for soft drug use in the equations for Latino/Hispanic and for Native American adolescents were .25 and .15, respectively. In the equation for Latino/Hispanic adolescents and for Native Americans adolescents there were two significant predictors, peer group

characteristics, which accounted for the most variance, followed by age.

In the multiple regression for sexual activity, the equations for Latino/Hispanic adolescents and for Native American adolescents had R^2 s of .21 and .20, respectively. Peer group characteristics, gender, age, and religiosity were significant predictors in the equation for Latino/Hispanic adolescents. In the equation for Native American adolescents there were three significant predictors: Age, peer group characteristics, religiosity.

In the multiple regression for school misconduct, the equation for Latino/Hispanic adolescents had an $R^2 = .29$, while the equation for Native American adolescents had an $R^2 = .26$. Peer group characteristics predicted school misconduct in the equations for Latino/Hispanic adolescents and for Native American adolescents.

In sum, in four of the six multiple regressions for the Native American adolescents R^2 was lower than was the case in the multiple regressions for the Latino/Hispanic adolescents. The one equation in which this did not occur was for the criterion variable of sexual activity. The R^2 was the same for hard drug use in the equations for both subgroups. Peer group characteristics was the strongest predictor in five of the six multiple regressions in the equations for Latino/Hispanic adolescents and for Native American adolescents. Gender was the strongest predictor in one of the multiple regressions for the Latino/Hispanic adolescents. Age was the strongest predictor in one of the multiple regressions for Native American adolescents.

Comparison of Patterns of Significant Predictors Among the Six Age Groups

Comparison of patterns of significant predictors analogous to those conducted in regard to the entire sample were conducted for the 12 year old, the

13 year old, the 14 year old, the 15 year old, the 16 year old, and the 17 year old subgroups. The results of these 36 analyses are presented separately for each age subgroups.

The 12 Year Olds and the 13 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equation for the 12 year olds and the 13 year olds was .26 and .29, respectively. There were two significant predictors in the equation for 12 year olds, peer group characteristics, which accounted for the most variance, followed by ethnicity. Peer group characteristics, gender, ethnicity, and involvement in extracurricular activities were the significant predictors in the equation for 13 year olds.

In the multiple regression for alcohol use, the equations for 12 year olds and for 13 year olds had R^2 s of .18 and .23, respectively. In the equations for both the 12 year olds and the 13 year olds there was one significant predictor of alcohol use: Peer group characteristics.

In the multiple regression for hard drug use, the equations for 12 year olds had an $R^2 = .12$ and the equations for 13 year olds had an $R^2 = .10$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics was the only significant predictor of hard drug use in the equation for both groups.

The R^2 s of the multiple regression for soft drug use in the equation for 12 year olds and for 13 year olds were .19 and .20, respectively. Similar to the alcohol use and hard drug use, peer group characteristics was the only predictor that significantly predicted soft drug use in the equation for both 12 year olds and 13 year olds.

In the multiple regression for sexual activity, the equations for 12 year olds

and 13 year olds had an R^2 of .26 and .19, respectively. Peer group characteristics and school climate were significant predictors in the equation for 12 year olds. In the equation for 13 year olds there were two predictors: Peer group characteristics and gender.

In the multiple regression for school misconduct, the equations for the 12 year olds had an $R^2 = .26$, while the equations for the 13 year olds had an $R^2 = .28$. Peer group characteristics and school climate significantly predicted school misconduct in the equation for both 12 year olds and for 13 year olds.

In sum, in four of the six multiple regressions for the 12 year olds R^2 was lower than was the case in the multiple regressions for the 13 year olds. The two equations in which this did not occur were for the criterion variables of hard drug use and sexual activity. Peer group characteristics was a strongest predictor in all of the equations for both the 12 year olds and 13 year olds.

The 12 Year Olds and the 14 Year Olds The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 12 year olds and for 14 year olds was .26 and .32, respectively. There were two significant predictors in the equation for 12 year olds: Peer group characteristics, which accounted for the most variance, followed by the predictor of ethnicity. Peer group characteristics, gender, and ethnicity were the significant predictors in the equations for 14 year olds.

In the multiple regression for alcohol use, the equations for 12 year olds and for 14 year olds had R^2 s of .18 and .28. Peer group characteristics was the only predictor in the equations for both age groups.

In the multiple regression for hard drug use, the equations for 12 year olds had $R^2 = .012$ and the equations 14 year olds had $R^2 = .07$. The R^2 in the equation

for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equation for both 12 year olds and 14 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 12 year olds and for 14 year olds were .19 and .27, respectively. As was the case for alcohol use and hard drug use, peer group characteristics significantly predicted soft drug use in the equations for both 12 year olds and 14 year olds.

In the multiple regression for sexual activity, the equations for the 12 year olds and the 14 year olds had R^2 s of .26 and .17, respectively. Peer group characteristics and school climate were significant predictors in the equation for 12 year olds. In the equation for 14 year olds there were four predictors: Peer group characteristics; religiosity; ethnicity; and gender.

In the multiple regression for school misconduct, the equation for 12 year olds there was an $R^2 = .26$, while the equation for 14 year olds had an $R^2 = .29$. Peer group characteristics and school climate significantly predicted school misconduct in the equations for both 12 year olds and for 14 year olds.

In sum, in four of the six the multiple regressions for the 12 year olds R^2 was lower than was the case in the multiple regressions for the 14 year olds. The two equations in which this did not occur were for the criterion variables of hard drug use and sexual activity. Peer group characteristics was a strongest predictor for the multiple regressions in the equations for both the 12 year olds and the 14 year olds. Peer group characteristics was the strongest predictor in all six multiple regressions for both the 12 year olds and 14 year olds.

The 12 Year Olds and the 15 Year Olds The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 12 year olds and for 15 year

olds was .26 and .32, respectively. There were two significant predictors in the equation for 12 year olds, peer group characteristics, which accounted for the most variance, followed by ethnicity. Peer group characteristics, gender, and ethnicity were significant predictors in the equations for 15 year olds.

In the multiple regression for alcohol use, the equations for 12 year olds and 15 year olds had R^2 s of .18 and .29, respectively. Peer group characteristics was the only predictor in the equation for 12 year olds. In the equation for 15 year olds peer group characteristics and religiosity significantly predicted alcohol use.

In the multiple regression for hard drug use, the equation for 12 year olds had an $R^2 = .012$ and the equation for 15 year olds had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both 12 year olds and 15 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 12 year olds and for 15 year olds were .19 and .29, respectively. Similar to the hard drug use, peer group characteristics significantly predicted soft drug use in the equations for 12 year olds and for 15 year olds.

In the multiple regression for sexual activity, the equations for 12 year olds and 15 year olds had R^2 s of .26 and .18, respectively. Peer group characteristics and school climate were significant predictors in the equation for 12 year olds. In the equation for 15 year olds there were four predictors: Peer group characteristics and religiosity.

In the multiple regression for school misconduct, the equation for 12 year olds had an $R^2 = .26$, while the equation 15 year olds had an $R^2 = .28$. Peer group characteristics and school climate significantly predicted school misconduct in the

equation for 12 year olds. However, in the equation for 15 year olds there were three predictors: Peer group characteristics; school climate; and ethnicity.

In sum, in four of the six equations for the 15 year olds R^2 was higher than was the case in the equations for the 12 year olds. The R^2 s for hard drug use and sexual activity were the same in the equations for both age subgroups. Peer group characteristics was the strongest predictor for the multiple regressions for both the 12 year olds and the 15 year olds. Peer group characteristics was the strongest predictor in all of the six multiple regressions for both the 12 year olds and the 15 year olds. Gender was the strongest predictor in one equation, sexual activity, for the 12 year olds.

The 12 Year Olds and the 16 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 12 year olds and for 16 year olds was .26 and .30, respectively. There were two significant predictors in the equation for 12 year olds, peer group characteristics, which accounted for the most variance, followed by ethnicity. Peer group characteristics, gender, ethnicity, and school climate were the significant predictors in the equation for 16 year olds.

In the multiple regression for alcohol use, the equations for 12 year olds and for 16 year olds had R^2 s of .18 and .27, respectively. Peer group characteristics was the only predictor in the equations for 12 year olds and for 16 year olds.

In the multiple regression for hard drug use, the equation for 12 year olds had an $R^2 = .012$ and the equation for 16 year olds had an $R^2 = .09$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both 12 year olds and 16 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 12

year olds and for 16 year olds were .19 and .29, respectively. Peer group characteristics significantly predicted soft drug use in the equation for 12 year olds. In the equation for 16 year olds, there were two significant predictors: Peer group characteristics and religiosity.

In the multiple regression for sexual activity, the equation for 12 year olds and the equation for 16 year olds had R^2 s of .26 and .20, respectively. Peer group characteristics and school climate were significant predictors in the equation for 12 year olds. In the equation for 16 year olds there were three predictors: Religiosity; peer group characteristics; and ethnicity.

In the multiple regression for school misconduct, the equation for 12 year olds had an $R^2 = .26$, while the equation for 16 year olds had an $R^2 = .29$. Peer group characteristics and school climate significantly predicted school misconduct in the equation for 12 year olds. However, in the equation for 16 year olds there were three predictors: Peer group characteristics; school climate; and ethnicity.

In sum, in four of the six multiple regressions for the 16 year olds R^2 was higher than was the case in the multiple regressions for the 12 year olds. The R^2 for hard drug use and sexual activity were higher in the equations for the 12 year olds than in the equation for the 16 year olds. Peer group characteristics was the strongest predictor in the equations for both the 12 year olds and the 16 year olds. It was the strongest predictor in five of the six multiple regressions for the 16 year olds and in all the equations for the 12 year olds. Religiosity was the strongest predictor of sexual activity in the equation for 16 year olds.

The 12 Year Olds and the 17 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 12 year olds and for 17 year olds was .26 and .25, respectively. There were two significant predictors in the

equation for 12 year olds, peer group characteristics, which accounted for the most variance, followed by ethnicity. Peer group characteristics and gender were the significant predictors in the equation for 17 year olds.

In the multiple regression for alcohol use, the equations for 12 year olds and for 17 year olds had R^2 s of .18 and .30, respectively. Peer group characteristics was the only predictor in the equation for 12 year olds. Peer group characteristics and school climate were the significant predictors in the equation for 17 year olds

In the multiple regression for hard drug use, the equation for 12 year olds had an $R^2 = .012$ and the equation for 17 year olds had an $R^2 = .10$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both 12 year olds and 17 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 12 year olds and for 17 year olds were .19 and .30, respectively. Peer group characteristics was the only predictor of hard drug use in the equations for both 12 year olds and 17 year olds.

In the multiple regression for sexual activity, the equations for 12 year olds and for 17 year olds had R^2 s of .26 and .16, respectively. Peer group characteristics and school climate were significant predictors in the equation for 12 year olds. In the equation for 17 year olds, there were three predictors: Religiosity; peer group characteristics; and ethnicity.

In the multiple regression for school misconduct, the equation for 12 year olds and for 17 year olds each had an R^2 of .26. Peer group characteristics and school climate significantly predicted school misconduct in the equations for both 12 year olds and 17 year olds.

In sum, in two of the six multiple regressions for the 17 year olds R^2 was higher than was the case in the multiple regressions for the 12 year olds. The R^2 for antisocial behavior/delinquency, hard drug use, and sexual activity were higher in the equations for 12 year olds than in the equations for 17 year olds. In addition, the R^2 for school misconduct was the same in the equations for both groups. Peer group characteristics was the strongest predictor in the equations for both the 12 year olds and the 17 year olds. It was the strongest predictor in five of the six multiple regressions for the 17 year olds and in all the equations for the 12 year olds. Religiosity was the strongest predictor of sexual activity in the equation for 17 year olds.

The 13 Year Olds and the 14 Year Olds The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 13 year olds and for 14 year olds was .29 and .32, respectively. There were four significant predictors in the equation for 13 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; ethnicity; involvement in extracurricular activities. Peer group characteristics, gender, and ethnicity were the significant predictors in the equation for 14 year olds.

In the multiple regression for alcohol use, the equations for 13 year olds and for 14 year olds had R^2 s of .23 and .28, respectively. Peer group characteristics was the only predictor for the alcohol use in the equations for both age subgroups.

In the multiple regression for hard drug use, the equations for 13 year olds and for 14 year olds R^2 s of .10 and .07, respectively. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both age subgroups.

The R^2 s of the multiple regression for soft drug use in the equations for 13

year olds and for 14 year olds were .20 and .27, respectively. As was the case for alcohol use and hard drug use, peer group characteristics significantly predicted soft drug use in the equations for both age subgroups.

In the multiple regression for sexual activity, the equations for 13 year olds and 14 year olds had R^2 s of .19 and .17, respectively. Peer group characteristics, and gender were significant predictors of the multiple regression for 13 year olds. In the equation for 14 year olds there were four predictors: peer group characteristics; religiosity; ethnicity; and gender.

In the multiple regression for school misconduct, the equation for 13 year olds had an $R^2 = .28$, while the equation 14 year olds had an $R^2 = .29$. Peer group characteristics and school climate significantly predicted school misconduct in the equations for both the 13 year olds and the 14 year olds.

In sum, in all five of the six multiple regressions for the 13 year olds R^2 was lower than was the case in the equations for the 14 year olds. The one equation in which this did not occur was for the criterion variable of hard drug use. Peer group characteristics was the strongest predictor in all of the six multiple regressions for both the 13 year olds and the 14 year olds.

The 13 Year Olds and the 15 Year Olds The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 13 year olds and for 15 year olds was .29 and .32, respectively. There were four significant predictors in the equation for 13 year olds: Peer group characteristics, which accounted for the most variance, followed by gender, ethnicity, and religiosity. Peer group characteristics, gender, and ethnicity were the significant predictors in the equation for 15 year olds.

In the multiple regression for alcohol use, the equation for 13 year olds and

for 15 year olds had R^2 s of .23 and .29, respectively. Peer group characteristics was the only predictor in the multiple regression for 13 year olds. In the equation for 15 year olds, peer group characteristics and religiosity significantly predicted alcohol use.

In the multiple regression for hard drug use, the equation for 13 year olds had an $R^2 = .10$ and the equation for 15 year olds had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equation for both 13 year olds and 15 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 13 year olds and for 15 year olds was .20 and .29, respectively. Similar to the hard drug use, peer group characteristics were the only predictor that significantly predicted soft drug use in the equation for both the 13 year olds and the 15 year olds.

In the multiple regression for sexual activity, the equations 13 year olds and 15 year olds had R^2 s of .19 and .18, respectively. Peer group characteristics, and gender were significant predictors of the multiple regression for 13 year olds. In the equation for 15 year olds, there were two predictors: Peer group characteristics and religiosity.

In the multiple regression for school misconduct, the equations for 13 year olds and 15 year olds each had an R^2 of .28. Peer group characteristics and school climate significantly predicted school misconduct in the equation for 13 year olds. However, in the equation for 15 year olds there were three predictors: Peer group characteristics; school climate; and ethnicity.

In sum, in five of the six multiple regressions for the 15 year olds R^2 was

higher than was the case in the equations for the 13 year olds. The R^2 was the same for school misconduct in the equations for both subgroups. Peer group characteristics was the strongest predictor in all of the six multiple regressions for both the 13 year olds and the 15 year olds.

The 13 Year Olds and the 16 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 13 year olds and for 16 year olds was .29 and .30, respectively. There were four significant predictors in the equation for 13 year olds: Peer group characteristics, which accounted for the most variance, followed by gender, ethnicity, and religiosity. Peer group characteristics, gender, ethnicity, and school climate were the significant predictors in the equation for 16 year olds.

In the multiple regression for alcohol use, the equations for 13 year olds and for 16 year olds had R^2 s of .23 and .27, respectively. Peer group characteristics was the only predictor in the equations for both subgroups.

In the multiple regression for hard drug use, the equation for 13 year olds had an $R^2 = .10$ and the equation for 16 year olds had an $R^2 = .09$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for 13 year olds and for 16 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 13 year olds and for 16 year olds were .20 and .29, respectively. Peer group characteristics significantly predicted soft drug use in the equation for 13 year olds. In the equation for 16 year olds, there were two significant predictors: Peer group characteristics and religiosity.

In the multiple regression for sexual activity, the equations for 13 year olds

and for 16 year olds had R^2 's of .19 and .20, respectively. Peer group characteristics, and gender were significant predictors of the multiple regression for 13 year olds. In the equation for 16 year olds, there were three predictors: Religiosity; peer group characteristics; and ethnicity.

In the multiple regression for school misconduct, the equation for 13 year olds had an $R^2 = .28$, while the equation for 16 year olds had an $R^2 = .29$. Peer group characteristics and school climate significantly predicted school misconduct in the equation for 13 year olds. However, in the equation for 16 year olds there were three predictors: Peer group characteristics; school climate; and ethnicity.

In sum, in five of the six multiple regressions for the 16 year olds R^2 was higher than was the case in the multiple regressions for the 13 year olds. The one equation in which this did not occur was for the criterion variable of hard drug use. Peer group characteristics was the strongest predictor in the equations for both the 13 year old and the 16 year old subgroups. It was the strongest predictor in all of the six multiple regressions for the 13 year olds and in five of the six multiple regressions for 16 year olds. Religiosity was the strongest predictor of sexual activity in the equation for 16 year olds.

The 13 Year Olds and the 17 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 13 year olds and for 17 year olds was .29 and .25, respectively. There were four significant predictors in the equation for 13 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; ethnicity; and religiosity. Peer group characteristics and gender were the significant predictors in the equation for 17 year olds.

In the multiple regression for alcohol use, the equations for 13 year olds and

for 17 year olds had R^2 s of .23 and .30, respectively. Peer group characteristics was the only predictor for this multiple regression in the equation for 13 year olds. Peer group characteristics and school climate were the significant predictors in the equation for 17 year olds

In the multiple regression for hard drug use, the equation for 13 year olds had an $R^2 = .10$ and the equation for 17 year olds had an $R^2 = .10$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics was the only predictor that significantly predicted hard drug use in the equations for both 13 year olds and 17 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 13 year olds and for 17 year olds were .20 and .30, respectively. Peer group characteristics was the only predictor that significantly predicted soft drug use in the equation for 13 year olds and for 17 year olds.

In the multiple regression for sexual activity, the equations for 13 year olds and for 17 year olds had R^2 s of .19 and .16, respectively. Peer group characteristics, and gender were significant predictors of the multiple regression for 13 year olds. In the equation for 17 year olds, there were three predictors: Religiosity; peer group characteristics; and ethnicity.

In the multiple regression for school misconduct, the equation for the 13 year olds had an $R^2 = .28$, while the equation for the 17 year olds had an $R^2 = .26$. Peer group characteristics and school climate significantly predicted school misconduct in the equation for 13 year olds and for 17 year olds.

In sum, in two of the six multiple regressions for the 17 year olds R^2 was higher than was the case in the equations for the 13 year olds. The R^2 s for antisocial behavior/delinquency, hard drug use, sexual activity, and school

misconduct were higher in the equations for 13 year olds than in the equations for 17 year olds. Peer group characteristics was the strongest predictor for both groups. It was the strongest predictor in all of the six equations for the 13 year olds and in five of the six equations for the 17 year olds. In comparison, religiosity was the strongest predictor of sexual activity in the equation for 17 year olds.

The 14 Year Olds and the 15 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equation for 14 year olds and for 15 year olds was .32 and .32, respectively. There were three significant predictors in the equations for 14 year olds and for 15 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; and ethnicity.

In the multiple regression for alcohol use, the equations for 14 year olds and for 15 year olds had R^2 s of .28 and .29, respectively. Peer group characteristics was the only significant predictor in the equation for 14 year olds. In the equation for 15 year olds, peer group characteristics and religiosity significantly predicted alcohol use.

In the multiple regression for hard drug use, the equation for 14 year olds had an $R^2 = .07$ and the equation for 15 year olds had an $R^2 = .12$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both 14 year olds and 15 year olds.

The R^2 s of the multiple regression for soft drug use in the equation for 14 year olds and for 15 year olds were .27 and .29, respectively. Again, peer group characteristics significantly predicted soft drug use in the equations for both subgroups.

In multiple regression for sexual activity, the equation for 14 year olds and

for 15 year olds had R^2 s of .17 and .18, respectively. Peer group characteristics, religiosity, ethnicity, and gender were significant predictors in the equation for 14 year olds. In the equation for 15 year olds, there were two predictors: Peer group characteristics and religiosity.

In the multiple regression for school misconduct, the equations for 14 year olds and for 15 year olds had an R^2 of .29 and .28, respectively. Peer group characteristics and school climate significantly predicted school misconduct in the equation for 14 year olds. However, in the equation for 15 year olds there were four predictors: Peer group characteristics; school climate; ethnicity; and self-esteem.

In sum, in four of the six multiple regressions for the 15 year olds R^2 was higher than was the case in the multiple regressions for the 14 year olds. The one equation in which this did not occur was for the criterion variable of school misconduct. The R^2 was the same for antisocial behavior/delinquency in the equations for both subgroups. Peer group characteristics was the strongest predictor in all of the six equations for both the 14 year olds and the 15 year olds.

The 14 Year Olds and the 16 Year Olds. The R^2 of the multiple regression with antisocial behavior/delinquency in the equations for 14 year olds and for 16 year olds was .32 and .30, respectively. There were three significant predictors in the equation for 14 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; and ethnicity. Peer group characteristics, gender, ethnicity, and school climate were the significant predictors in the equation for 16 year olds.

In the multiple regression for alcohol use, the equations for 14 year olds and for 16 year olds had R^2 s of .28 and .27, respectively. Peer group characteristics

was the only significant predictor in the equations for both 14 year olds and 16 year olds.

In the multiple regression for hard drug use, the equation for the 14 year olds had an $R^2 = .07$ and the equation for the 16 year olds had an $R^2 = .09$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for 14 year olds and for 16 year olds.

The R^2 s of the multiple regression with soft drug use in the equations for 14 year olds and for 16 year olds were .27 and .29, respectively. Peer group characteristics significantly predicted soft drug use in the equation for 14 year olds. In the equation for 16 year olds, there were two significant predictors: Peer group characteristics; and religiosity.

In the multiple regression for sexual activity, the equations for the 14 year olds and for the 16 year olds had R^2 s of .17 and .20, respectively. Peer group characteristics, religiosity, ethnicity, and gender were significant predictors in the equation for 14 year olds. In the equation for 16 year olds, there were three predictors: Religiosity, peer group characteristics, and ethnicity.

In the multiple regression for school misconduct, the equations for 14 year olds and for 16 year olds each had an R^2 of .29. Peer group characteristics and school climate significantly predicted school misconduct in the equation for 14 year olds. However, in the equation for 16 year olds there were three predictors: Peer group characteristics; school climate; and ethnicity.

In sum, in two of the six multiple regressions for the 14 year olds R^2 was higher than was the case in the multiple regressions for the 16 year olds. The two equations in which this did not occur were for the criterion variables of hard drug

use and soft drug use. The R^2 was the same for school misconduct in the equations for both subgroups. Peer group characteristics was the strongest predictor in the equations for both the 14 year olds and the 16 year olds. It was the strongest predictor in all of the six equations for the 14 year olds and in five of the six multiple regressions for 16 year olds. In comparison, religiosity was the strongest predictor of sexual activity in the equation for 16 year olds.

The 14 Year Olds and the 17 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equation for 14 year olds and for 17 year olds was .32 and .25, respectively. There were three significant predictors in the equation for 14 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; and ethnicity. Peer group characteristics and gender were the significant predictors in the equation for 17 year olds.

In the multiple regression alcohol use, the equations for 14 year olds and for 17 year olds had R^2 s of .28 and .30, respectively. Peer group characteristics was the only predictor in the equation for 14 year olds. Peer group characteristics and school climate were the significant predictors in the equation for 17 year olds

In the multiple regression for hard drug use, the equation for 14 year olds had an $R^2 = .07$ and the equation for 17 year olds had an $R^2 = .10$. The R^2 in the equations for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for 14 year olds and for 17 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 14 year olds and for 17 year olds were .27 and .30, respectively. Peer group characteristics was the only predictor of soft drug use in the equations for both 14 year olds and 17 year olds.

In multiple regression for sexual activity, the equation for 14 year olds and the equation for 17 year olds had R^2 s of .17 and .16, respectively. Peer group characteristics, religiosity, ethnicity, and gender were significant predictors in the equation for 14 year olds. In the equation for 17 year olds, there were three predictors: Religiosity; peer group characteristics; and ethnicity.

In the multiple regression for school misconduct, the equation for 14 year olds had an $R^2 = .29$, while the equation for 17 year olds had an $R^2 = .26$. Peer group characteristics and school climate significantly predicted school misconduct in the equations for both the 14 year olds and the 17 year olds.

In sum, in three of the six multiple regressions for the 17 year olds R^2 was higher than was the case in the multiple regressions for the 14 year olds. The three equations in which this did not occur were for the criterion variables of alcohol use, hard drug use, and soft drug use. Peer group characteristics was the strongest predictor for the multiple regressions for both subgroups. It was the strongest predictor in all of the six equations for the 14 year olds and in five of the six multiple regressions for 17 year olds. Religiosity was the strongest predictor of sexual activity in the equation for 17 year olds.

The 15 Year Olds and the 16 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 15 year olds and for 16 year olds was .32 and .30, respectively. There were three significant predictors in the equation for 15 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; and ethnicity. Peer group characteristics, gender, ethnicity, and school climate were the significant predictors in the equation for 16 year olds.

In the multiple regression for alcohol use, the equations for 15 year olds and

for 16 year olds had R^2 s of .29 and .27 respectively. Peer group characteristics and religiosity were significant predictors in the equation for 15 year olds. There was one significant predictor in the equation 16 year olds: Peer group characteristics.

In the multiple regression hard drug use, the equation for 15 year olds had an $R^2 = .12$ and the equation for 16 year olds had an $R^2 = .09$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics was the only predictor of hard drug use in the equations for 15 year olds and for 16 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 15 year olds and for 16 year olds were .29 and .29, respectively. Peer group characteristics significantly predicted soft drug use in the equation for 15 year olds. In the equation for 16 year olds, there were two significant predictors: Peer group characteristics and religiosity.

In the multiple regression for sexual activity, the equation for 15 year olds and for 16 year olds had R^2 s of .18 and .20, respectively. Peer group characteristics and religiosity were significant predictors in the equation for 15 year olds. In the equation for 16 year olds there were three predictors: Religiosity; peer group characteristics; ethnicity; and self-esteem.

In the multiple regression for school misconduct, in the equation for 15 year olds there was an $R^2 = .28$, while in the equation for 16 year olds there was an $R^2 = .29$. Three predictors significantly predicted school misconduct for the equations for both 15 year olds and 16 year olds: Peer group characteristics; school climate; and ethnicity.

In sum, in two of the six multiple regressions for the 16 year olds there was

a higher R^2 was higher than was the case in the equations for the 15 year olds. The R^2 was the same for soft drug use in the equations for both subgroups. Peer group characteristics was the strongest predictor in the multiple regressions for both the 15 year olds and the 16 year olds. It was the strongest predictor in all of the six equations for the 15 year olds and in five of the six multiple regressions for 16 year olds. In comparison, religiosity was the strongest predictor of sexual activity in the equation for 16 year olds.

The 15 Year Olds and the 17 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equation for 15 year olds and for 17 year olds was .32 and .25, respectively. There were three significant predictors in the equation for 15 year olds: Peer group characteristics, which accounted for the most variance, followed by gender; and ethnicity. Peer group characteristics and gender were the significant predictors in the equation for 17 year olds.

In the multiple regression for alcohol use, the equations for 15 year olds and for 17 year olds had R^2 s of .29 and .30, respectively. Peer group characteristics and religiosity were significant predictors in the multiple regression for the 15 year olds. Peer group characteristics and school climate were the significant predictors in the equation for the 17 year olds

In the multiple regression for hard drug use, the equation for 15 year olds had an $R^2 = .12$ and the equation for 17 year olds had an $R^2 = .10$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics was the only predictor of hard drug use in the equations for both 15 year olds and 17 year olds.

The R^2 s of the multiple regression for soft drug use in the equations for 15 year olds and for 17 year olds were .29 and .30, respectively. Peer group

characteristics significantly predicted soft drug use in the equations for 15 year olds and for 17 year olds.

In the multiple regression for sexual activity, the equations for 15 year olds and for 17 year olds had an R^2 of .18 and .16, respectively. Peer group characteristics and religiosity were significant predictors in the equation for the 15 year olds. In the equation for 17 year olds there were three predictors: Religiosity; peer group characteristics; and ethnicity.

In the multiple regression for school misconduct, the equation for 15 year olds there was an $R^2 = .28$, while the equation 17 year olds there was an $R^2 = .26$. Three predictors significantly predicted school misconduct in the equation for 15 year olds: Peer group characteristics, ethnicity, and school climate. In the equation for 17 year olds two predictors were significant: Peer group characteristics and school misconduct.

In sum, in four of the six multiple regressions for the 15 year olds R^2 was higher than was the case in the equation for the 17 year olds. The two equations in which this did not occur were for the criterion variables of alcohol use and soft drug use. Peer group characteristics was the strongest predictor in the multiple regressions for both the 15 year olds and the 17 year olds. It was the strongest predictor in all of the six multiple regressions for the 15 year olds and in five of the six multiple regression for 17 year olds. Religiosity was the strongest predictor of sexual activity in the equation for 17 year olds.

The 16 Year Olds and the 17 Year Olds. The R^2 of the multiple regression for antisocial behavior/delinquency in the equations for 16 year olds and for 17 year olds was .30 and .25, respectively. There were four significant predictors in the equation for 16 year olds: Peer group characteristics, which accounted for the

most variance, followed by gender; ethnicity; and school climate. Peer group characteristics and gender were the significant predictors in the equation for 17 year olds.

In the multiple regression for alcohol use, the equations for 16 year olds and 17 year olds had an R^2 of .27 and .30, respectively. Peer group characteristics significantly predicted alcohol use in the multiple regression for 16 year olds. Peer group characteristics and school climate were the significant predictors in the equation for 17 year olds

In the multiple regression for hard drug use, the equation for 16 year olds had an $R^2 = .09$ and the equation for 17 year olds had an $R^2 = .10$. The R^2 in the equation for hard drug use was the lowest R^2 for both subgroups. Peer group characteristics significantly predicted hard drug use in the equations for both 16 year olds and 17 year olds.

The R^2 s of the multiple regression with soft drug use in the equations for 16 year olds and for 17 year olds were .29 and .30, respectively. In the equations for 16 year olds and 17 year olds, there were two significant predictors: Peer group characteristics and religiosity.

In the multiple regression for sexual activity, the equations for 16 year olds and 17 year olds had R^2 s of .20 and .16, respectively. Religiosity, peer group characteristics, and ethnicity were significant predictors in the multiple regressions for both subgroups.

In the multiple regression for school misconduct, the equation for the 16 year olds had an $R^2 = .29$, while the equation for the 17 year olds had an $R^2 = .26$. Three predictors significantly predicted school misconduct in the equations for 16 year olds and 17: Peer group characteristics; ethnicity; and school climate.

In sum, in three of the six multiple regressions for the 16 year olds R^2 was higher than was the case in the equation for the 17 year olds. The three equations in which this did not occur were for the criterion variables of alcohol use, hard drug use, and soft drug use. Peer group characteristics was the strongest predictor in the multiple regressions for both the 16 year olds and the 17 year olds. It was the strongest predictor in five of the six multiple regressions for both the 16 year olds and the 17 year olds. Religiosity was the strongest predictor of sexual activity in the equations for both groups.

Overview of the Findings in Regard to Question 4

For the male and female subgroups there was a very similar pattern of predictors on three of the six multiple regressions. That is, peer group characteristics accounted for the most variance in the majority of equations for both the males and the females, followed by age and ethnicity. Moreover, age played a greater role in the multiple regression for sexual activity in the equation for females. In addition, school climate predicted school misconduct in the equation for the females, but not in the equation for the males.

Generally, for the racial/ethnic subgroups there was a similar pattern of predictors for the equations, that is, peer group characteristics accounted for the most variance and age, gender, school climate, and involvement in extracurricular activities played a significant role in the prediction of risk behaviors among the ethnic subgroups. There was some minimal variability in regard to the multiple regressions for sexual activity. For example, age and gender were the predictors that accounted for the most variance in this equation. In the equations for the African American, the Asian American, the European American, and the Native American subgroups, age was the strongest predictor of sexual activity. In the

equation for the Latino/Hispanic subgroup, gender was the strongest predictor of sexual activity.

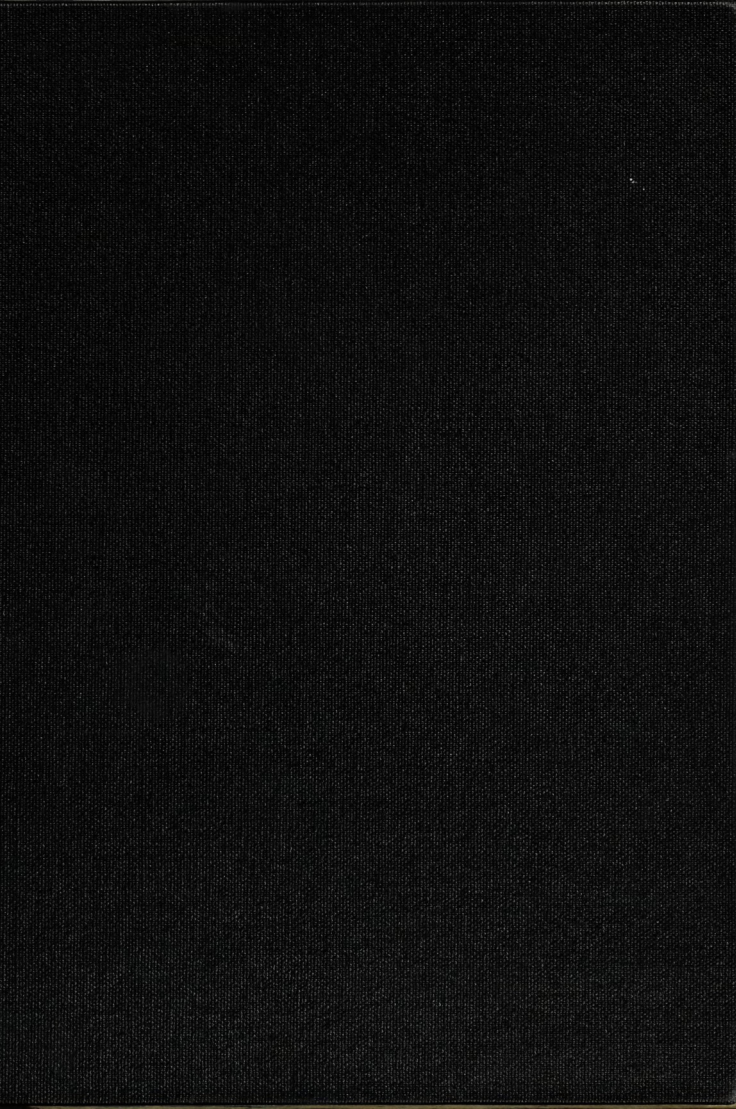
Similar to the findings for the gender and for the five racial/ethnic subgroups, the age subgroups had minimal variation in the pattern of significant predictors found across equations. As before, peer group characteristics was the predictor that accounted for the most variance in a majority of the equations, followed by age, gender, religiosity, and ethnicity. However, in the equations for sexual activity among the 16 year olds and the 17 year olds religiosity accounted for the most variance.

Therefore, the findings for Question 4 provide evidence for the importance of peer group characteristics in predicting involvement in risk behaviors. This finding may be generalized across the age, race/ethnicity, and gender subgroups in the sample. In addition, age, gender, and religiosity played a significant role in the multiple regression for sexual activity. Self-esteem, parent-adolescent communication, view of the future, and family support were not found to be useful predictors in the multiple regressions for the risk behaviors.

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AN EXAMINATION OF THE ORGANISMIC, BEHAVIORAL, AND
CONTEXTUAL COVARIATES OF RISK BEHAVIORS AMONG
DIVERSE GROUPS OF ADOLESCENTS

By

Daniel Francis Perkins

A DISSERTATION

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Chapter V

DISCUSSION

Several investigations have provided evidence for the interrelationship among risk behaviors (Dryfoos, 1990; Hawkins, et al., 1992b; Henggeler, 1989; Irwin & Millstein, 1986, 1991; Jessor & Jessor, 1977; Udry 1988). Moreover, individual-organismic, individual-behavioral, and contextual characteristics that are related to youth involvement in risk behaviors have been identified (Dryfoos, 1990; Hawkins, et al., 1992b; Henggeler, 1989; Hogan & Kitagawa, 1984; Luster & Small, 1994). For example, several studies have found that age is associated with involvement in risk behaviors: The earlier the initiation in any of several risk behaviors, such as antisocial behavior/delinquency, alcohol and drug use, sexual activity, and school underachievement, the more likely that an adolescent will become involved with multiple risk behaviors (Dryfoos, 1990; Henggeler, 1989; Irwin & Millstein, 1986, 1991; Jessor & Jessor, 1977). However, despite such evidence, no study has examined multiple risk behaviors and multiple organismic, behavioral, and contextual characteristics using as large a sample of racially and ethnically diverse American adolescents as was the case in the present investigation (Dryfoos, 1990; National Research Council, 1993; Schorr, 1988).

This investigation represents an attempt to further understand the interrelationship of multiple risk behaviors (e.g., adolescent sexual activity, alcohol use, hard drug use, soft drug use, antisocial behavior/delinquency, and school misconduct) among diverse adolescents. The study attempted to identify potential individual-organismic, individual-behavioral, and contextual characteristics associated with adolescent engagement in multiple risk behaviors among these youth.

Specifically, this study attempted to begin to address the following questions: (1) How are risk behaviors interrelated, and does this interrelation vary by age, ethnicity, and gender?; (2) What are the individual-organismic, individual-behavioral, and contextual characteristics that covary with risk behaviors among adolescents, and is this variation different among groups differentiated on the basis of age, ethnicity, and gender?; (3) Given that there may be multicollinearity among individual-organismic, individual-behavioral, and contextual characteristics in their association with risk, are there particular characteristics that best account for the variance in either selected outcome variables and/or in sets of these variables?; and (4) Do these patterns of covariance differ across age, ethnicity, and gender?

Findings of the Present Study

In order to address Question 1, zero-order correlations among risk behaviors were calculated for the entire sample and among gender, ethnic, and age subgroups. In addition, a series of tests for differences between independent correlations were calculated to determine whether significant gender, ethnic, or age differences occurred in any of these intercorrelations. A Bonferroni correction was employed to guard against an inflated alpha. The results obtained from these analyses provide evidence for the interrelation of the six risk behaviors examined in this study (i.e., antisocial behavior/delinquency, alcohol use, hard drug use, soft drug use, sexual activity, and school misconduct). In addition, significant interrelationships existed among the risk behaviors for the six age subgroups, for the five racial/ethnic subgroups, and for the male and the female subgroups.

Overall, the t -test for the differences between intercorrelations were not systematically significant across the six age subgroups; within three of the five racial/ethnic subgroups (the Asian American, the Latino/Hispanic, and the Native

American subgroup); across the male and the female subgroups; and across the males and the females subgroups assessed within the age and racial/ethnic subgroups. Moreover, there were relatively few significant differences in the comparisons among the age subgroups, and between the male and female subgroups. However, systematically significant differences did exist in the comparison of intercorrelations between the African American and the European American subgroups: Of the 15 comparisons made, 9 of the 13 that proved to be significantly different were higher for the European Americans than for the African Americans.

To address Questions 2, 3, and 4, a total 84 multiple regression equations were computed: Six for the entire sample; 12 for the male and the female subgroups; 30 across the five racial/ethnic groups; and 36 across the six age subgroups. The multiple regression analyses included Type III Sums of Squares, that is least-squares analyses. This analytical method identifies the unique variance accounted for by each individual predictor, thereby providing information pertinent to Question 3 and Question 4.

In addressing Question 2, the results obtained from the multiple regression analyses provided evidence that specific individual-organismic, individual-behavioral, and contextual predictors played a significant role in predicting of risk behaviors. Overall, the R^2 s from the multiple regressions for the risk behaviors that included the individual-organismic, individual-behavioral, and contextual predictors were significant for the entire sample, for males and females, for the five ethnic groups, and for the six age groups. The range of R^2 s was between .04 and .38. The multiple regression for hard drug use had the lowest R^2 of any of the equations.

Generally, the same predictors were significant in the majority of the multiple

regressions. That is, peer group characteristics was the predictor found to be significant in 83 of the 84 equations (98.8%). The exception was the equation for sexual activity for the Asian American subgroup. Age was the second most frequent predictor; it was involved in 83.3% of the equations. The predictor of ethnicity was significant in 21 of the 54 (38.9%) equations in which it was involved. In addition, religiosity, school climate, family support and involvement in extracurricular activities were significant predictors in 28 (33.3%), 35 (41.7%), 22 (26.2), and 16 (19.0%) of the 84 equations, respectively. Parent-adolescent communication was significant in five (6.0%) of the 84 equations. Two other characteristics, self-esteem and view of the future, were consistently found not to be significant in the equations. Moreover, across the 84 equations, self-esteem was significant in eight (9.5%) equations. Parent-adolescent communication was a significant predictor in only three equations.

An examination of the unique variance accounted for by the predictors was conducted in order to address Question 3. Overall, the findings here were similar for the entire sample, for males and females, for the five ethnic groups, and for the six age groups. The R^2 change for peer group characteristics accounted for the most variance in 74 of the 84 (88.1%) of the multiple regressions.

Age was involved in 35 equations (i.e., age was in essence controlled in the 36 within age group equations). In the equations in which it was a predictor, age accounted for the most variance in three of the 48 equations (6.3%). Gender was a significant predictor in an additional 25 equations (34.7%) (in turn, gender was in effect controlled in 12 of the equations). The predictors of religiosity and school climate each accounted for the most variance in three (3.6%) in two (2.4%) of the 84 equations. Although the predictor of ethnicity was significant in 35.2%

equations in which it was involved, it only accounted for the most variance for one of the equations.

In addressing Question 4, the results obtained from the ordinary least squares analyses provided evidence that there were consistent patterns of predictors among the age, the racial/ethnic, and the male and the female subgroups. For the male and female subgroups there was a consistent pattern of predictors on three of the six multiple regressions. That is, peer group characteristics accounted for the most variance in the majority of equations for both the males and the females followed by age, and ethnicity. Moreover, age played a greater role in the multiple regression for sexual activity in the equation for females than it did in the equation for males. In addition, school climate predicted school misconduct in the equation for the females, but not in the equation for the males.

Generally, for the racial/ethnic subgroups there was a consistent pattern of predictors for the equations, that is, peer group characteristics accounted for the most variance and age, gender, school climate, and involvement in extracurricular activities played a significant role in the prediction of risk behaviors among the ethnic subgroups. There was some variability, however, in regard to the multiple regressions for Asian Americans. Moreover, in the equation for the Native American subgroups, age was the strongest predictor of sexual activity.

Similar to the findings for the gender and for the five racial/ethnic subgroups, the age subgroups had a consistent pattern of predictors across equations. As before, peer group characteristics was the predictor that accounted for the most variance in a majority of the equations, followed by gender, ethnicity, and religiosity. However, in the equations for sexual activity among the 16 year olds and the 17 year olds, religiosity accounted for the most variance.

Therefore, the findings for Question 4 provided evidence for the importance of peer group characteristics in predicting involvement in risk behaviors. This finding may be generalized across the age, race/ethnicity, and gender subgroups in the sample. In addition, age, gender, and religiosity played a significant role in the multiple regression for sexual activity. Self-esteem, parent-adolescent communication, view of the future, and family support were not found to be useful predictors in the multiple regressions for the risk behaviors.

Conclusions

The findings pertinent to the test of Question 1 provided evidence of the interrelation of the risk behaviors assessed in this investigation, i.e., antisocial behavior/delinquency, alcohol use, hard drug use, soft drug use, sexual activity, and school misconduct. These results provide support for findings of previous research about the interrelationship among risk behaviors (Dryfoos, 1990; Farrington, 1992, 1993; Henggeler, 1989; Hawkins et al., 1992b; Jessor & Jessor, 1977; 1992; Udry 1988). In addition, the results extend previous knowledge by providing evidence that interrelationships exist among risk behaviors for adolescents who differ based on ethnicity, gender, and age. The fact that significant differences were found in the intercorrelations between African American adolescents and European American adolescents, but not among the other racial/ethnic subgroups, may be due to cultural, historical, and societal differences between African Americans and European Americans (Spencer & Dornbusch, 1990), differences that were not assessed in the present study. As such, the nature of these findings for these two racial/ethnic subgroups suggests the need for further research. Such work should examine the role that macrosystem characteristics of an adolescent's ecology, such as cultural and institutional influences, play in involvement in risk

behaviors.

Peer group characteristics was the most frequent significant predictor of risk behaviors, followed by age, ethnicity, gender, religiosity, school climate, family support, and involvement in extracurricular activities. Given this range of predictors, this study provided evidence for the importance of individual-organismic, individual-behavioral, and contextual characteristics in the understanding of risk behaviors among diverse groups of youth. In addition, this investigation found that three characteristics (i.e., self-esteem, parent-adolescence communication, and view of the future) did not systematically significantly predict any of the risk behaviors. This finding indicates that not all individual or contextual characteristics can be expected to be linked to involvement in risk behaviors. As such, future research should seek to identify the conditions that promote the association of particular individual and contextual variables with adolescent risk behaviors.

The finding that peer group characteristics is highly associated with an adolescent's involvement in risk behaviors supports previous research about the salience of peers in the positive and negative behaviors of adolescents (e.g., Irwin & Shafer, 1992; Jessor, 1992; Simmons, Carlton-Ford, & Blyth, 1987; Stättin & Magnusson, 1990). For example, in a longitudinal study conducted in Sweden about pubertal maturation and psychosocial development in adolescent girls, Stättin and Magnusson (1990) found that early-maturing girls who had older friends were more likely to engage in norm-breaking and problem behaviors (e.g., unwanted pregnancies, alcohol use) than were early-maturing girls who were in same-age peer groups. However, in the present study the importance of peers was not found to be limited to females. In the equations for males, as well as for the five ethnic subgroups and for the six age subgroups, peer characteristics accounted for the

most variance in the preponderant majority of equations.

Moreover, this study's findings--that age, gender, and religiosity were significant predictors of adolescents' engagement in risk behavior, especially sexual activity--are consistent with data reported in previous research (Dryfoos, 1990; Hawkins et al., 1992b; Henggeler, 1989; Jessor & Jessor, 1977; Luster & Small, 1994). Not surprisingly, these findings suggest that older adolescents are more likely to have engaged in risk behaviors, particularly sexual ones, than are younger adolescents. Moreover, the link between religiosity and older adolescent's involvement in sexual activity indicated that young people who attended church and who viewed religion as an important part of their lives were less likely to be involved in sexual activity than adolescents who did not possess such attributes of religiosity.

Self-esteem has been theorized to be an important part of adolescent functioning, given that one of the critical developmental tasks of this period is to establish a coherent personal identity (Erickson, 1968). In the present study, self-esteem was not found to play a significant role in adolescents' engagement in risk behaviors. There is some literature in the field of adolescence that does not support the importance of self-esteem in adolescent risk behaviors (Dryfoos, 1990; Kohn, 1994; Hawkins et al., 1992b; Henggeler, 1989; Small & Luster, 1994), and it may be that the theoretical and empirical emphasis placed on self-esteem is thus unwarranted. In turn, however, the global measure of self-esteem employed in this study may not have been an adequate assessment of adolescents' views of their self (e.g., see Harter, 1983, 1990). Perhaps a more differentiated measure of self-esteem, as for instance developed by Harter (1979, 1990), might have been linked to other results. In addition, if the data set used in this study would have included

multiple measures of constructs (such as self-esteem), and thus if a triangulated assessment of constructs occurred, then better determination could have been made of how substantive and methodological issues influenced the findings of this study.

Similar substantive and methodological issues becloud a determination of why parent-adolescent communication and family support did not play a role in the prediction of adolescent risk behavior. It may be that the marked salience of peer relationships reduced the importance of parent-adolescent and family variables in the lives of the adolescents in the present sample. However, research suggests that there is correspondence between parental and peer values and standards for behavior (Douvan & Adelson, 1966; Foster-Clark & Blyth, 1991; Lerner & Knapp, 1975). Thus, in this case, issues of measurement rather than issues of substance may account for the findings regarding the differential salience of parent/family versus peer variables.

While these issues of measurement raise points pertinent to the limitations of this study, it is important to stress, before turning to a fuller discussion of these limitations, that the results of this research contribute importantly to the understanding of the salience of both individual and contextual characteristics in adolescent risk behavior. Given this association, it is important to take a multivariate approach to the assessment of the covariates of adolescent risk behaviors--an argument advanced by Dryfoos (1990) and underscored here. That is, assessment of only a single individual or contextual characteristic will provide a quite limited view of the pattern of covariation associated with adolescent risk behavior. In order to study risk behavior engagement in adolescence, multiple risk behaviors need to be examined simultaneously across time; assessment of only one

risk behavior will limit understanding of how risks influence each other during the developmental period of adolescence. However, even when a multivariate and longitudinal approach is taken there are other concerns that must be addressed in order to advance scholarship in this area. These concerns are brought to the fore by a consideration of other limitations of the present research.

Limitations of the Present Research

The present findings indicated that risk behaviors are intercorrelated across age, racial/ethnic, and gender subgroups. In addition, specific individual-organismic, individual-behavioral, and contextual variables significantly predicted risk behavior involvement and this pattern of predictors remained consistent across the age, the racial/ethnic, and the gender subgroups (with the exception of the equations for sexual activity). However, these generalizations about the findings of this study must be tempered by recognition of the limitations of the present work.

Sample Characteristics

Overall, the sample size of the total sample of participants and of the subgroups employed in this study were strengths of this investigation. These sample sizes provided considerable power, even when assessing data pertinent to the various subgroups in the study. This was especially important in regard to subgroups (e.g., Native Americans) that have not been extensively studied.

However, since the sample of adolescents was from Michigan, there may be regional differences that were not assessed in this study. Moreover, some ethnic/racial subgroups, e.g., Arab Americans, were not present in the data set. Generalization to groups of adolescents from different regions, of racial/ethnic backgrounds not present in this study, and of ages not represented in this data set must be made with caution.

The Measurement Model and the Design

To examine human development, it is necessary to study individuals over time. Intraindividual change and interindividual differences in patterns of change can only be identified through studying individuals longitudinally (Baltes, Reese, & Nesselroade, 1978). In order to more fully understand the processes by which individual and contextual characteristics relate to involvement in risk behaviors across age, ethnicity, and gender, therefore, multivariate, longitudinal assessments must be made.

However, this study was cross-sectional in nature and this design is a limitation insofar as the study of change is concerned. Thus, although this study contributes to a better understanding of risk and individual and contextual covariates of risk, the study does not allow one to draw conclusions about the processes through which these associations develop.

For example, the multiple regression analysis for antisocial behavior/delinquency does not indicate any casual relationship between the individual and contextual predictors and the risk behavior of antisocial behavior. It may be adolescents who have peers that participate in negative behaviors become more involved in negative behaviors themselves; in turn, engagement in negative behaviors may eventuate in selection of a particular group of peers. Of course, both directions of influence could occur. Indeed, according to a development contextual perspective, one would expect such a bidirectional relations to exist between an individual's peer group behavior and his or her own behavior (Lerner, 1986). This bidirectionality could not be adequately assessed in the present study, and thus should be the focus of future research.

Clearly the variables measured in this study are only a subset of the

variables that may play a role in adolescents' involvement in risk behavior. Indeed, within this study there is a lack of measurement of the macrosystem level variables (i.e., the stress individuals experience when their cultural heritage does not fit with the culture of their context; Saldana 1994). Thus, the present findings are limited to the measurement model and to the measurement instrument that was employed. In addition, a concern may be raised about whether the self-report instrument used in this study provides data that reflect adolescent behavior in a valid and accurate manner.

However, despite these concerns, it is important to note that the information in the present data set are consistent in many ways with past research. For example, Keith and Perkins (1995), in an independent analysis of the data set employed in the present study, found that the percentages of engagement in risk behaviors among the adolescents were consistent with data from other research (Dryfoos, 1990; Hawkins, et al., 1992b; Henggeler, 1989; Johnson et al., 1987). In addition, in the present analyses, the means and standard deviations for risk behavior measures and for individual-organismic, individual-behavioral, and contextual measures were consistent with corresponding data from past research of normal samples of youth (Dryfoos, 1990; Dohrenwend, et al., 1982; Hawkins et al., 1992a; Irwin & Millstein, 1991; Jessor, 1993; Rutter, 1985; Werner & Smith, 1982, 1992). Moreover, as noted in Appendix 3, there is converging evidence--derived from expert raters' scores and from LISREL analyses--that the 14 scores, developed from the 82 ABQ items used in the present study, were useful.

Thus, although tempered by the limitations of the present study, the findings of this research provide a useful initial step toward understanding issues of risk behavior engagement and the individual-organismic, individual-behavioral, and

contextual covariates of risk among diverse groups of adolescents. Together, both the assets and limitations of this research provide directions for future research.

Future Directions and Implications

The present study focused on whether there were differences at one point in time in the co-occurrence of multiple risk behaviors and in the pattern of the covariates of risk among diverse groups of adolescents. As such, several important issues related to the co-occurrence over time of multiple risk behaviors, and of the multiple organismic, behavioral, and contextual covariates of risk behaviors, were not assessed. A key issue that needs to be addressed in future research, then, is to extend longitudinally the understanding of the empirical instance of co-occurrence of risk and their predictors through systematic, change-sensitive research derived from a line of scholarship that includes a larger array of risk and predictor measures, among more diverse participants, than has been assessed in this study or is available across the extant literature. As noted earlier, such broad-based, programmatic, multi-level scholarship would involve the research and theoretical developments requisite for a more nuanced understanding of risk co-occurrence.

It is important to stress that such scholarship must be longitudinal in nature in order to best appraise the systematic relations between predictors and outcomes over the course of adolescence. This scholarship would provide integrated (theoretical) understanding of the conditions under which diverse individual (including biological), interpersonal, institutional, physical ecological, cultural, and historical variables covary in the development of risk behaviors and/or in the development of a behavioral repertoire not characterized by risk. For example, as noted above, more macrosystem variables should be assessed in order to help identify the potential historical, cultural, and societal bases of variation among

different gender, racial/ethnic, and age groups (Elder, Modell, & Parke, 1993; Hernandez, 1993). Furthermore, such research should pursue a multitrait-multimethod approach to measurement (Campbell & Fiske, 1959) in order that triangulation of the elements of the measurement model can occur.

Future research with the present data set, because of its size and range of variables included with it, may be especially able to contribute to future theory and research about the co-occurrence of risk behaviors. As an extension to the analyses conducted to answer Question 4 of the present study, future research might examine predictor patterns through the use of a 3-dimensional, non-metric, Multi-Dimensional Scaling analysis (Rovine & von Eye, 1991). Such an analysis would afford a test of predictor patterns among the diverse subgroups within the present data set. In addition, future analysis on the present data set might include a cluster analysis that would develop functional groups by degree of involvement in risk behaviors. Such an analysis would allow for a comparison among risk groups in regard to the predictors that pertain to these groups. Finally, to eliminate the effect of skewness, a Poisson regression should be calculated on those risk behaviors that were highly skewed, such as hard drug use (i.e., 4% of the sample participated in this risk behavior).

If data from such future research are used to further scholarship about adolescents and risk, as well as to inform policies and programs directed to the promotion of positive youth development (Pittman & Zeldin, 1994), this multivariate, longitudinal, contextually-rich, and triangulated research could better identify the organismic, behavioral, and contextual characteristics that distinguish youth who, across their adolescent years, do and do not engage in risk behaviors. The findings of such a study would more fully inform scientists and practitioners

about individual differences, across development, in the interrelatedness of risk behaviors. Such research would provide the basis for context- and diversity-sensitive prevention programs, ones providing opportunities for diverse adolescents to use their individual and contextual assets to pursue lives free of risk.

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Appendix 1

Search Institute Profiles of Student Life: Attitudes and Behaviors Questionnaire

SEARCH INSTITUTE PROFILES OF STUDENT LIFE

Attitudes and Behaviors

Your answers on this questionnaire will be kept strictly confidential. DO NOT put your name on this form. It has no code numbers, so no one will be able to find out how you or anyone else answered. Your school will receive a report that combines many students' answers together. Therefore, no one will be able to connect your answers with your name.

This is not a test you take for school grades. You are just being asked to tell about yourself, your experiences, and your feelings. Please be as honest as you can.

IMPORTANT MARKING DIRECTIONS

- Use black lead pencil only (No. 2).
- Do NOT use ink or ballpoint pens.
- Make heavy black marks that fill the circle.
- Erase cleanly any answer you wish to change.
- Do not make any stray marks on the questionnaire.

EXAMPLES

Proper Mark



Improper Marks



1. How old are you?
- ☐ 11 or younger ☐ 16
- ☐ 12 ☐ 17
- ☐ 13 ☐ 18
- ☐ 14 ☐ 19 or older
- ☐ 15
2. What is your grade in school?
- ☐ 5th ☐ 9th
- ☐ 6th ☐ 10th
- ☐ 7th ☐ 11th
- ☐ 8th ☐ 12th
3. What is your sex?
- ☐ Male
- ☐ Female
4. How do you describe yourself?
- ☐ American Indian
- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic
- ☐ White
5. How many years do you think you will go to school?
- Choose the statement that fits you best.
- ☐ I would like to quit school as soon as I can.
- ☐ I plan to finish high school but don't think I'll go to college.
- ☐ I'd like to go to some kind of trade school or vocational school after high school.
- ☐ I'd like to go to college after high school.
- ☐ I'd like to go to college and then go on after college to graduate or professional school.
6. Do you live all or most of the time in a family with two parents? ☐ Yes ☐ No
7. Do you live all or most of the time in a single-parent family? ☐ Yes ☐ No
8. Are your parents divorced or separated?
- ☐ Yes
- ☐ No
- ☐ I'm not sure
9. Are you adopted?
- ☐ Yes
- ☐ No
- ☐ I'm not sure
10. If yes, at what age were you adopted?
- ☐ Age 0-1 ☐ Age 6-10
- ☐ Age 2-5 ☐ Age 11 or older

A few of the following questions ask about your parents. In this survey, "parents" (and "father" or "mother") refers to the adults who are now most responsible for raising you. They could be foster parents, step-parents, or guardians. If you live in a single parent family, answer for that adult.

11. What is the highest level of schooling your father completed?
- ☐ Completed grade school or less
- ☐ Some high school
- ☐ Completed high school
- ☐ Some college
- ☐ Completed college
- ☐ Graduate or professional school after college
- ☐ Don't know, or does not apply
12. What is the highest level of schooling your mother completed?
- ☐ Completed grade school or less
- ☐ Some high school
- ☐ Completed high school
- ☐ Some college
- ☐ Completed college
- ☐ Graduate or professional school after college
- ☐ Don't know, or does not apply
13. Did your mother have a paid job (half-time or more) during the time you were growing up?
- ☐ No
- ☐ Yes, some of the time when I was growing up
- ☐ Yes, most of the time
- ☐ Yes, all of the time
14. During a typical week, on how many evenings do you go out for fun and recreation?
- ☐ None ☐ Three
- ☐ One ☐ Four or five
- ☐ Two ☐ Six or seven
15. Where does your family now live?
- ☐ On a farm
- ☐ In the country, not on a farm
- ☐ On an American Indian reservation
- ☐ In a small town (under 2,500 in population)
- ☐ In a town of 2,500 to 9,999
- ☐ In a small city (10,000 to 49,999)
- ☐ In a medium size city (50,000 to 250,000)
- ☐ In a large city (over 250,000)

How important is each of the following to you in your life?
Mark one answer for each.

- | | Not
important | Somewhat
important | Quite
important | Extremely
important |
|---|-----------------------|-----------------------|-----------------------|------------------------|
| 16. Having lots of money ... | ☐ | ☐ | ☐ | ☐ |
| 17. Helping other people | ☐ | ☐ | ☐ | ☐ |
| 18. Having lots of fun and
good times | ☐ | ☐ | ☐ | ☐ |
| 19. Helping to reduce
hunger and poverty in
the world | ☐ | ☐ | ☐ | ☐ |
| 20. Being popular or
well-liked | ☐ | ☐ | ☐ | ☐ |
| 21. Helping to make the
world a better place
to live | ☐ | ☐ | ☐ | ☐ |

ABOUT SCHOOL

22. In an average week, about how many hours do you spend doing homework?

- | | |
|-----------------------------------|--|
| ☐ 0 hours | ☐ 6 - 10 hours |
| ☐ 1 - 2 hours | ☐ 11 hours or more |
| ☐ 3 - 5 hours | |

23. Compared with others your age, how well do you do in school?

- | | |
|--|--|
| ☐ Much above average | ☐ Below average |
| ☐ Above average | ☐ Much below average |
| ☐ Average | |

24. What kinds of grades do you earn in school?

- | | |
|---|---|
| ☐ Mostly A | ☐ Mostly C |
| ☐ About half A and half B | ☐ About half C and half D |
| ☐ Mostly B | ☐ Mostly D |
| ☐ About half B and half C | ☐ Mostly below D |

For each of the following, choose one answer.
How often does one of your parents ... ?

- | | Very
Often | Often | Some-
times | Seldom | Never |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 25. Help you with your school
work | ☐ | ☐ | ☐ | ☐ | ☐ |
| 26. Talk to you about what
you are doing in school | ☐ | ☐ | ☐ | ☐ | ☐ |
| 27. Ask you about homework | ☐ | ☐ | ☐ | ☐ | ☐ |
| 28. Go to meetings or events
at your school | ☐ | ☐ | ☐ | ☐ | ☐ |

How much do you agree or disagree with the following?
Choose one answer for each.

- | | Strongly
Agree | Agree | Not
Sure | Disagree | Strongly
Disagree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 29. At school I try as hard as I
can to do my best work | ☐ | ☐ | ☐ | ☐ | ☐ |
| 30. I like school. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 31. My teachers really care
about me | ☐ | ☐ | ☐ | ☐ | ☐ |
| 32. It bothers me when I don't
do something well | ☐ | ☐ | ☐ | ☐ | ☐ |
| 33. I don't care how I do
in school | ☐ | ☐ | ☐ | ☐ | ☐ |
| 34. My teachers don't pay much
attention to me | ☐ | ☐ | ☐ | ☐ | ☐ |
| 35. I get a lot of encouragement
at my school | ☐ | ☐ | ☐ | ☐ | ☐ |

36. During the last four weeks, how many days of school have you missed because you skipped or "cut"?

- ☐ None
☐ 1 day
☐ 2 days
☐ 3 days
☐ 4 - 5 days
☐ 6 - 10 days
☐ 11 days or more

37. During the last four weeks, how often have you gone to school and skipped a class when you were not supposed to?

- ☐ Not at all
☐ 1 or 2 times
☐ 3 - 5 times
☐ 6 - 10 times
☐ 11 - 20 times
☐ More than 20 times

38. On the average during the school year, how many hours per week do you work in a paid job?

- ☐ None
☐ 5 hours or less
☐ 6 - 10 hours
☐ 11 - 15 hours
☐ 16 - 20 hours
☐ 21 - 25 hours
☐ 26 - 30 hours
☐ More than 30 hours

ABOUT ME

How much do you agree or disagree with each of these?
Choose one answer for each.

39. My family life is happy Strongly
Agree Agree Not
Sure Disagree Strongly
Disagree
40. I have a number of good qualities ○ ○ ○ ○ ○
41. I am good at making friends ○ ○ ○ ○ ○
42. On the whole, I like myself ○ ○ ○ ○ ○
43. I feel no one understands me ○ ○ ○ ○ ○
44. There is a lot of love in my family ○ ○ ○ ○ ○
45. At times, I think I am no good at all ○ ○ ○ ○ ○
46. I get along well with my parents ○ ○ ○ ○ ○
47. All in all, I am glad I am me ○ ○ ○ ○ ○
48. I have lots of good conversations with my parents ○ ○ ○ ○ ○
49. I am a lonely person ○ ○ ○ ○ ○
50. I care about people's feelings ○ ○ ○ ○ ○
51. I feel I do not have much to be proud of ○ ○ ○ ○ ○
52. If I break one of my parents' rules, I usually get punished ○ ○ ○ ○ ○
53. My parents give me help and support when I need it ○ ○ ○ ○ ○
54. It is against my values to have sex while I am a teenager ○ ○ ○ ○ ○
55. My parents are easy to talk with ○ ○ ○ ○ ○

56. I am good at making decisions Strongly
Agree Agree Not
Sure Disagree Strongly
Disagree

57. I feel that no one really cares about me ○ ○ ○ ○ ○
58. I stand up for my beliefs ○ ○ ○ ○ ○
59. My parents often tell me they love me ○ ○ ○ ○ ○

During the last 12 months, how many times have you ... ?

60. Gotten into trouble at school Never Once Twice 3-4
Times 5 or
More
Times
61. Stolen something from a store ○ ○ ○ ○ ○
62. Been involved in a project to help make life better for other people ○ ○ ○ ○ ○
63. Gotten into trouble with the police ○ ○ ○ ○ ○
64. Hit or beat up someone ○ ○ ○ ○ ○
65. Cheated on a test at school ○ ○ ○ ○ ○
66. Damaged property just for fun (such as breaking windows, scratching a car, putting paint on walls, etc.) ○ ○ ○ ○ ○
67. Given money or time to a charity or organization that helps people ○ ○ ○ ○ ○
68. Spent time helping people who are poor, hungry, sick, or unable to care for themselves ○ ○ ○ ○ ○

On an average school day, how many hours do you spend ... ?

69. Watching TV.....
 70. Listening to the radio, records, or tapes.....
 71. At home without an adult there with you.....
 72. How many really close friends your age do you have?
 ○ None ○ Three
 ○ One ○ Four or five
 ○ Two ○ Six or more

During an average week, how many hours do you ... ?

73. Spend in band, choir, orchestra, music lessons or practicing voice or an instrument.....
 74. Spend playing sports on a school team.....
 75. Spend in clubs or organizations at school (other than sports).....
 76. Spend in clubs or organizations outside of school.....
 77. Attend services, groups, or programs at a church or synagogue.....

In this section we want to ask you about alcohol and other drugs. Please answer as honestly as you can. Remember, you are not asked to put your name on this form, so no one will ever be able to tell what you answered.

How many times, if any, have you had alcohol to drink ... ?

78. In your lifetime.....
 79. During the last 12 months.....
 80. During the last 30 days.....

81. Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row? (A "drink" is a glass of wine, a bottle or can of beer, a shot glass of liquor, or a mixed drink.)

- None ○ 3 to 5 times
 ○ Once ○ 6 to 9 times
 ○ Twice ○ 10 or more times

82. If you came home from a party and your parents found out that you had been drinking, how upset do you think they would be?

- Not at all upset ○ Very upset
 ○ A little upset ○ Extremely upset
 ○ Somewhat upset

How many times, if any, have you smoked cigarettes ... ?

83. In your lifetime.....
 84. During the last 12 months.....
 85. During the last 30 days.....

86. During the last two weeks, about how many cigarettes have you smoked?

- None ○ About 1 pack per day
 ○ Less than 1 cigarette per day ○ About 1 1/2 packs per day
 ○ 1 to 5 cigarettes per day ○ 2 packs or more per day
 ○ About 1/2 pack per day

How many times, if any, have you used marijuana (grass, pot) or hashish (hash, hash oil) ... ?

87. In your lifetime.....
 88. During the last 12 months.....
 89. During the last 30 days.....

How many times, if any, have you used cocaine (crack, coke, snow, rock) ... ?

90. In your lifetime.....
 91. During the last 12 months.....
 92. During the last 30 days.....

During the last 12 months, how many times have you ... ?

93. Been to a party where other kids your age were drinking Never Once Twice 3-4 Times 5 or More Times

94. Driven a car after you had been drinking ☐ ☐ ☐ ☐ ☐

95. Ridden in a car whose driver had been drinking ☐ ☐ ☐ ☐ ☐

96. How many times in the last month have you had a good conversation with one of your parents that lasted 10 minutes or more?

☐ None ☐ 3 times
☐ Once ☐ 4 or more times
☐ Twice

97. How many times in the last month have you had a good conversation with an adult (not a parent) that lasted 10 minutes or more?

☐ None ☐ 3 times
☐ Once ☐ 4 or more times
☐ Twice

98. If you had an important question about your life, how many adults do you know (not counting your parents) to whom you would feel comfortable going for help?

☐ None ☐ 3 to 4
☐ 1 ☐ 5 or more
☐ 2

99. How often have you felt sad or depressed during the last month?

☐ All the time ☐ Once in a while
☐ Most of the time ☐ Not at all
☐ Some of the time

100. In the last year, how often, if at all, have you thought about killing yourself?

☐ Never ☐ 3 to 5 times
☐ Once ☐ 6 or more times
☐ Twice

101. Have you ever tried to kill yourself?

☐ No
☐ Yes, once
☐ Yes, twice
☐ Yes, more than two times

102. How often do you wear a seat belt when you drive or ride in a car or truck?

☐ All the time ☐ Once in a while
☐ Most of the time ☐ Not at all
☐ Some of the time

103. Have you ever had sexual intercourse ("gone all the way," "made love")?

☐ No → SKIP TO QUESTION 107
☐ Once
☐ Twice
☐ 3 times
☐ 4 or more times

104. When you have sex, how often do you and/or your partner use a birth control method such as birth control pills, a condom (rubber), foam, diaphragm, or IUD?

☐ Never ☐ Often
☐ Seldom ☐ Always
☐ Sometimes

105. The first time you had sex, did you and/or your partner use birth control?

☐ Yes
☐ No

106. Have you ever been pregnant, or made someone pregnant?

☐ Yes
☐ No

How many times, if any, in the last 12 months have you ... ?

107. Used chewing tobacco or snuff ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-9 ☐ 10-19 ☐ 20-39 ☐ 40+

108. Used heroin (smack, horse, skag) or other narcotics like opium or morphine ☐ ☐ ☐ ☐ ☐ ☐ ☐

109. Used a drug called alawan ☐ ☐ ☐ ☐ ☐ ☐ ☐

110. Used a drug known as crack ☐ ☐ ☐ ☐ ☐ ☐ ☐

111. Used PCP or Angel Dust ☐ ☐ ☐ ☐ ☐ ☐ ☐

112. Used LSD ("acid") ☐ ☐ ☐ ☐ ☐ ☐ ☐

How many times, if any, in your lifetime have you ... ?

- Number of Times
113. Used a drug known as crack 0 1-2 3-5 6-9 10-19 20-39 40-
☐ ☐ ☐ ☐ ☐ ☐ ☐
114. Used PCP or Angel Dust ☐ ☐ ☐ ☐ ☐ ☐ ☐
115. Used LSD ("acid") ☐ ☐ ☐ ☐ ☐ ☐ ☐
116. How often do you vomit (throw up) on purpose after eating?
☐ Never ☐ Once a week
☐ Once a month or less ☐ 2 or more times a week
☐ 2 - 3 times a month

117. Have you ever been physically abused by an adult (that is, where an adult caused you to have a scar, black and blue marks, welts, bleeding, or a broken bone)?
☐ Never ☐ 4 - 10 times
☐ Once ☐ More than 10 times
☐ 2 - 3 times
118. Have you ever been sexually abused by someone (that is, someone in your family or someone else did sexual things to you that you did not want or forced you to touch them sexually)?
☐ Never ☐ 4 - 10 times
☐ Once ☐ More than 10 times
☐ 2 - 3 times

During the last 12 months, how many times have you ... ?

119. Taken part in a fight where a group of your friends were against another group Never Once Twice 3-4 Times 5 or More Times
120. Hurt someone badly enough to need bandages or a doctor ☐ ☐ ☐ ☐ ☐
121. Used a knife or a gun or some other thing (like a club) to get something from a person ☐ ☐ ☐ ☐ ☐
122. I would be willing to eat less meat and more grains and vegetables if it would help provide food for starving people.
☐ Disagree
☐ Mostly disagree
☐ Neither agree nor disagree
☐ Mostly agree
☐ Agree

The next questions are about AMPHETAMINES, which doctors can prescribe to help people lose weight or to give people more energy. Drugstores are not supposed to sell them without a prescription from a doctor.

Amphetamines are sometimes called uppers, ups, speed, bennies, dexies, pep pills, diet pills. They include the following drugs: Benzedrine, Dexedrine, Methedrine, Ritalin, Preludin, Dexamyl, Methamphetamine.

IN YOUR ANSWERS ABOUT AMPHETAMINES, DO NOT INCLUDE ANY NONPRESCRIPTION OR OVER-THE-COUNTER DRUGS.

On how many occasions, if any, have you taken amphetamines on your own—that is, without a doctor telling you to take them ... ?

- Number of Times
123. In your lifetime 0 1-2 3-5 6-9 10-19 20-39 40-
☐ ☐ ☐ ☐ ☐ ☐ ☐
124. During the last 12 months ☐ ☐ ☐ ☐ ☐ ☐ ☐
125. During the last 30 days ☐ ☐ ☐ ☐ ☐ ☐ ☐

For each of the following, mark only one answer.

126. I worry a lot about my future Strongly Agree Agree Not Sure Disagree Strongly Disagree
127. I am good at planning ahead ☐ ☐ ☐ ☐ ☐
128. Ten years from now, I think I will be very happy ☐ ☐ ☐ ☐ ☐
129. When I am an adult, I think I will be successful in whatever work I choose to do ☐ ☐ ☐ ☐ ☐

How interested are you in each of the following?

130. Getting better at making and keeping friends Very Interested Somewhat Interested Not Interested
131. Learning how to read better ☐ ☐ ☐
132. Doing things to help other people ☐ ☐ ☐
133. Learning values that will help guide me throughout my life ☐ ☐ ☐

How interested are you in each of the following?

134. Learning how to deal with pressure to use alcohol or other drugs..... ☐ Very interested ☐ Somewhat interested ☐ Not interested

135. Learning more about sexuality..... ☐ ☐ ☐

136. Getting better at making my own decisions..... ☐ ☐ ☐

137. Having a better relationship with my parents..... ☐ ☐ ☐

138. Deciding what I should do with my life..... ☐ ☐ ☐

139. If you had an important concern about drugs, alcohol, sex, or some other serious issue, would you talk to your parent(s) about it?

- ☐ Yes ☐ Probably not
☐ Probably ☐ No
☐ I'm not sure

140. How much of the time do your parents ask you where you are going or with whom you will be?

- ☐ Practically never ☐ Most of the time
☐ Seldom ☐ All of the time
☐ Some of the time

Among the people you consider to be your closest friends, how many would you say ...?

141. Drink alcohol once a week or more..... ☐ None ☐ A few ☐ Some ☐ Most ☐ All

142. Have used drugs such as marijuana or cocaine..... ☐ ☐ ☐ ☐ ☐

143. Do well in school..... ☐ ☐ ☐ ☐ ☐

144. Get into trouble at school..... ☐ ☐ ☐ ☐ ☐

145. Help other people..... ☐ ☐ ☐ ☐ ☐

146. Have you felt you were under any strain, stress, or pressure during the past month?

- ☐ Yes, almost more than I could take
☐ Yes, quite a bit of pressure
☐ Yes, some/more than usual
☐ Yes, a little/about usual
☐ Not at all

147. How often have you felt anxious, worried, or upset during the past month?

- ☐ All of the time
☐ Most of the time
☐ Some of the time
☐ A little of the time
☐ None of the time

148. When was the last time you went to see a doctor for a checkup?

- ☐ Within the last 12 months
☐ About 1-2 years ago
☐ About 3-4 years ago
☐ 5 or more years ago
☐ I've never been to a doctor for a checkup

149. Do you think your mother or father has a serious problem with alcohol or drugs?

- ☐ No
☐ Maybe: I'm not sure
☐ Yes

150. How often do you attend religious services at a church or synagogue?

- ☐ Never
☐ Rarely
☐ Once or twice a month
☐ About once a week or more

151. How important is religion in your life?

- ☐ Not important
☐ Somewhat important
☐ Important
☐ Very important

152. On the average over a school year, how many hours per week do you spend doing volunteer work to help other people (such as helping out at a hospital, day care center or nursery, food shelf, youth program, community service agency, etc.)?

- ☐ None
☐ 1-2 hours
☐ 3-5 hours
☐ 6-9 hours
☐ 10 hours or more

Appendix 2

**Item Categories and Definitions for the 82 Items Used in this Study from
Search Institute Profiles of Student Life: Attitudes and Behaviors Questionnaire**

Item Categories and Definitions for the 82 Items used in this Study from Search Institute Profiles of Student Life: Attitudes and Behavior Questionnaire

A	Self-esteem	Any item that describes the individual's feelings towards himself or herself.
B	Involvement in structured activities	Any item that has do with an individual's participation in any extracurricular activity (sports, clubs, organization). The activities may be either school-based or community-based.
C	Religiosity	Any item that describes an individual's participation in religious services or a person's perception of the role religion plays his or her life.
D	View of future	Any item that concerns an individual's perception of his or her future and/or his or her ability to prepare for the future.
E	Family support	Any item that describes support (e.g., love, help) which an individual perceives is present within his or her family.
F	Parent-adolescent communication	Any item that has to do with the type of communication (positive or negative) an individual perceives he or she has with his or her parent(s).
G	Peer group characteristics	Any item that describes the behaviors (e.g., positive or negative) of an individual's friends.
H	School climate	Any item that concerns the individual's perception of his or her school or teachers and/or his or her attitude toward school.
I	Alcohol use	Any item that has to do with an individual's drinking alcoholic beverages.
J	Soft Drugs	Any item that describes the use of drugs such as tobacco and marijuana.
K	Hard Drugs	Any item that concerns the use of drugs such as cocaine, heroin, PCP ("angel dust"), LSD ("acid"), and amphetamines.
L	Sexual Activity	Any item that has to do with an individual's engagement in sexual intercourse and/or the use of protection during sexual intercourse.

M	Antisocial behavior and delinquency	Any item that describes negative or nonnormative behavior and/or behavior that is illegal, destructive, and/or violent.
N	School misconduct	Any item that concerns an individual's engagement in problem behavior in school, such as getting into trouble, skipping school, cutting class, and cheating.

Appendix 3

**Principal Components and LISREL Analyses for the 82 Items used in this
Study from Search Institute Profiles of Student Life: Attitudes and
Behaviors Questionnaire**

Principal Components and LISREL Analyses for the 82 Items used in this Study from Search Institute Profiles of Student Life: Attitudes and Behavior Questionnaire

To provide further empirical support for the 14 item groupings a principal components analysis and a LISREL analysis were conducted. As presented in this appendix, whereas the findings of the principal components analysis are not supportive of the usefulness of the 14 item groupings, the results of the LISREL analysis did provide such support.

Principal components analysis

Principal components analysis and factor analysis employing a varimax solution were conducted on all of the non-demographic items ($N = 141$) from the ABQ. These analyses were used to explore the structure of the items of the ABQ. A principal component analysis was employed using SPSS.

Thirty-two factors were found with eigenvalues greater than one; these factors accounted for 59.1% of the variance. The range of eigenvalues was from 17.52 to 1.01. The distance between individual eigenvalues and the scree plot indicated that there were probably six major factors.

A maximum likelihood factor analysis using varimax rotation was employed to explore whether a six factor model could be used in the present study. The range of eigenvalues was from 10.18 through 3.94, and 26.9% of the variance was accounted for by the solution. The Chi-square test of fit statistics was found to be significant ($\chi^2 = 136203.793$, $df = 9039$, $p < .00001$).

The first factor included 32 items that concerned the individual's feelings and perceptions about self, family, parents, and school. The second factor was comprised of 25 items that concerned alcohol use, soft-drug use (e.g., marijuana), negative peer behaviors, antisocial behaviors, and school misconduct. Twenty-six

items about a caring attitude and prosocial behaviors comprised the third factor. Ten items comprised the fourth factor, which concerned use of hard-drugs, such as cocaine, crack, LSD, and PCP. The fifth factor was comprised of four items and was about cigarette use. The sixth factor had three items that concerned use of amphetamines.

The six factors found in this analysis were not seen as useful for the present investigation because they did not readily afford an examination of risk behaviors and of individual-organismic, individual-behavioral, and contextual characteristics of the adolescent. Accordingly, an alternative analytic approach--one involving LISREL (Jöreskog & Sörbom, 1993)--was employed to see if such use could be identified.

LISREL Analysis

In order to assess the use of the ABQ items as measures of specific concepts, LISREL was applied. LISREL is a computer program that estimates structural equation models. Two LISREL models were employed in these analyses. The first model involved the "predictor" items, or the individual and contextual characteristics, examined in this investigation. The second model involved the six risk behaviors (i.e., antisocial behavior/delinquency, alcohol use, soft drug use, hard drug use, sexual activity, and school misconduct). Upon entry, items were fixed to the specified latent variable, based upon the result of the expert raters' responses. However, until an acceptable fit was obtained, some items were freed and allowed to intercorrelate with items in other latent variables, based on the modification indices of the Theta Delta (i.e., residuals). A minimum acceptable goodness of fit index was set to be .90. Given the that the measures concerned conceptually interrelated characteristics and behaviors, it was not unexpected that some of the items would be correlated.

The predictor model had a total of 38 elements and eight latent variables (i.e., self-esteem, involvement in extracurricular activities, religiosity, view of the future, parent-adolescent communication, family support, peer group characteristics, and school climate). The goodness of fit statistic for this measurement model was .92. ($N = 14,388$). In addition, the Chi-square was 22,408.50 ($df = 626$, $p < .0$), the Root Mean Square was .049 with a Critical $N = 457.65$. The following items intercorrelated, when they were freed to do so: Items 40 and 41; 40 and 49; 45 and 43; 50 and 32; 50 and 145; 32 and 55; 76 and 77; 44 and 39; 141 and 142; and 143 and 145.

The risk behavior model had a total of 36 items and six latent variables (i.e., antisocial behavior/delinquency, alcohol use, soft drug use, hard drug use, sexual activity, and school misconduct). As noted above, until an acceptable fit was reached, some items were freed and allowed to intercorrelate based on the modification indices of the Theta Delta (i.e., residuals). The goodness of fit statistic for this measurement model was .92. ($N = 14,532$). In addition, the Chi-square was 20,007.01 ($df = 543$, $p < .0$), and the Root Mean Square was .056 with a Critical $N = 453.19$. The following items intercorrelated, when they were freed to do so: Items 54 and 103; 54 and 104; 54 and 105; 103 and 104; 106 and 105; 84 and 105; 85 and 103; 85 and 104; 86 and 85; 89 and 103; 107 and 89; 91 and 89; 91 and 107; 110 and 108; 111 and 89; 111 and 92; 113 and 92; 113 and 108; 113 and 110; 115 and 114; 123 and 114; 123 and 115; 79 and 125; 80 and 125; 81 and 125; 61 and 125; 120 and 64; 121 and 120; 37 and 36; 60 and 64; and 37 and 36.

In conclusion, the goodness of fit index associated with each of the two models provided support for both measurement models. Therefore, the LISREL

analyses did provide additional empirical support for the use of 14 risk, individual-organismic, individual-behavioral, and contextual scales involved in this study. That is, both the results of the LISREL analyses and of the expert raters' responses converged in indicating the validity of the 14 factors.

Appendix 4

**Directions for Teachers Administering the Search Institute Profiles
of Student Life: Attitudes and Behaviors Questionnaire**

III. Administering the Survey

In a study of this kind, it is important to have a standardized format so that procedures are consistent across the study. Therefore, where verbal instructions are given below, try to give them as written.

Introductory Procedure

As quickly as possible after the class period begins, bring the class to attention. You need approximately 30-40 minutes for students to take the survey, plus another 5 minutes for directions.

Introduce yourself (or be introduced by the teacher) and say the following:

Our school is involved in a very important study on student attitudes and behaviors. The purpose of this study is to help our school better understand the issues and problems students face. By taking this survey seriously, and by being as honest as you can, you will help to improve our school's programs.

It is very important that you know that your survey will be confidential. Since your name will not be on the survey, no one will be able to figure out which survey you completed.

I will now give each of you a survey form and pencil. Please do not open the survey until I tell you to do so. Remember: The survey is not a test.

After distributing the materials, ask the students to follow along as you read the two paragraphs on the front page of the survey.

When done reading the paragraphs, continue...

When you have finished the survey, raise your hand. I will come to your desk, and you will place your survey in the large envelope. After all the surveys are enclosed, I will seal it. Neither I nor anyone else in this school will open the envelope or look at the survey. They will be bundled and sent for processing to Search Institute in Minneapolis, Minnesota. All of the surveys will be grouped together to give an overall picture of our school. Then the surveys will be destroyed. Again, no one here at this school will ever see your survey forms. So, please answer the questions honestly.

Look, now, at the section called "Important Marking Directions."

Read these instructions aloud, stressing that students fill the circles **completely** with heavy, black marks and erase fully any answers they need to change. For younger students, you may want to illustrate the proper marks on the chalkboard.

Then say...

If you have any questions during the survey, raise your hand, and I will try to answer them. You have (35/40/45) minutes to do the survey. You should be able to move rather quickly through it, but make sure you read and answer each question. Again, when you are done, raise your hand, and I will have you put your survey in this envelope. If you finish early, remain seated and use your time to study. If you do not finish the survey, I will collect it anyway, at the end of the period. You may begin.

Concluding Procedure

During the survey period, announce when there are five minutes remaining.

Collect all surveys by the end of the period. When the bell rings, all survey forms should be in the envelope. Make a visible and verbal effort, as promised, to seal the envelope. Do **not** make special arrangements for students to finish later, or on their own. The hard and fast rule is to collect all forms by the end of the period.

At the end of the survey session, thank the class (and the teacher) for their help.

At the coordinators request:

Label the envelopes in the upper left-hand corner with the following information:

- School Name
- Survey administrators name
- Subject and class period
- Grade level

If there is high absenteeism, note it (percentage absent) and its cause on the envelope

If there is a lack of cooperation, note it and its probable cause on the envelope. Do not use names.

Additional Directives for Administering the Survey

If a student comes in late, let him or her do the survey if at least 20 minutes remain.

If a student does not want to participate, that is his or her right. try to encourage participation, but do not mandate it.

Should they ask, assure the students that having a sip of an alcoholic beverage (communion wine included) or taking a couple of puffs of a cigarette does not constitute drinking/smoking.

Do not include in the sealed envelope any unused surveys. Return them separately to the survey coordinator.

Appendix 5

**Letter of Approval from the University Committee on
Research Involving Human Subjects**

**MICHIGAN STATE
UNIVERSITY**

September 30, 1993

TO: Dr. Joanne Keith
203 Human Ecology

RE: IRB #: 92-379
TITLE: COMMUNITY BASED YOUTH NEEDS ASSESSMENT - COMMUNITY
BASED PROFILE OF MICHIGAN YOUTH
REVISION REQUESTED: N/A
CATEGORY: 1-C
APPROVAL DATE: September 24, 1993

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project including any revision listed above.

Renewal: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the enclosed form to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

Revisions: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the enclosed form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable. the year, please outline the proposed revisions in a letter to the Committee.



**OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES**

University Committee on
Research Involving
Human Subjects
(UCRIHS)

Michigan State University
225 Administration Building
East Lansing, Michigan
48824-1046
517/355-2180
FAX: 517/336-1171

**Problems/
Changes:**

Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517) 355-2180 or FAX (517) 336-1171.

Sincerely,

David E. Wright
David E. Wright, Ph.D.
UCRIHS Chair

DEW:pjm

Appendix 6

Sample Parent Consent Form

Sample Parent Consent Form

[Date]

Dear Parent(s),

The School District of _____ is conducting a very important study of the needs, concerns, and attitudes of our students in grades _____. We will use the information from the study in many ways—to revise programs in order to address problems students face, to assess strategies for positive youth development, to set program priorities, to affirm effective programs already in place, and to share with other youth serving organizations in order to improve programs and service families and young people.

For the study, we are using a questionnaire called *Search Institute Profiles of Student Life: Attitudes and Behaviors*. Search Institute, a nationally-known research organization located in Minneapolis, Minnesota has been conducting research on adolescents for over 30 years. The surveys have been used with thousands of students.

Please know that while student participation is encouraged, this questionnaire is voluntary. This information is collected completely anonymously, and the questionnaire procedure assures students of confidentiality. A copy of the questionnaire is available for your review in the central office of each participating school. If you have any questions, please contact _____ at _____.

Search Institute will send the results of the study to our school/school district for use in better serving students and addressing their needs

Thanks, in advance, for support in allowing us to collect these data. Please fill out the form below and return it in the enclosed, readdressed and stamped envelope by _____. If we do not receive your permission, we will assume we have your permission.

Appendix 7

Correlations Among Risk Behaviors for the Entire
Sample and Subgroups (Tables 10-48)

Table 10

Correlations Among Risk Behaviors for the 12 Year Old, the 13 Year Old, the 14 Year Old, the 15 Year Old, the 16 Year Old, and the 17 Year Old Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 12</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5015 *	---				
Hard Drug Use	.3291 *	.3441 *	---			
Soft Drug Use	.5199 *	.5869 *	.4493 *	---		
Sexual Activity	.3891 *	.3283 *	.2602 *	.3907 *	---	
School Misconduct	.7542 *	.6611 *	.3677 *	.4834 *	.5161 *	---
<u>Age 13</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5996 *	---				
Hard Drug Use	.3617 *	.3805 *	---			
Soft Drug Use	.5450 *	.6408 *	.4253 *	---		
Sexual Activity	.3885 *	.3137 *	.2274 *	.2795 *	---	
School Misconduct	.5700 *	.5000 *	.3207 *	.4702 *	.3358 *	---

* Note.--Significance level = .01.

Table 10 (continued)

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 14</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5314 *	---				
Hard Drug Use	.3032 *	.3439 *	---			
Soft Drug Use	.5105 *	.6373 *	.3812 *	---		
Sexual Activity	.3547 *	.3216 *	.1596 *	.3177 *	---	
School Misconduct	.7089 *	.5248 *	.2702 *	.4785 *	.3329 *	---
<u>Age 15</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5352 *	---				
Hard Drug Use	.3353 *	.3544 *	---			
Soft Drug Use	.5024 *	.6398 *	.4411 *	---		
Sexual Activity	.3422 *	.3324 *	.1859 *	.3230 *	---	
School Misconduct	.5531 *	.5063 *	.2599 *	.4620 *	.3094 *	---

* Note.--Significance level = .01.

Table 10 (continued)

Risk Behavior	Antisocial Behavior/ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
Age 16						
Antisocial Behavior/ Delinquency	---					
Alcohol Use	.4952*	---				
Hard Drug Use	.3516*	.3414*	---			
Soft Drug Use	.4553*	.6212*	.4411*	---		
Sexual Activity	.3215*	.3142*	.2180*	.3175*	---	
School Misconduct	.5844*	.5267*	.2860*	.4818*	.3192*	---
Age 17						
Antisocial Behavior/ Delinquency	---					
Alcohol Use	.4238*	---				
Hard Drug Use	.3527*	.3754*	---			
Soft Drug Use	.4159*	.6515*	.4602*			
Sexual Activity	.2603*	.2915*	.1742*	.2792*	---	
School Misconduct	.5005*	.4744*	.2617*	.4415*	.2923*	---

* Note.--Significance level = .01.

Table 11
Correlations Among Risk Behaviors for Males (N = 7,614) and Females (N = 8,665)

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Males</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5250 *	---				
Hard Drug Use	.3306 *	.3620 *	---			
Soft Drug Use	.4663 *	.6623 *	.4335 *	---		
Sexual Activity	.3294 *	.2997 * ^D	.1788 * ^D	.2781 * ^D	---	
School Misconduct	.5845 * ^D	.5120 *	.2849 *	.4683 *	.3162 *	---
<u>Females</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4648 *	---				
Hard Drug Use	.3399 *	.3729 *	---			
Soft Drug Use	.4378 *	.6377 *	.4417 *	---		
Sexual Activity	.3026 *	.3702 * ^D	.2341 * ^D	.3583 * ^D	---	
School Misconduct	.5415 * ^D	.5627 *	.2837 *	.4608 *	.3227 *	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 12

Correlations Among Risk Behaviors for the African American, the Asian American, the European American, the Latino/Hispanic, and the Native American Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>African American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5340 *	---				
Hard Drug Use	.2410 *	.2252 *	---			
Soft Drug Use	.5234 *	.6857 *	.2417 *	---		
Sexual Activity	.3235 *	.3097 *	.1228 *	.3230 *	---	
School Misconduct	.5085 *	.4771 *	.1923 *	.4534 *	.2937 *	---
<u>Asian American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4037 *	---				
Hard Drug Use	.4276 *	.4689 *	---			
Soft Drug Use	.4759 *	.6932 *	.5323 *	---		
Sexual Activity	.1744 ^N	.1188 ^N	.1897 ^N	.1598 ^N	---	
School Misconduct	.5760 *	.4365 *	.4505 *	.5294 *	.3094 *	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criterion of reaching statistical significance.

Table 12 (continued)

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Hispanic\Latino</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5120 *	---				
Hard Drug Use	.4328 *	.4665 *	---			
Soft Drug Use	.4836 *	.6377 *	.5694 *	---		
Sexual Activity	.3675 *	.3421 *	.3296 *	.3667 *	---	
School Misconduct	.5699 *	.5127 *	.3884 *	.4728 *	.3064 *	---
<u>Native American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4567 *	---				
Hard Drug Use	.4286 *	.3975 *	---			
Soft Drug Use	.4488 *	.6370 *	.4558 *	---		
Sexual Activity	.3730 *	.4154 *	.3017 *	.4309 *	---	
School Misconduct	.5672 *	.4861 *	.3968 *	.4642 *	.3649 *	---

* Note.--Significance level = .01.

Table 12 (continued)

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>European American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4927 *	---				
Hard Drug Use	.3822 *	.4026 *	---			
Soft Drug Use	.4759 *	.6529 *	.4650 *	---		
Sexual Activity	.3119 *	.3440 *	.2294 *	.3310 *	---	
School Misconduct	.5820 *	.5354 *	.3228 *	.5016 *	.3300 *	---

* Note.--Significance level = .01.

Table 13
Correlations Among Risk Behaviors for the 12 Year Old ($N = 139$) and 13 Year Old ($N = 3,212$) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 12</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5015 ^{*D}	---				
Hard Drug Use	.3291 [*]	.3441 [*]	---			
Soft Drug Use	.5199 [*]	.5869 [*]	.4493 [*]	---		
Sexual Activity	.3891 [*]	.3283 [*]	.2602 [*]	.3907 ^{*D}	---	
School Misconduct	.7542 ^{*D}	.6611 [*]	.3677 [*]	.4834 [*]	.5161 ^{*D}	---
<u>Age 13</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5996 ^{*D}	---				
Hard Drug Use	.3617 [*]	.3805 [*]	---			
Soft Drug Use	.5450 [*]	.6408 [*]	.4253 [*]	---		
Sexual Activity	.3885 [*]	.3137 [*]	.2274 [*]	.2795 ^{*D}	---	
School Misconduct	.5700 ^{*D}	.5000 [*]	.3207 [*]	.4702 [*]	.3358 ^{*D}	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 14
Correlations Among Risk Behaviors for the 12 Year Old (N = 137) and 14 Year Old (N = 3,358) Subgroups

Risk Behavior	Antisocial Behavior/ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
Age 12						
Antisocial Behavior/ Delinquency	***					
Alcohol Use	.5015*	***				
Hard Drug Use	.3291*	.3441*	***			
Soft Drug Use	.5199*	.5869*	.4493*	***		
Sexual Activity	.3891*	.3283*	.2602*	.3907*	***	
School Misconduct	.7842*	.6611*	.3677*	.4834*	.5161*	***
Age 14						
Antisocial Behavior/ Delinquency	***					
Alcohol Use	.5314*	***				
Hard Drug Use	.3032*	.3439*	***			
Soft Drug Use	.5105*	.6373*	.3812*	***		
Sexual Activity	.3547*	.3216*	.1596*	.3177*	***	
School Misconduct	.7089*	.5248*	.2702*	.4785*	.3329*	***

* Note.--Significance level = .01.

Table 15
Correlations Among Risk Behaviors for the 12 Year Old ($N = 137$) and 15 Year Old ($N = 3,139$) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 12</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5015 *	---				
Hard Drug Use	.3291 *	.3441 *	---			
Soft Drug Use	.5199 *	.5869 *	.4493 *	---		
Sexual Activity	.3891 *	.3283 *	.2602 *	.3907 *	---	
School Misconduct	.7542 *	.6611 *	.3677 *	.4834 *	.5161 *	---
<u>Age 15</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5352 *	---				
Hard Drug Use	.3353 *	.3544 *	---			
Soft Drug Use	.5024 *	.6398 *	.4411 *	---		
Sexual Activity	.3422 *	.3324 *	.1859 *	.3230 *	---	
School Misconduct	.5531 *	.5063 *	.2599 *	.4620 *	.3094 *	---

* Note.--Significance level = .01.

Table 16
Correlations Among Risk Behaviors for the 12 Year Old (N = 137) and 16 Year Old (N = 2,697) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 12</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5015 *	---				
Hard Drug Use	.3291 *	.3441 *	---			
Soft Drug Use	.5199 *	.5869 *	.4493 *	---		
Sexual Activity	.3891 *	.3283 *	.2602 *	.3907 *	---	
School Misconduct	.7542 *	.6611 * ^D	.3677 *	.4834 *	.5161 * ^D	---
<u>Age 16</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4952 *	---				
Hard Drug Use	.3516 *	.3414 *	---			
Soft Drug Use	.4553 *	.6212 *	.4411 *	---		
Sexual Activity	.3215 *	.3142 *	.2180 *	.3175 *	---	
School Misconduct	.5844 *	.5267 * ^D	.2860 *	.4818 *	.3192 * ^D	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 17
Correlations Among Risk Behaviors for the 12 Year Old (N = 137) and 17 Year Old (N = 2,084) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 12</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5015*	---				
Hard Drug Use	.3291*	.3441*	---			
Soft Drug Use	.5199* ^D	.5869*	.4493*	---		
Sexual Activity	.3891* ^D	.3283*	.2602*	.3907* ^D	---	
School Misconduct	.7542*	.6611*	.3677*	.4834*	.5161* ^D	---
<u>Age 17</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4238*	---				
Hard Drug Use	.3527*	.3754*	---			
Soft Drug Use	.4159* ^D	.6515*	.4602*	---		
Sexual Activity	.2603* ^D	.2915*	.1742*	.2792* ^D	---	
School Misconduct	.5005*	.4744*	.2617*	.4415*	.3192* ^D	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 18
Correlations Among Risk Behaviors for the 13 Year Old (N = 3,212) and 14 Year Old (N = 3,358) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 13</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5996 ^{*D}	---				
Hard Drug Use	.3617 *	.3805 *	---			
Soft Drug Use	.5450 *	.6408 *	.4253 *	---		
Sexual Activity	.3885 *	.3137 *	.2274 ^{*D}	.2795 *	---	
School Misconduct	.5700 ^{*D}	.5000 *	.3207 *	.4702 *	.3358 *	---
<u>Age 14</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5314 ^{*D}	---				
Hard Drug Use	.3032 *	.3439 *	---			
Soft Drug Use	.5105 *	.6373 *	.3812 *	---		
Sexual Activity	.3547 *	.3216 *	.1596 ^{*D}	.3177 *	---	
School Misconduct	.7089 ^{*D}	.5248 *	.2702 *	.4785 *	.3329 *	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 19
Correlations Among Risk Behaviors for the 13 Year Old (N = 3,212) and 15 Year Old (N = 3,138) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 13</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5996 *	---				
Hard Drug Use	.3617 *	.3805 *	---			
Soft Drug Use	.5450 *	.6408 *	.4253 *	---		
Sexual Activity	.3885 *	.3137 *	.2274 *	.2795 *	---	
School Misconduct	.5700 *	.5000 *	.3207 *	.4702 *	.3358 *	---
<u>Age 15</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5352 *	---				
Hard Drug Use	.3353 *	.3544 *	---			
Soft Drug Use	.5024 *	.6398 *	.4411 *	---		
Sexual Activity	.3422 *	.3324 *	.1859 *	.3230 *	---	
School Misconduct	.5531 *	.5063 *	.2599 *	.4620 *	.3094 *	---

* Note.--Significance level = .01.

Table 20
Correlations Among Risk Behaviors for the 13 Year Old (N = 3,212) and 16 Year Old (N = 2,697) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 13</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5996*	---				
Hard Drug Use	.3617*	.3805*	---			
Soft Drug Use	.5450*	.6408*	.4253*	---		
Sexual Activity	.3885*	.3137*	.2274*	.2795*	---	
School Misconduct	.5700*	.5000*	.3207*	.4702*	.3358*	---
<u>Age 16</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4952*	---				
Hard Drug Use	.3516*	.3414*	---			
Soft Drug Use	.4553*	.6212*	.4411*	---		
Sexual Activity	.3215*	.3142*	.2180*	.3175*	---	
School Misconduct	.5844*	.5267*	.2860*	.4818*	.3192*	---

* Note.--Significance level = .01.

Table 21
Correlations Among Risk Behaviors for the 13 Year Old (N = 3212) and 17 Year Old (N = 2084) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 13</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5996 ^{*D}	---				
Hard Drug Use	.3617 [*]	.3805 [*]	---			
Soft Drug Use	.5450 ^{*D}	.6408 [*]	.4253 [*]	---		
Sexual Activity	.3885 ^{*D}	.3137 [*]	.2274 [*]	.2795 [*]	---	
School Misconduct	.5700 ^{*D}	.5000 [*]	.3207 [*]	.4702 [*]	.3358 [*]	---
<u>Age 17</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4238 ^{*D}	---				
Hard Drug Use	.3527 [*]	.3754 [*]	---			
Soft Drug Use	.4159 ^{*D}	.6515 [*]	.4602 [*]	---		
Sexual Activity	.2603 ^{*D}	.2915 [*]	.1742 [*]	.2792 [*]	---	
School Misconduct	.5005 ^{*D}	.4744 [*]	.2617 [*]	.4415 [*]	.3192 [*]	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 22
Correlations Among Risk Behaviors for the 14 Year Old (N = 3,358) and 15 Year Old (N = 3,139) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 14</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5314*	---				
Hard Drug Use	.3032*	.3439*	---			
Soft Drug Use	.5105*	.6373*	.3812*	---		
Sexual Activity	.3547*	.3216*	.1596*	.3177*	---	
School Misconduct	.7089* ^D	.5248*	.2702*	.4785*	.3329*	---
<u>Age 15</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5352*	---				
Hard Drug Use	.3353*	.3544*	---			
Soft Drug Use	.5024*	.6398*	.4411*	---		
Sexual Activity	.3422*	.3324*	.1859*	.3230*	---	
School Misconduct	.5531* ^D	.5063*	.2599*	.4620*	.3094*	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 23
Correlations Among Risk Behaviors for the 14 Year Old (N = 3,358) and 16 Year Old (N = 2,697) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 14</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5314*	---				
Hard Drug Use	.3032*	.3439*	---			
Soft Drug Use	.5105*	.6373*	.3812*	---		
Sexual Activity	.3547*	.3216*	.1596*	.3177*	---	
School Misconduct	.7089*	.5248*	.2702*	.4785*	.3329*	---
<u>Age 16</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4952*	---				
Hard Drug Use	.3516*	.3414*	---			
Soft Drug Use	.4553*	.6212*	.4411*	---		
Sexual Activity	.3215*	.3142*	.2180*	.3175*	---	
School Misconduct	.5844*	.5267*	.2860*	.4818*	.3192*	---

* Note.--Significance level = .01.

Table 24
Correlations Among Risk Behaviors for the 14 Year Old (N = 3,358) and 17 Year Old (N = 2,084) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 14</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5314*	---				
Hard Drug Use	.3032*	.3439*	---			
Soft Drug Use	.5105* ^D	.6373*	.3812*	---		
Sexual Activity	.3547*	.3216*	.1596*	.3177*	---	
School Misconduct	.7089* ^D	.5248*	.2702*	.4785*	.3329*	---
<u>Age 17</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4238*	---				
Hard Drug Use	.3527*	.3754*	---			
Soft Drug Use	.4159* ^D	.6515*	.4602*	---		
Sexual Activity	.2603*	.2915*	.1742*	.2792*	---	
School Misconduct	.5005* ^D	.4744*	.2617*	.4415*	.3192*	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 25
Correlations Among Risk Behaviors for the 15 Year Old (N = 3,139) and 16 Year Old (N = 2,697) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 15</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5352 *	---				
Hard Drug Use	.3353 *	.3544 *	---			
Soft Drug Use	.5024 *	.6398 *	.4411 *	---		
Sexual Activity	.3422 *	.3324 *	.1859 *	.3230 *	---	
School Misconduct	.5531 *	.5063 *	.2599 *	.4620 *	.3094 *	---
<u>Age 16</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4952 *	---				
Hard Drug Use	.3516 *	.3414 *	---			
Soft Drug Use	.4553 *	.6212 *	.4411 *	---		
Sexual Activity	.3215 *	.3142 *	.2180 *	.3175 *	---	
School Misconduct	.5844 *	.5267 *	.2860 *	.4818 *	.3192 *	---

* Note.--Significance level = .01.

Table 26
Correlations Among Risk Behaviors for the 15 Year Old ($N = 3,139$) and 17 Year Old ($N = 2,084$) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 15</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5352 ^{*D}	---				
Hard Drug Use	.3353 [*]	.3544 [*]	---			
Soft Drug Use	.5024 ^{*D}	.6398 [*]	.4411 [*]	---		
Sexual Activity	.3422 ^{*D}	.3324 [*]	.1859 [*]	.3230 [*]	---	
School Misconduct	.5531 ^{*D}	.5063 [*]	.2599 [*]	.4620 [*]	.3094 [*]	---
<u>Age 17</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4238 ^{*D}	---				
Hard Drug Use	.3527 [*]	.3754 [*]	---			
Soft Drug Use	.4159 ^{*D}	.6515 [*]	.4602 [*]	---		
Sexual Activity	.2603 ^{*D}	.2915 [*]	.1742 [*]	.2792 [*]	---	
School Misconduct	.5005 ^{*D}	.4744 [*]	.2617 [*]	.4415 [*]	.3192 [*]	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 27
Correlations Among Risk Behaviors for the 16 Year Old ($N = 2,697$) and 17 Year Old ($N = 2,084$) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Age 16</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4952 ^{*D}	---				
Hard Drug Use	.3516 [*]	.3414 [*]	---			
Soft Drug Use	.4553 [*]	.6212 [*]	.4411 [*]	---		
Sexual Activity	.3215 [*]	.3142 [*]	.2180 [*]	.3175 [*]	---	
School Misconduct	.5844 ^{*D}	.5267 [*]	.2860 [*]	.4818 [*]	.3192 [*]	---
<u>Age 17</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4238 ^{*D}	---				
Hard Drug Use	.3527 [*]	.3754 [*]	---			
Soft Drug Use	.4159 [*]	.6515 [*]	.4602 [*]	---		
Sexual Activity	.2603 [*]	.2915 [*]	.1742 [*]	.2792 [*]	---	
School Misconduct	.5005 ^{*D}	.4744 [*]	.2617 [*]	.4415 [*]	.3192 [*]	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 28
Correlations Among Risk Behaviors for the African American (N = 3,883) and the Asian American (N = 158) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>African American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5340 *	---				
Hard Drug Use	.2410 *	.2252 * ^D	---			
Soft Drug Use	.5234 *	.6857 *	.2417 * ^D	---		
Sexual Activity	.3235 *	.3097 *	.1228 *	.3230 *	---	
School Misconduct	.5085 *	.4771 *	.1923 * ^D	.4534 *	.2937 *	---
<u>Asian American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4037 *	---				
Hard Drug Use	.4276 *	.4689 * ^D	---			
Soft Drug Use	.4759 *	.6932 *	.5323 * ^D	---		
Sexual Activity	.1744 * ^N	.1188 * ^N	.1897 * ^N	.1598 * ^N	---	
School Misconduct	.5760 *	.4365 *	.4505 * ^D	.5294 *	.3094 *	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criteria of reaching statistical significance.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 29

Correlations Among Risk Behaviors for the African American (N = 3,883) and the Hispanic/Latino (N = 438) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>African American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5340 *	---				
Hard Drug Use	.2410 * ^D	.2252 * ^D	---			
Soft Drug Use	.5234 *	.6857 *	.2417 * ^D	---		
Sexual Activity	.3235 *	.3097 *	.1228 *	.3230 *	---	
School Misconduct	.5085 *	.4771 *	.1923 * ^D	.4534 *	.2937 *	---
<u>Hispanic/Latino</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5120 *	---				
Hard Drug Use	.4328 * ^D	.4665 * ^D	---			
Soft Drug Use	.4836 *	.6377 *	.5694 * ^D	---		
Sexual Activity	.3675 *	.3421 *	.3296 *	.3667 *	---	
School Misconduct	.5699 *	.5127 *	.3884 * ^D	.4728 *	.3064 *	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 30
Correlations Among Risk Behaviors for the African American (N = 3,883) and the Native American (N = 590) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>African American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5340 *	---				
Hard Drug Use	.2410 * ^D	.2252 * ^D	---			
Soft Drug Use	.5234 *	.6857 *	.2417 * ^D	---		
Sexual Activity	.3235 *	.3097 *	.1228 *	.3230 *	---	
School Misconduct	.5085 *	.4771 *	.1923 * ^D	.4534 *	.2937 *	---
<u>Native American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4567 *	---				
Hard Drug Use	.4286 * ^D	.3975 * ^D	---			
Soft Drug Use	.4488 *	.6370 *	.4558 * ^D	---		
Sexual Activity	.3730 *	.4154 *	.3017 *	.4309 *	---	
School Misconduct	.5672 *	.4861 *	.3968 * ^D	.4642 *	.3649 *	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 31
Correlations Among Risk Behaviors for the African American (N = 3,883) and the European American (N = 11,009) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>African American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5340 *	---				
Hard Drug Use	.2410 * ^D	.2252 * ^D	---			
Soft Drug Use	.5234 *	.6857 * ^D	.2417 * ^D	---		
Sexual Activity	.3235 *	.3097 *	.1228 * ^D	.3230 *	---	
School Misconduct	.5085 * ^D	.4771 * ^D	.1923 * ^D	.4534 *	.2937 *	---
<u>European American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4927 *	---				
Hard Drug Use	.3822 * ^D	.4026 * ^D	---			
Soft Drug Use	.4759 *	.6529 * ^D	.4650 * ^D	---		
Sexual Activity	.3119 *	.3440 *	.2294 * ^D	.3310 *	---	
School Misconduct	.5820 * ^D	.5354 * ^D	.3228 * ^D	.5016 *	.3300 *	---

* Note.--Significance level = .01.

*^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 32
Correlations Among Risk Behaviors for the Asian American (N = 158) and the Hispanic/Latino (N = 438) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Asian American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4037 *	---				
Hard Drug Use	.4276 *	.4689 *	---			
Soft Drug Use	.4759 *	.6932 *	.5323 *	---		
Sexual Activity	.1744 ^N	.1188 ^N	.1897 ^N	.1598 ^N	---	
School Misconduct	.5760 *	.4365 *	.4505 *	.5294 *	.3094 *	---
<u>Hispanic/Latino</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5120 *	---				
Hard Drug Use	.4328 *	.4665 *	---			
Soft Drug Use	.4836 *	.6377 *	.5694 *	---		
Sexual Activity	.3675 *	.3421 *	.3296 *	.3667 *	---	
School Misconduct	.5699 *	.5127 *	.3884 *	.4728 *	.3064 *	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criteria of reaching statistical significance.

Table 33
Correlations Among Risk Behaviors for the Asian American (N = 158) and the Native American (N = 590) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Asian American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4037 *	---				
Hard Drug Use	.4276 *	.4689 *	---			
Soft Drug Use	.4759 *	.6932 *	.5323 *	---		
Sexual Activity	.1744 * ^N	.1188 * ^N	.1897 * ^N	.1598 * ^N	---	
School Misconduct	.5760 *	.4365 *	.4505 *	.5294 *	.3094 *	---
<u>Native American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4567 *	---				
Hard Drug Use	.4286 *	.3975 *	---			
Soft Drug Use	.4488 *	.6370 *	.4558 *	---		
Sexual Activity	.3730 *	.4154 *	.3017 *	.4309 *	---	
School Misconduct	.5672 *	.4861 *	.3968 *	.4642 *	.3649 *	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criteria of reaching statistical significance.

Table 34

Correlations Among Risk Behaviors for the Asian American (N = 158) and the European American (N = 11,008) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Asian American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4037 *	---				
Hard Drug Use	.4276 *	.4689 *	---			
Soft Drug Use	.4759 *	.6932 *	.5323 *	---		
Sexual Activity	.1744 ^N	.1188 ^N	.1897 ^N	.1598 ^N	---	
School Misconduct	.5760 *	.4365 *	.4505 *	.5294 *	.3094 *	---
<u>European American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4927 *	---				
Hard Drug Use	.3822 *	.4026 *	---			
Soft Drug Use	.4759 *	.6529 *	.4650 *	---		
Sexual Activity	.3119 *	.3440 *	.2294 *	.3310 *	---	
School Misconduct	.5820 *	.5354 *	.3228 *	.5016 *	.3300 *	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criteria of reaching statistical significance.

Table 35

Correlations Among Risk Behaviors for the Hispanic\Latino (N = 438) and the Native American (N = 590) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Hispanic\Latino</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5120 *	---				
Hard Drug Use	.4328 *	.4665 *	---			
Soft Drug Use	.4836 *	.6377 *	.5694 *	---		
Sexual Activity	.3675 *	.3421 *	.3296 *	.3667 *	---	
School Misconduct	.5699 *	.5127 *	.3884 *	.4728 *	.3064 *	---
<u>Native American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4567 *	---				
Hard Drug Use	.4286 *	.3975 *	---			
Soft Drug Use	.4488 *	.6370 *	.4558 *	---		
Sexual Activity	.3730 *	.4154 *	.3017 *	.4309 *	---	
School Misconduct	.5672 *	.4861 *	.3968 *	.4642 *	.3649 *	---

* Note.--Significance level = .01.

Table 36

Correlations Among Risk Behaviors for the Hispanic\Latino (N = 438) and the European American (N = 11,008) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Hispanic\Latino</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5120 *	---				
Hard Drug Use	.4328 *	.4665 *	---			
Soft Drug Use	.4836 *	.6377 *	.5694 *	---		
Sexual Activity	.3675 *	.3421 *	.3296 *	.3667 *	---	
School Misconduct	.5699 *	.5127 *	.3884 *	.4728 *	.3064 *	---
<u>European American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4927 *	---				
Hard Drug Use	.3822 *	.4026 *	---			
Soft Drug Use	.4759 *	.6529 *	.4650 *	---		
Sexual Activity	.3119 *	.3440 *	.2294 *	.3310 *	---	
School Misconduct	.5820 *	.5354 *	.3228 *	.5016 *	.3300 *	---

* Note.--Significance level = .01.

Table 37

Correlations Among Risk Behaviors for the Native American (N = 590) and the European American (N = 11,008) Subgroups

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Native American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4567 *	---				
Hard Drug Use	.4286 *	.3975 *	---			
Soft Drug Use	.4488 *	.6370 *	.4558 *	---		
Sexual Activity	.3730 *	.4154 *	.3017 *	.4309 *	---	
School Misconduct	.5672 *	.4861 *	.3968 *	.4642 *	.3649 *	---
<u>European American</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4927 *	---				
Hard Drug Use	.3822 *	.4026 *	---			
Soft Drug Use	.4759 *	.6529 *	.4650 *	---		
Sexual Activity	.3119 *	.3440 *	.2294 *	.3310 *	---	
School Misconduct	.5820 *	.5354 *	.3228 *	.5016 *	.3300 *	---

* Note.--Significance level = .01.

Table 38
Correlations Among Risk Behaviors for Males (N = 762) and Females (N = 1,081) Within the 12 Year Old Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4342 ^{*D}	---				
Hard Drug Use	.2347 ^{*D}	.2476 ^{*D}	---			
Soft Drug Use	.4988 [*]	.5517 [*]	.4412 [*]	---		
Sexual Activity	.4492 [*]	.2100 ^{*N}	.0918 ^{*N}	.2890 ^{*N}	---	
School Misconduct	.5488 [*]	.3593 ^{*D}	.3059 [*]	.4306 [*]	.5743 [*]	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5787 ^{*D}	---				
Hard Drug Use	.4159 ^{*D}	.4108 ^{*D}	---			
Soft Drug Use	.5573 [*]	.6169 [*]	.4551 [*]	---		
Sexual Activity	.3044 ^{*N}	.3832 [*]	.3392 [*]	.4461 [*]	---	
School Misconduct	.5885 [*]	.5054 ^{*D}	.2704 [*]	.3975 [*]	.4483 [*]	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criterion of reaching statistical significance.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Table 39
Correlations Among Risk Behaviors for Males (N = 1,566) and Females (N = 1,641) Within the 13 Year Old Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.6321 *	---				
Hard Drug Use	.3610 *	.3790 *	---			
Soft Drug Use	.5612 *	.6364 *	.4678 *	---		
Sexual Activity	.3594 *	.2897 *	.2305 *	.2578 *	---	
School Misconduct	.5841 *	.4830 *	.3131 *	.4405 *	.3030 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5779 *	---				
Hard Drug Use	.3761 *	.3879 *	---			
Soft Drug Use	.5401 *	.6452 *	.3640 *	---		
Sexual Activity	.3776 *	.3627 *	.2297 *	.3088 *	---	
School Misconduct	.5639 *	.5763 *	.3328 *	.4983 *	.3578 *	---

* Note.--Significance level = .01.

Table 40
Correlations Among Risk Behaviors for Males (N = 1480) and Females (N = 1863) Within the 14 Year Old Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5966 *	---				
Hard Drug Use	.3149 *	.3625 *	---			
Soft Drug Use	.5369 *	.6493 *	.3825 *	---		
Sexual Activity	.3625 *	.2933 *	.1407 *	.2918 *	---	
School Misconduct	.6468 *	.5413 *	.2719 *	.4831 *	.3244 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5005 *	---				
Hard Drug Use	.2984 *	.3336 *	---			
Soft Drug Use	.4945 *	.6231 *	.3834 *	---		
Sexual Activity	.3095 *	.3596 *	.1751 *	.3397 *	---	
School Misconduct	.5894 *	.5168 *	.2725 *	.4728 *	.3202 *	---

* Note.--Significance level = .01.

Table 41
Correlations Among Risk Behaviors for Males (N = 1,558) and Females (N = 1,572) Within the 15 Year Old Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5653 *	---				
Hard Drug Use	.3576 *	.3508 *	---			
Soft Drug Use	.5254 *	.6567 *	.4290 *	---		
Sexual Activity	.3233 *	.2847 *	.1501 *	.2695 *	---	
School Misconduct	.5675 *	.5307 *	.2781 *	.4795 *	.2987 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5107 *	---				
Hard Drug Use	.3250 *	.3613 *	---			
Soft Drug Use	.4649 *	.6120 *	.4643 *	---		
Sexual Activity	.3396 *	.3811 *	.2360 *	.3671 *	---	
School Misconduct	.5291 *	.4716 *	.2390 *	.4276 *	.2993 *	---

* Note.--Significance level = .01.

Table 42
Correlations Among Risk Behaviors for Males (N = 1,184) and Females (N = 1,496) Within the 16 Year Old Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5227 *	---				
Hard Drug Use	.3355 *	.3497 *	---			
Soft Drug Use	.4470 *	.6243 *	.4318 *	---		
Sexual Activity	.3137 *	.2838 *	.1967 *	.2632 *	---	
School Misconduct	.6244 *	.5228 *	.2900 *	.4913 *	.3049 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4611 *	---				
Hard Drug Use	.3968 *	.3440 *	---			
Soft Drug Use	.4556 *	.6078 *	.4582 *	---		
Sexual Activity	.3332 *	.3308 *	.2455 *	.3555 *	---	
School Misconduct	.5376 *	.5199 *	.2818 *	.4847 *	.3089 *	---

* Note.--Significance level = .01.

Table 43
Correlations Among Risk Behaviors for Males (N = 1,062) and Females (N = 1,012) Within the 17 Year Old Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4516 *	---				
Hard Drug Use	.3506 *	.3672 *	---			
Soft Drug Use	.4013 *	.6508 *	.4514 *	---		
Sexual Activity	.2570 *	.2922 *	.1355 *	.2455 *	---	
School Misconduct	.5008 *	.4616 *	.2471 *	.4095 *	.2996 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.3553 *	---				
Hard Drug Use	.4194 *	.3958 *	---			
Soft Drug Use	.4270 *	.6515 *	.4811 *	---		
Sexual Activity	.2700 *	.2856 *	.2257 *	.3170 *	---	
School Misconduct	.5075 *	.4858 *	.2907 *	.4752 *	.2707 *	---

* Note.--Significance level = .01.

Table 44

Correlations Among Risk Behaviors for Males (N = 1739) and Females (N = 2132) Within the African American Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5519 *	---				
Hard Drug Use	.2249 *	.2396 *	---			
Soft Drug Use	.5317 *	.7125 *	.2421 *	---		
Sexual Activity	.3473 *	.3156 *	.1135 *	.3262 *	---	
School Misconduct	.5167 *	.4768 *	.1869 *	.4540 *	.2973 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5020 *	---				
Hard Drug Use	.2742 *	.2047 *	---			
Soft Drug Use	.4944 *	.6429 *	.2499 *	---		
Sexual Activity	.2551 *	.3005 *	.1416 *	.3048 *	---	
School Misconduct	.5144 *	.4805 *	.1969 *	.4493 *	.2804 *	---

* Note.--Significance level = .01.

Table 45

Correlations Among Risk Behaviors for Males (N = 78) and Females (N = 80) Within the Asian American Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5203 *	---				
Hard Drug Use	.4307 *	.5664 *	---			
Soft Drug Use	.4522 *	.7347 *	.4851 *	---		
Sexual Activity	.0662 * ^N	.0568 * ^N	.1455 * ^N	.0362 * ^N	---	
School Misconduct	.7753 *	.4318 *	.3799 *	.4611 *	.1437 * ^N	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.1637 * ^N	---				
Hard Drug Use	.4831 *	.3845 *	---			
Soft Drug Use	.4881 *	.6008 *	.6717 *	---		
Sexual Activity	.2873 * ^N	.3218 * ^N	.2249 * ^N	.3306 * ^N	---	
School Misconduct	.4725 *	.4437 *	.5207 *	.6586 *	.4443 *	---

* Note.--Significance level = .01.

^N Note.--This variable did not meet the criterion of reaching statistical significance.

Table 46
Correlations Among Risk Behaviors for Males (N = 215) and Females (N = 221) Within the Hispanic/Latino Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5561 *	---				
Hard Drug Use	.4306 *	.4658 *	---			
Soft Drug Use	.4959 *	.6300 *	.5922 *	---		
Sexual Activity	.3363 *	.2714 *	.3345 *	.3496 *	---	
School Misconduct	.6520 *	.5319 *	.4228 *	.4718 *	.2326 *	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4832 *	---				
Hard Drug Use	.4809 *	.4690 *	---			
Soft Drug Use	.5091 *	.6436 *	.5324 *	---		
Sexual Activity	.3612 *	.4298 *	.3134 *	.3800 *	---	
School Misconduct	.5236 *	.4923 *	.3180 *	.4734 *	.3578 *	---

* Note.--Significance level = .01.

Table 47
Correlations Among Risk Behaviors for Males (N = 268) and Females (N = 313) Within the Native American Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4384*	---				
Hard Drug Use	.4598*	.4559*	---			
Soft Drug Use	.4294*	.6662*	.4238*	---		
Sexual Activity	.3649*	.3734*	.2189*	.4220*	---	
School Misconduct	.5484*	.5207*	.3616*	.4843*	.3374*	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4915*	---				
Hard Drug Use	.4668*	.3596*	---			
Soft Drug Use	.4844*	.5874*	.5013*	---		
Sexual Activity	.3832*	.4648*	.3664*	.4528*	---	
School Misconduct	.5621*	.4517*	.4571*	.4427*	.3727*	---

* Note.--Significance level = .01.

Table 48

Correlations Among Risk Behaviors for Males (N = 5,216) and Females (N = 5,756) Within the European American Subgroup

Risk Behavior	Antisocial Behavior\ Delinquency	Alcohol Use	Hard Drug Use	Soft Drug Use	Sexual Activity	School Misconduct
<u>Male</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.5270 ^{*D}	---				
Hard Drug Use	.3802 [*]	.3916 [*]	---			
Soft Drug Use	.4844 [*]	.6594 [*]	.4651 [*]	---		
Sexual Activity	.2916 [*]	.2919 [*]	.2023 ^{*D}	.2684 ^{*D}	---	
School Misconduct	.6093 [*]	.5263 [*]	.3186 [*]	.4902 [*]	.3124 [*]	---
<u>Female</u>						
Antisocial Behavior\ Delinquency	---					
Alcohol Use	.4822 ^{*D}	---				
Hard Drug Use	.4215 [*]	.4259 [*]	---			
Soft Drug Use	.4772 [*]	.6460 [*]	.4662 [*]	---		
Sexual Activity	.3017 [*]	.3957 [*]	.2660 ^{*D}	.3894 ^{*D}	---	
School Misconduct	.5345 [*]	.5470 [*]	.3344 [*]	.5077 [*]	.3196 [*]	---

* Note.--Significance level = .01.

^D Note.--Significant difference resulting from a test of the difference between two independent correlations; the difference was significant at $p < .01$ after a Bonferroni correction.

Appendix 8

**The Multiple Regression for Each Criterion Variable for the
Entire Sample and Subgroups (Tables 49-132)**

Table 49

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for the Entire Sample (N = 15,537)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	114.39	-.0738	-	.0052	.0000
	Gender	1	551.82	-.1628	-	.0250*	.0000
	Ethnicity/Race	1	376.96	-.1346	-	.0171*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	4.60	-.0204	-	.0002	.0319
	Extracurricular activities	1	133.95	.0826	-	.0061	.0000
	Religiosity	1	56.92	-.0552	-	.0026	.0000
	View of the future	1	5.72	.0180	-	.0003	.0168
	<u>Contextual</u>						
	Family Support	1	72.25	-.0907	-	.0033	.0000
	Parent-adolescent communication	1	4.75	.0214	-	.0002	.0292
	Peer group characteristics	1	2,537.09	.3881	-	.1150*	.0000
	School climate	1	155.54	-.0994	-	.0070	.0000
	Overall Model	11	595.78	-	.2968	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 50

The Multiple Regression for the Criterion Variable of Alcohol Use for the Entire Sample (N = 15,537)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	552.42	.1617	-	.0249*	.0000
	Gender	1	41.12	.0443	-	.0019	.0000
	Ethnicity/Race	1	.97	-.0068	-	.0000	.3256
	<u>Individual-Behavioral</u>						
	Self-esteem	1	10.66	.0309	-	.0005	.0011
	Extracurricular activities	1	65.09	.0574	-	.0029	.0000
	Religiosity	1	143.56	-.0874	-	.0065	.0000
	View of the future	1	6.23	.0188	-	.0003	.0126
	<u>Contextual</u>						
	Family support	1	63.29	-.0846	-	.0029	.0000
	Parent-adolescent communication	1	8.99	.0293	-	.0004	.0027
	Peer group characteristics	1	3,355.49	.4450	-	.1511*	.0000
	School climate	1	99.96	-.0794	-	.0045	.0000
Overall Model		11	607.35	-	.3008	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 51

The Multiple Regression for the Criterion Variable of Hard Drug Use for the Entire Sample (N = 15,537)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	19.54	.0346	-	.0011	.0118
	Gender	1	9.30	.0240	-	.0005	.0023
	Ethnicity/Race	1	14.87	.0304	-	.0009	.0001
	<u>Individual-Behavioral</u>						
	Self-esteem	1	20.04	-.0482	-	.0012	.0000
	Extracurricular activities	1	24.72	.0403	-	.0014	.0000
	Religiosity	1	23.20	-.0400	-	.0014	.0000
	View of the future	1	2.66	.0140	-	.0002	.1031
	<u>Contextual</u>						
	Family support	1	44.42	-.0807	-	.0026	.0000
	Parent-adolescent communication	1	12.14	.0388	-	.0007	.0005
	Peer group characteristics	1	792.35	.2462	-	.0463*	.0000
	School climate	1	7.65	-.0250	-	.0005	.0057
Overall Model		11	146.05	-	.0938	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 52

The Multiple Regression for the Criterion Variable of Soft Drug Use for the Entire Sample (N = 15,537)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	458.09	.1484	-	.0209*	.0000
	Gender	1	1.66	.0090	-	.0001	.1981
	Ethnicity/Race	1	30.19	.0383	-	.0014	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	4.76	-.0208	-	.0002	.0291
	Extracurricular activities	1	.33	-.0042	-	.0000	.5611
	Religiosity	1	130.01	-.0838	-	.0059	.0000
	View of the future	1	3.50	.0142	-	.0002	.0615
	<u>Contextual</u>						
	Family support	1	84.31	-.0984	-	.0039	.0000
	Parent-adolescent communication	1	57.56	.0747	-	.0026	.0000
	Peer group characteristics	1	2,968.93	.4217	-	.1357*	.0000
	School climate	1	68.79	-.0664	-	.0031	.0000
	Overall Model	11	577.10	-	.2902	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 53

The Multiple Regression for the Criterion Variable of Sexual Activity for the Entire Sample (N = 15,537)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	280.08	.1232	-	.0144*	.0000
	Gender	1	155.22	-.0921	-	.0080	.3657
	Ethnicity/Race	1	234.84	-.1133	-	.0121*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.58	.0077	-	.0000	.4449
	Extracurricular activities	1	.46	-.0052	-	.0000	.4954
	Religiosity	1	499.31	-.1745	-	.0257*	.0000
	View of the future	1	1.63	.0103	-	.0001	.2013
	<u>Contextual</u>						
	Family support	1	17.12	-.0470	-	.0009	.0000
	Parent-adolescent communication	1	18.01	-.0444	-	.0009	.0000
	Peer group characteristics	1	723.24	.2211	-	.0373*	.0000
	School climate	1	52.22	-.0614	-	.0027	.0000
	Overall Model	11	350.01	-	.1985	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 54

The Multiple Regression for the Criterion Variable of School Misconduct for the Entire Sample (N = 15,537)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	42.75	.0455	-	.0020	.0000
	Gender	1	25.70	-.0354	-	.0012	.0000
	Ethnicity/Race	1	176.66	-.0928	-	.0081	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.02	-.0014	-	.0000	.8855
	Extracurricular activities	1	31.01	.0401	-	.0014	.1389
	Religiosity	1	13.89	-.0275	-	.0006	.0002
	View of the future	1	.08	.0021	-	.0000	.7776
	<u>Contextual</u>						
	Family support	1	55.53	-.0801	-	.0026	.0000
	Parent-adolescent communication	1	.00	.0005	-	.0000	.9587
	Peer group characteristics	1	2,363.37	.3774	-	.1087*	.0000
	School climate	1	490.95	-.1779	-	.0226*	.0000
Overall Model		11	565.66	-	.2861	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 55

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Males ($N = 7,219$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	47.66	-.0699	-	.0046	.0000
	Ethnicity/Race	1	175.01	-.1326	-	-.0170	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	6.02	-.0339	-	.0006	.0142
	Extracurricular activities	1	106.70	.0169	-	.0103*	.0000
	Religiosity	1	33.16	-.0611	-	.0032	.0000
	View of the future	1	.62	.0086	-	.0001	.4300
	<u>Contextual</u>						
	Family support	1	41.61	-.0977	-	.0040	.0000
	Parent-adolescent communication	1	2.49	.0220	-	.0002	.1143
	Peer group characteristics	1	1,574.63	.4355	-	.1526*	.0000
	School climate	1	70.92	-.0981	-	.0069	.0000
	Overall Model	10	311.21	-	.3015	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 56
The Multiple Regression for the Criterion Variable of Alcohol Use for Males (N = 7,219)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	305.10	.1756	-	.0292*	.0000
	Ethnicity/Race	1	9.97	-.0314	-	.0010	.0016
	<u>Individual-Behavioral</u>						
	Self-esteem	1	3.46	.0255	-	.0003	.0628
	Extracurricular activities	1	61.49	.0806	-	.0059	.0000
	Religiosity	1	58.75	-.0808	-	.0056	.0000
	View of the future	1	8.92	.0322	-	.0009	.0028
	<u>Contextual</u>						
	Family support	1	25.58	-.0760	-	.0024	.0000
	Parent-adolescent communication	1	10.24	.0443	-	.0010	.0014
	Peer group characteristics	1	1,690.98	.4481	-	.1616*	.0000
	School climate	1	48.77	-.0808	-	.0047	.0000
	Overall Model	10	325.72	-	.3112	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 57

The Multiple Regression for the Criterion Variable of Hard Drug Use for Males (N = 7,219)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	2.83	.0194	-	.0004	.0927
	Ethnicity/Race	1	5.79	.0274	-	.0007	.0161
	<u>Individual-Behavioral</u>						
	Self-esteem	1	13.19	-.0570	-	.0017	.0003
	Extracurricular activities	1	13.99	.0440	-	.0018	.0002
	Religiosity	1	8.98	-.0362	-	.0011	.0027
	View of the future	1	3.78	.0240	-	.0005	.0518
	<u>Contextual</u>						
	Family support	1	12.91	-.0619	-	.0016	.0003
	Parent-adolescent communication	1	4.62	.0341	-	.0006	.0316
	Peer group characteristics	1	451.65	.2652	-	.0566*	.0000
	School climate	1	1.21	-.0146	-	.0002	.2712
	Overall Model	11	77.35	-	.0969	-	.0000

* Note.---Change represents an R² increase of at least 0.01.

Table 58

The Multiple Regression for the Criterion Variable of Soft Drug Use for Males ($N = 7,219$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	259.42	.1645	-	.0256*	.0000
	Ethnicity/Race	1	4.30	.0210	-	.0004	.0382
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.62	-.0225	-	.0003	.1057
	Extracurricular activities	1	2.39	.0161	-	.0002	.1222
	Religiosity	1	61.13	-.0837	-	.0060	.0000
	View of the future	1	5.49	.0257	-	.0005	.0191
	<u>Contextual</u>						
	Family support	1	21.05	-.0701	-	.0021	.0000
	Parent-adolescent communication	1	24.01	.0690	-	.0024	.0000
	Peer group characteristics	1	1,450.48	.4216	-	.1437*	.0000
	School climate	1	42.91	-.0769	-	.0042	.0000
	Overall Model	11	293.51	-	.2893	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 59

The Multiple Regression for the Criterion Variable of Sexual Activity for Males (N = 7,219)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	40.11	.0704	-	.0047	.0000
	Ethnicity/Race	1	127.88	-.1243	-	.0149*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.26	.0170	-	.0002	.2623
	Extracurricular activities	1	10.58	.0369	-	.0012	.0011
	Religiosity	1	232.87	-.1777	-	.0272*	.0000
	View of the future	1	.20	.0053	-	.0000	.6546
	<u>Contextual</u>						
	Family support	1	1.25	-.0186	-	.0002	.2633
	Parent-adolescent communication	1	15.89	-.0610	-	.0019	.0001
	Peer group characteristics	1	294.56	.2067	-	.0344*	.0000
	School climate	1	50.51	-.0908	-	.0059	.0000
	Overall Model	10	135.50	-	.1581	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 60
The Multiple Regression for the Criterion Variable of School Misconduct for Males (N = 7,219)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	15.52	.0403	-	.0015	.0001
	Ethnicity/Race	1	65.88	-.0822	-	.0065	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.10	.0043	-	.0000	.7567
	Extracurricular activities	1	3.59	.0597	-	.0032	.0000
	Religiosity	1	6.64	-.0276	-	.0007	.0100
	View of the future	1	.33	.0063	-	.0000	.5634
	<u>Contextual</u>						
	Family support	1	44.44	-.1020	-	.0044	.0000
	Parent-adolescent communication	1	.61	.0110	-	.0001	.4339
	Peer group characteristics	1	1,203.38	-.3846*	-	.1190*	.0000
	School climate	1	24.92	-.1844	-	.0242*	.0000
	Overall Model	10	290.25	-	.2871	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 61

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Females (N = 8,317)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/</u>	<u>Individual-Organismic</u>						
	Age	1	106.88	-.1007	-	.0097	.0000
	Ethnicity/Race	1	247.38	-.1556	-	.0224*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.05	-.0031	-	.0000	.8209
	Extracurricular activities	1	15.96	-.0408	-	.0015	.0001
	Religiosity	1	20.47	-.0470	-	.0019	.0000
	View of the future	1	5.69	.0258	-	.0005	.0171
	<u>Contextual</u>						
	Family support	1	57.89	-.1173	-	.0053	.0000
	Parent-adolescent communication	1	3.99	.0283	-	.0004	.0458
	Peer group characteristics	1	1,086.81	.3596	-	.0985*	.0000
	School climate	1	78.78	-.0998	-	.0071	.0000
	Overall Model	10	272.82	-	.2472	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 62

The Multiple Regression for the Criterion Variable of Alcohol Use for Females (N = 8,317)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	243.91	.1470	-	.0207 *	.0000
	Ethnicity/Race	1	3.87	.0189	-	.0003	.0493
	<u>Individual-Behavioral</u>						
	Self-esteem	1	8.00	.0369	-	.0007	.0047
	Extracurricular activities	1	7.35	.0268	-	.0006	.0067
	Religiosity	1	82.63	-.0912	-	.0070	.0000
	View of the future	1	.19	.0046	-	.0000	.6589
	<u>Contextual</u>						
	Family support	1	42.12	-.0967	-	.0036	.0000
	Parent-adolescent communication	1	1.45	.0165	-	.0001	.2293
	Peer group characteristics	1	1,68.53	.4306	-	.1412 *	.0000
	School climate	1	50.90	-.0775	-	.0043	.0000
	Overall Model	10	350.72	-	.2969	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 63
The Multiple Regression for the Criterion Variable of Hard Drug Use for Females ($N = 8,317$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	21.21	.0491	-	.0023	.0000
	Ethnicity/Race	1	8.38	.0316	-	.0009	.0038
	<u>Individual-Behavioral</u>						
	Self-esteem	1	7.71	-.0411	-	.0008	.0055
	Extracurricular activities	1	8.26	.0322	-	.0009	.0041
	Religiosity	1	14.53	-.0434	-	.0016	.0001
	View of the future	1	.00	.0007	-	.0000	.9559
	<u>Contextual</u>						
	Family support	1	41.86	-.0193	-	.0046	.0000
	Parent-adolescent communication	1	9.54	.0480	-	.0010	.0020
	Peer group characteristics	1	342.28	.2212	-	.0373*	.0000
	School climate	1	7.24	-.0331	-	.0008	.0072
	Overall Model	10	88.16	-	.0959	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 64

The Multiple Regression for the Criterion Variable of Soft Drug Use for Females ($N = 8,317$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	194.65	.1316	-	.0165*	.0000
	Ethnicity/Race	1	34.22	.0564	-	.0029	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.14	-.0203	-	.0002	.1206
	Extracurricular activities	1	10.49	-.0320	-	.0000	.0012
	Religiosity	1	67.22	-.0824	-	.0057	.0000
	View of the future	1	.00	-.0003	-	.0000	.9777
	<u>Contextual</u>						
	Family support	1	82.04	-.1352	-	.0070	.0000
	Parent-adolescent communication	1	40.44	.0874	-	.0034	.0000
	Peer group characteristics	1	1,528.92	.4130	-	.1299*	.0000
	School climate	1	24.16	-.0535	-	.0021	.0000
	Overall Model	10	346.22	-	.2942	-	.0000

* Note.--Change represents an R^2 increase of at least 0.01.

Table 65

The Multiple Regression for the Criterion Variable of Sexual Activity for Females (N = 8,317)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	300.47	.1728	-	.0285*	.0000
	Ethnicity/Race	1	104.08	-.1040	-	.0099	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.04	-.0026	-	.0000	.8485
	Extracurricular activities	1	15.72	-.0415	-	.0015	.0001
	Religiosity	1	264.44	-.1728	-	.0251*	.0000
	View of the future	1	1.59	.0139	-	.0002	.2074
	<u>Contextual</u>						
	Family support	1	18.82	-.0684	-	.0018	.0000
	Parent-adolescent communication	1	5.38	-.0337	-	.0005	.0204
	Peer group characteristics	1	430.70	.2317	-	.0409*	.0000
	School climate	1	9.49	-.0354	-	.0009	.0021
	Overall Model	10	221.17	-	.2100	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 66
The Multiple Regression for the Criterion Variable of School Misconduct for Females (N = 8,317)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	26.22	.0490	-	.0023	.0000
	Ethnicity/Race	1	114.27	-.1046	-	.0100*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.23	-.0063	-	.0000	.6348
	Extracurricular activities	1	3.39	.0185	-	.0003	.0656
	Religiosity	1	6.38	-.0258	-	.0006	.0116
	View of the future	1	.20	-.0048	-	.0000	.6508
	<u>Contextual</u>						
	Family support	1	17.95	-.0642	-	.0016	.0000
	Parent-adolescent communication	1	.45	-.0094	-	.0000	.5004
	Peer group characteristics	1	1,156.66	.3647	-	.1013*	.0000
	School climate	1	236.24	-.1698	-	.0207*	.0000
	Overall Model	10	311.53	-	.2727	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 67

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for African Americans (N = 3,612)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	22.38	-.0656	-	.0045	.0000
	Gender	1	99.04	-.1458	-	.0251*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	10.51	.0606	-	.0021	.0012
	Extracurricular activities	1	95.39	.1470	-	.0193*	.0000
	Religiosity	1	70.76	-.1295	-	.0143*	.0000
	View of the future	1	.13	.0056	-	.0000	.7136
	<u>Contextual</u>						
	Family support	1	14.18	-.0795	-	.0029	.0002
	Parent-adolescent communication	1	2.28	.0296	-	.0005	.1314
	Peer group characteristics	1	523.58	.3548	-	.1060*	.0000
	School climate	1	37.31	-.0988	-	.0076	.0000
	Overall Model	10	133.67	-	.2707	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 68

The Multiple Regression for the Criterion Variable of Alcohol Use for African Americans ($N = 3,612$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	49.50	.1029	-	.0102*	.0000
	Gender	1	.00	.0000	-	.0000	.9546
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.36	-.0113	-	.0001	.4595
	Extracurricular activities	1	54.20	.1118	-	.0112*	.0000
	Religiosity	1	65.43	-.1257	-	.0035	.0000
	View of the future	1	.42	.0099	-	.0001	.5165
	<u>Contextual</u>						
	Family support	1	10.40	-.0687	-	.0021	.0013
	Parent-adolescent communication	1	1.40	.0234	-	.0003	.2369
	Peer group characteristics	1	649.75	.3988	-	.1340*	.0000
	School climate	1	19.77	-.0726	-	.0041	.0000
	Overall Model	10	124.75	-	.2572	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 69

The Multiple Regression for the Criterion Variable of Hard Drug Use for African Americans (N = 3,612)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	.68	-.0137	-	.0002	.4094
	Gender	1	1.38	-.0197	-	.0004	.2410
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.52	-.0155	-	.0001	.4716
	Extracurricular activities	1	4.01	.0346	-	.0011	.0453
	Religiosity	1	.12	-.0062	-	.0000	.7254
	View of the future	1	18.58	-.0749	-	.0050	.0000
	<u>Contextual</u>						
	Family support	1	4.36	-.0507	-	.0012	.0369
	Parent-adolescent communication	1	.00	.0000	-	.0000	.9662
	Peer group characteristics	1	50.94	.1272	-	.0136*	.0000
	School climate	1	.46	-.0126	-	.0001	.4996
Overall Model		10	13.82	-	.0370	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 70
The Multiple Regression for the Criterion Variable of Soft Drug Use for African Americans (N = 3,612)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	24.47	.0732	-	.0052	.0000
	Gender	1	5.56	-.0352	-	.0012	.0184
	<u>Individual-Behavioral</u>						
	Self-esteem	1	3.67	-.0365	-	.0008	.0556
	Extracurricular activities	1	26.53	.0791	-	.0056	.0000
	Religiosity	1	39.58	-.0989	-	.0084	.0000
	View of the future	1	.13	-.0055	-	.0000	.7228
	<u>Contextual</u>						
	Family support	1	6.83	-.0563	-	.0014	.0090
	Parent-adolescent communication	1	.92	.0191	-	.0002	.3388
	Peer group characteristics	1	634.80	.3987	-	.1339*	.0000
	School climate	1	8.54	-.0483	-	.0018	.0035
	Overall Model	10	113.86	-	.2402	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 71

The Multiple Regression for the Criterion Variable of Sexual Activity for African Americans (N = 3,612)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	72.87	.1324	-	.0169*	.0000
	Gender	1	61.59	-.1228	-	.0143*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.09	.0289	-	.0005	.1486
	Extracurricular activities	1	5.85	.0390	-	.0014	.0156
	Religiosity	1	56.86	-.1243	-	.0132*	.0000
	View of the future	1	3.25	-.0292	-	.0008	.0717
	<u>Contextual</u>						
	Family support	1	4.00	-.0451	-	.0009	.0457
	Parent-adolescent communication	1	3.83	-.0409	-	.0009	.0506
	Peer group characteristics	1	153.28	.2054	-	.0355*	.0000
	School climate	1	8.06	-.0492	-	.0019	.0045
	Overall Model	10	70.69	-	.1638	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 72

The Multiple Regression for the Criterion Variable of School Misconduct for African Americans (N = 3,612)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	36.06	.0884	-	.0075	.0000
	Gender	1	.06	.0035	-	.0000	.8127
	<u>Individual-Behavioral</u>						
	Self-esteem	1	20.65	-.0863	-	.0043	.0000
	Extracurricular activities	1	38.47	.0948	-	.0080	.0000
	Religiosity	1	15.44	-.0615	-	.0032	.0001
	View of the future	1	1.44	-.0184	-	.0003	.2310
	<u>Contextual</u>						
	Family support	1	16.11	-.0861	-	.0034	.0001
	Parent-adolescent communication	1	.19	-.0087	-	.0000	.6618
	Peer group characteristics	1	388.57	.3104	-	.0812*	.0000
	School climate	1	71.42	-.1389	-	.0149*	.0000
	Overall Model	10	118.48	-	.2475	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 73

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Asian Americans (N = 151)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	.06	.0177	-	.0003	.8058
	Gender	1	9.57	-.2121	-	.0426*	.0024
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.25	.1276	-	.0100*	.1359
	Extracurricular activities	1	2.81	.1190	-	.0125*	.0959
	Religiosity	1	.29	-.0388	-	.0013	.5900
	View of the future	1	.00	-.0024	-	.0000	.9744
	<u>Contextual</u>						
	Family support	1	.16	.0415	-	.0007	.6859
	Parent-adolescent communication	1	.00	.0046	-	.0000	.9596
	Peer group characteristics	1	38.56	.4621	-	.1716*	.0000
	School climate	1	10.62	-.2661	-	.0472*	.0014
	Overall Model	10	8.38	-	.3727	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 74
The Multiple Regression for the Criterion Variable of Alcohol Use for Asian Americans (N = 151)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	19.90	.3580	-	.1107*	.0000
	Gender	1	1.01	-.0770	-	.0056	.3170
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.01	.0106	-	.0001	.9116
	Extracurricular activities	1	.10	-.0250	-	.0006	.7533
	Religiosity	1	.22	-.0374	-	.0012	.6419
	View of the future	1	2.97	.1418	-	.0166*	.0868
	<u>Contextual</u>						
	Family support	1	.00	.0060	-	.0000	.9580
	Parent-adolescent communication	1	.00	-.0031	-	.0000	.9759
	Peer group characteristics	1	4.97	.1855	-	.0277*	.0274
	School climate	1	2.50	-.1443	-	.0139*	.1163
	Overall Model	10	3.87	-	.2152	-	.0001

* Note.--Change represents an R² increase of at least 0.01.

Table 75

The Multiple Regression for the Criterion Variable of Hard Drug Use for Asian Americans (N = 151)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	2.83	.1359	-	.0160*	.0950
	Gender	1	1.26	.0867	-	.0071	.2634
	<u>Individual-Behavioral</u>						
	Self-esteem	1	3.98	.1912	-	.0225*	.0480
	Extracurricular activities	1	.05	.0175	-	.0003	.8275
	Religiosity	1	.65	-.0654	-	.0037	.4202
	View of the future	1	1.49	-.1012	-	.0084	.2237
	<u>Contextual</u>						
	Family support	1	2.56	.1844	-	.0144*	.1120
	Parent-adolescent communication	1	.59	.0783	-	.0033	.4451
	Peer group characteristics	1	6.91	.2203	-	.0390*	.0095
	School climate	1	15.80	-.3656	-	.0892*	.0001
	Overall Model	10	-	3.61	.2040	-	.0003

* Note.--Change represents an R² increase of at least 0.01.

Table 76
The Multiple Regression for the Criterion Variable of Soft Drug Use for Asian Americans (N = 151)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	10.74	.2483	-	.0533*	.0013
	Gender	1	4.90	-.1603	-	.0243*	.0284
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.95	.1256	-	.0097	.1642
	Extracurricular activities	1	1.39	-.0884	-	.0069	.2403
	Religiosity	1	.22	.0360	-	.0011	.6361
	View of the future	1	.02	.0109	-	.0001	.8890
	<u>Contextual</u>						
	Family support	1	4.35	-.2253	-	.0216*	.0389
	Parent-adolescent communication	1	.89	.0906	-	.0044	.3461
	Peer group characteristics	1	10.13	.2501	-	.0503*	.0018
	School climate	1	5.88	-.2090	-	.0291*	.0166
	Overall Model	10	6.07	-	.3008	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 77

The Multiple Regression for the Criterion Variable of Sexual Activity for Asian Americans (N = 151)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	10.23	.2431	-	.0511 *	.0017
	Gender	1	1.18	-.0790	-	.0059	.2787
	<u>Individual-Behavioral</u>						
	Self-esteem	1	6.14	.2233	-	.0307 *	.0144
	Extracurricular activities	1	1.60	-.0952	-	.0080	.2077
	Religiosity	1	.04	-.0161	-	.0002	.8325
	View of the future	1	.89	.0736	-	.0045	.3462
	<u>Contextual</u>						
	Family support	1	.75	.0939	-	.0037	.3880
	Parent-adolescent communication	1	18.61	-.4146	-	.0929 *	.0000
	Peer group characteristics	1	1.11	.0832	-	.0056	.2931
	School climate	1	9.39	-.2651	-	.0469 *	.0026
	Overall Model	10	5.93	-	.2962	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 78

The Multiple Regression for the Criterion Variable of School Misconduct for Asian Americans (N = 151)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	9.95	.2253	-	.0439*	.0020
	Gender	1	2.38	-.0153	-	.0105*	.1252
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.03	.0861	-	.0046	.3113
	Extracurricular activities	1	.22	.0335	-	.0010	.6360
	Religiosity	1	.85	.0658	-	.0037	.3591
	View of the future	1	.44	-.0488	-	.0020	.5061
	<u>Contextual</u>						
	Family support	1	.01	.0088	-	.0000	.9311
	Parent-adolescent communication	1	2.62	-.1462	-	.0115*	.1079
	Peer group characteristics	1	16.01	.2964	-	.0706*	.0001
	School climate	1	17.63	-.3413	-	.0777*	.0000
Overall Model		10	8.58	-	.3782	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 79

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for European Americans (N = 10,795)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	82.14	-.0749	-	.0054	.0000
	Gender	1	394.76	-.1669	-	.0258*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.12	-.0124	-	.0001	.2903
	Extracurricular activities	1	35.88	.0519	-	.0024	.0000
	Religiosity	1	18.33	-.0377	-	.0012	.0000
	View of the future	1	7.19	.0248	-	.0005	.0074
	<u>Contextual</u>						
	Family support	1	59.77	-.1018	-	.0039	.0000
	Parent-adolescent communication	1	1.34	.0139	-	.0001	.2479
	Peer group characteristics	1	1,827.94	.4052	-	.1195*	.0000
	School climate	1	104.28	-.0996	-	.0068	.0000
	Overall Model	10	450.84	-	.2948	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 80

The Multiple Regression for the Criterion Variable of Alcohol Use for European Americans (N = 10,795)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	467.27	.1748	-	.0293*	.0000
	Gender	1	80.19	.0736	-	.0050	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	24.92	.0573	-	.0016	.0000
	Extracurricular activities	1	12.78	.0303	-	.0008	.0004
	Religiosity	1	62.72	-.0683	-	.0039	.0000
	View of the future	1	4.19	.0185	-	.0003	.0407
	<u>Contextual</u>						
	Family support	1	50.15	-.0913	-	.0031	.0000
	Parent-adolescent communication	1	8.65	.0347	-	.0005	.0033
	Peer group characteristics	1	2,531.19	.4666	-	.1585*	.0000
	School climate	1	83.24	-.0871	-	.0052	.0000
	Overall Model	10	518.72	-	.3248	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 81

The Multiple Regression for the Criterion Variable of Hard Drug Use for European Americans ($N = 10,795$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	14.96	.0357	-	.0012	.0001
	Gender	1	22.86	.0449	-	.0019	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	15.08	-.0509	-	.0012	.0001
	Extracurricular activities	1	13.63	.0537	-	.0011	.0002
	Religiosity	1	8.24	-.0283	-	.0007	.0041
	View of the future	1	10.86	.0340	-	.0009	.0010
	<u>Contextual</u>						
	Family support	1	25.54	-.0744	-	.0021	.0000
	Parent-adolescent communication	1	12.19	.0470	-	.0010	.0005
	Peer group characteristics	1	810.85	.3016	-	.0662*	.0000
	School climate	1	3.63	-.0208	-	.0003	.0569
	Overall Model	10	146.23	-	.1194	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 82

The Multiple Regression for the Criterion Variable of Soft Drug Use for European Americans ($N = 10,795$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	362.74	.1547	-	.0229*	.0000
	Gender	1	17.30	.0343	-	.0011	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.07	-.0030	-	.0000	.7965
	Extracurricular activities	1	15.36	-.0334	-	.0010	.0001
	Religiosity	1	54.97	-.0642	-	.0035	.0000
	View of the future	1	5.82	.0219	-	.0004	.0159
	<u>Contextual</u>						
	Family support	1	69.30	-.1078	-	.0044	.0000
	Parent-adolescent communication	1	63.28	.0942	-	.0040	.0000
	Peer group characteristics	1	2,323.99	.4490	-	.1468*	.0000
	School climate	1	58.22	-.0731	-	.0037	.0000
Overall Model		10	595.03	-	.3189	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 83

The Multiple Regression for the Criterion Variable of Sexual Activity for European Americans (N = 10,795)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	193.70	.1214	-	.0141*	.0000
	Gender	1	87.58	-.0830	-	.0064	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.83	.0113	-	.0001	.3636
	Extracurricular activities	1	4.77	-.0200	-	.0004	.0291
	Religiosity	1	539.55	-.2161	-	.0393*	.0000
	View of the future	1	3.07	.0171	-	.0002	.0795
	<u>Contextual</u>						
	Family support	1	16.83	-.0570	-	.0012	.0000
	Parent-adolescent communication	1	9.14	-.0385	-	.0007	.0025
	Peer group characteristics	1	428.12	.2070	-	.0312*	.0000
	School climate	1	39.50	-.0647	-	.0029	.0000
Overall Model		10	292.22	-	.2129	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 84

The Multiple Regression for the Criterion Variable of School Misconduct for European Americans (N = 10,795)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	15.93	.0329	-	.0010	.0001
	Gender	1	25.21	-.0420	-	.0016	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	3.43	.0216	-	.0002	.0641
	Extracurricular activities	1	7.56	.0237	-	.0005	.0060
	Religiosity	1	10.15	-.0280	-	.0007	.0015
	View of the future	1	.01	.0011	-	.0000	.9089
	<u>Contextual</u>						
	Family support	1	37.79	-.0807	-	.0025	.0000
	Parent-adolescent communication	1	.41	.0077	-	.0000	.5228
	Peer group characteristics	1	1,799.35	.4005	-	.1168*	.0000
	School climate	1	391.76	-.1923	-	.0254*	.0000
	Overall Model	10	462.39	-	.3001	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 85

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Latino/Hispanic (N = 418)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	.12	-.0141	-	.0002	.7336
	Gender	1	48.61	-.2918	-	.0810*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.99	-.0533	-	.0017	.3192
	Extracurricular activities	1	6.41	.1103	-	.1007*	.0117
	Religiosity	1	4.91	-.0963	-	.0082	.0272
	View of the future	1	.53	.0330	-	.0009	.4648
	<u>Contextual</u>						
	Family support	1	.71	-.0527	-	.0012	.4005
	Parent-adolescent communication	1	.03	-.0096	-	.0000	.8731
	Peer group characteristics	1	55.58	.3391	-	.0926*	.0000
	School climate	1	6.22	-.1197	-	.0104*	.0130
	Overall Model	10	19.24	-	.3204	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 86

The Multiple Regression for the Criterion Variable of Alcohol Use for Latino/Hispanic (N = 418)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	17.72	.1726	-	.0288*	.0000
	Gender	1	.08	-.0113	-	.0001	.7840
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.581	-.0402	-	.0009	.4467
	Extracurricular activities	1	.74	.0371	-	.0012	.3889
	Religiosity	1	4.85	-.0946	-	.0079	.0282
	View of the future	1	4.03	.0894	-	.0066	.0454
	<u>Contextual</u>						
	Family support	1	.37	-.0377	-	.0006	.5421
	Parent-adolescent communication	1	.71	-.0498	-	.0012	.4015
	Peer group characteristics	1	112.13	.4760	-	.1824*	.0000
	School climate	1	.49	-.0332	-	.0008	.4843
	Overall Model	10	20.66	-	.3362	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 87

The Multiple Regression for the Criterion Variable of Hard Drug Use for Latino/Hispanic (N = 418)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	1.05	.0483	-	.0023	.3060
	Gender	1	.80	-.0425	-	.0017	.3717
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.13	-.0645	-	.0024	.2882
	Extracurricular activities	1	.44	-.0329	-	.0010	.5059
	Religiosity	1	.00	.0010	-	.0000	.9841
	View of the future	1	.60	.0395	-	.0013	.4406
	<u>Contextual</u>						
	Family support	1	2.18	-.1049	-	.0047	.1407
	Parent-adolescent communication	1	1.40	.0806	-	.0030	.2376
	Peer group characteristics	1	33.26	.2978	-	.0714*	.0000
	School climate	1	.05	-.0116	-	.0001	.8308
	Overall Model	10	5.77	-	.1239	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 88

The Multiple Regression for the Criterion Variable of Soft Drug Use for Latino/Hispanic (N = 418)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	13.68	.1615	-	.0252*	.0002
	Gender	1	.67	-.0362	-	.0012	.4122
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.73	-.0480	-	.0013	.3942
	Extracurricular activities	1	.14	-.0169	-	.0003	.7133
	Religiosity	1	.69	-.0381	-	.0013	.4054
	View of the future	1	.82	.0429	-	.0015	.3664
	<u>Contextual</u>						
	Family support	1	1.72	-.0865	-	.0032	.1898
	Parent-adolescent communication	1	.59	.0486	-	.0011	.4423
	Peer group characteristics	1	63.90	.3829	-	.1181*	.0000
	School climate	1	2.31	-.0767	-	.0043	.1296
	Overall Model	10	13.32	-	.2462	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 89

The Multiple Regression for the Criterion Variable of Sexual Activity for Latino/Hispanic (N = 418)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	8.46	.1301	-	.0164*	.0038
	Gender	1	8.78	-.1336	-	.0170*	.0032
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.72	-.0755	-	.0033	.1903
	Extracurricular activities	1	.82	-.0426	-	.0016	.3645
	Religiosity	1	7.83	-.1310	-	.0152*	.0054
	View of the future	1	.06	.0117	-	.0001	.8106
	<u>Contextual</u>						
	Family support	1	.04	.0142	-	.0001	.8334
	Parent-adolescent communication	1	.69	-.0537	-	.0013	.4072
	Peer group characteristics	1	30.02	.2687	-	.0581*	.0000
	School climate	1	1.02	-.0522	-	.0020	.3130
	Overall Model	10	10.76	-	.2083	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 90

The Multiple Regression for the Criterion Variable of School Misconduct for Latino/Hispanic (N = 418)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	.56	.0318	-	.0010	.4528
	Gender	1	.67	-.0350	-	.0012	.4128
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.24	-.0269	-	.0004	.6226
	Extracurricular activities	1	1.29	.0504	-	.0022	.2571
	Religiosity	1	.45	-.0296	-	.0008	.5047
	View of the future	1	1.85	.0626	-	.0032	.1747
	<u>Contextual</u>						
	Family support	1	.28	-.0339	-	.0005	.5958
	Parent-adolescent communication	1	1.12	-.0649	-	.0019	.2906
	Peer group characteristics	1	68.29	.3838	-	.1186*	.0000
	School climate	1	15.99	-.0159	-	.0278*	.0001
	Overall Model	10	16.79	-	.2915	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 91

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Native Americans (N = 557)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Age	1	1.30	-.0430	-	.0018	.2549
	Gender	1	21.95	-.1798	-	.0295*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.15	-.0190	-	.0002	.7033
	Extracurricular activities	1	19.14	.1677	-	.0257*	.0000
	Religiosity	1	1.73	.0524	-	.0023	.1893
	View of the future	1	.47	.0273	-	.0006	.4916
	<u>Contextual</u>						
	Family support	1	4.49	-.1167	-	.0060	.0346
	Parent-adolescent communication	1	1.27	.0584	-	.0017	.2604
	Peer group characteristics	1	77.10	.3685	-	.1037*	.0000
	School climate	1	6.50	-.1096	-	.0087	.0111
	Overall Model	10	19.64	-	.2642	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 92

The Multiple Regression for the Criterion Variable of Alcohol Use for Native Americans (N = 557)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Age	1	48.04	.2504	-	.0593*	.0000
	Gender	1	.02	.0046	-	.0000	.8995
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.18	.0517	-	.0015	.2785
	Extracurricular activities	1	28.77	.1970	-	.0355*	.0000
	Religiosity	1	2.13	-.0558	-	.0026	.1448
	View of the future	1	.02	-.0049	-	.0000	.8971
	<u>Contextual</u>						
	Family support	1	4.81	-.1157	-	.0059	.0287
	Parent-adolescent communication	1	.00	.0008	-	.0000	.9869
	Peer group characteristics	1	92.02	.3858	-	.1137*	.0000
	School climate	1	2.92	-.0704	-	.0036	.0879
	Overall Model	10	26.27	-	.3245	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 93

The Multiple Regression for the Criterion Variable of Hard Drug Use for Native Americans (N = 557)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	4.44	.0855	-	.0069	.0356
	Gender	1	1.84	.0560	-	.0029	.1760
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.06	-.0132	-	.0001	.8058
	Extracurricular activities	1	9.12	.1247	-	.0142*	.0026
	Religiosity	1	2.43	-.0669	-	.0038	.1197
	View of the future	1	6.73	.1108	-	.0105*	.0097
	<u>Contextual</u>						
	Family support	1	13.15	-.2151	-	.0205*	.0003
	Parent-adolescent communication	1	1.53	.0690	-	.0024	.2168
	Peer group characteristics	1	19.93	.2018	-	.0311*	.0000
	School climate	1	3.93	-.0917	-	.0061	.0480
	Overall Model	10	9.41	-	.1468	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 94

The Multiple Regression for the Criterion Variable of Soft Drug Use for Native Americans (N = 557)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Age	1	60.78	.2848	-	.0768*	.0000
	Gender	1	.84	.0342	-	.0011	.3589
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.03	.0088	-	.0000	.8555
	Extracurricular activities	1	2.60	.0599	-	.0033	.1077
	Religiosity	1	5.51	-.0906	-	.0070	.0193
	View of the future	1	.13	.0140	-	.0002	.7159
	<u>Contextual</u>						
	Family support	1	3.55	-.1006	-	.0045	.0600
	Parent-adolescent communication	1	.04	.0099	-	.0001	.8444
	Peer group characteristics	1	75.30	.3529	-	.0951*	.0000
	School climate	1	1.29	-.0474	-	.0016	.2559
	Overall Model	10	24.47	-	.3091	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 95

The Multiple Regression for the Criterion Variable of Sexual Activity for Native Americans (N = 557)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Age	1	35.77	.2346	-	.0521*	.0000
	Gender	1	1.28	-.0453	-	.0019	.2575
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.75	-.0859	-	.0040	.0978
	Extracurricular activities	1	4.94	.0886	-	.0072	.0266
	Religiosity	1	7.89	-.1164	-	.0115*	.0051
	View of the future	1	3.24	.0742	-	.0047	.0723
	<u>Contextual</u>						
	Family support	1	.08	.0163	-	.0001	.7759
	Parent-adolescent communication	1	1.44	-.0646	-	.0021	.2311
	Peer group characteristics	1	30.47	.2410	-	.0444*	.0000
	School climate	1	.17	-.0186	-	.0003	.6772
	Overall Model	10	13.90	-	.2024	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 96

The Multiple Regression for the Criterion Variable of School Misconduct for Native Americans ($N = 557$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Age	1	5.48	.0885	-	.0074	.0196
	Gender	1	9.38	-.1179	-	.0127*	.0023
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.03	-.0091	-	.0001	.8551
	Extracurricular activities	1	11.71	.1316	-	.0159*	.0007
	Religiosity	1	.46	-.0271	-	.0006	.4979
	View of the future	1	1.24	-.0444	-	.0017	.2653
	<u>Contextual</u>						
	Family support	1	1.72	-.0724	-	.0023	.1904
	Parent-adolescent communication	1	.04	.0100	-	.0001	.8471
	Peer group characteristics	1	60.31	.3270	-	.0816*	.0000
	School climate	1	15.54	-.1699	-	.0210*	.0001
	Overall Model	10	19.17	-	.2596	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 97

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Adolescents Age 12 (N = 1,736)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Gender	1	23.17	-.1022	-	.0099	.0000
	Ethnicity/Race	1	67.34	-.1749	-	.0288*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.53	-.0396	-	.0007	.2158
	Extracurricular activities	1	10.40	.0698	-	.0045	.0013
	Religiosity	1	7.40	-.0603	-	.0032	.0066
	View of the future	1	1.55	.0290	-	.0007	.2128
	<u>Contextual</u>						
	Family support	1	14.88	-.1278	-	.0064	.0001
	Parent-adolescent communication	1	4.03	.0602	-	.0017	.0450
	Peer group characteristics	1	193.95	.3280	-	.0830*	.0000
	School climate	1	19.02	-.1111	-	.0081	.0000
Overall Model		10	61.09	-	.2614	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 98

The Multiple Regression for the Criterion Variable of Alcohol Use for Adolescents Age 12 (N = 1,736)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Gender	1	6.58	.0573	-	.0031	.0104
	Ethnicity/Race	1	7.26	-.0674	-	.0034	.0071
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.24	-.0374	-	.0006	.2651
	Extracurricular activities	1	17.93	.0963	-	.0085	.0000
	Religiosity	1	13.30	-.0850	-	.0063	.0003
	View of the future	1	.31	.0137	-	.0002	.5766
	<u>Contextual</u>						
	Family support	1	2.43	-.0543	-	.0012	.1193
	Parent-adolescent communication	1	1.07	.0327	-	.0005	.3005
	Peer group characteristics	1	202.62	.3523	-	.0958*	.0000
	School climate	1	5.24	-.0613	-	.0025	.0222
	Overall Model	10	39.00	-	.1843	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 99

The Multiple Regression for the Criterion Variable of Hard Drug Use for Adolescents Age 12 (N = 1,736)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.48	.0165	-	.0003	.4879
	Ethnicity/Race	1	2.90	-.0407	-	.0016	.0885
	<u>Individual-Behavioral</u>						
	Self-esteem	1	4.47	-.0757	-	.0024	.0347
	Extracurricular activities	1	8.52	.0707	-	.0046	.0036
	Religiosity	1	4.24	-.0512	-	.0023	.0396
	View of the future	1	7.44	.0712	-	.0040	.0064
	<u>Contextual</u>						
	Family support	1	.77	-.0327	-	.0004	.3789
	Parent-adolescent communication	1	.52	-.0242	-	.0003	.4712
	Peer group characteristics	1	53.83	.1935	-	.0289*	.0000
	School climate	1	.32	-.0162	-	.0002	.5714
	Overall Model	10	13.67	-	.0734	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 100

The Multiple Regression for the Criterion Variable of Soft Drug Use for Adolescents Age 12 (N = 1,736)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	3.11	.0392	-	.0015	.0782
	Ethnicity/Race	1	2.75	-.0370	-	.0013	.0976
	<u>Individual-Behavioral</u>						
	Self-esteem	1	6.93	-.0882	-	.0033	.0085
	Extracurricular activities	1	8.33	.0654	-	.0039	.0039
	Religiosity	1	17.56	-.0974	-	.0083	.0000
	View of the future	1	3.27	.0441	-	.0015	.0708
	<u>Contextual</u>						
	Family support	1	13.12	-.1257	-	.0062	.0003
	Parent-adolescent communication	1	2.27	.0474	-	.0011	.1322
	Peer group characteristics	1	182.40	.3332	-	.0857*	.0000
	School climate	1	.06	-.0067	-	.0000	.8023
Overall Model		18	40.32	-	.1894	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 101

The Multiple Regression for the Criterion Variable of Sexual Activity for Adolescents Age 12 ($N = 1,736$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Gender	1	56.02	-.1635	-	.0254*	.0000
	Ethnicity/Race	1	21.92	-.1026	-	.0099	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.74	.0283	-	.0003	.3902
	Extracurricular activities	1	.38	-.0137	-	.0002	.5371
	Religiosity	1	54.44	-.1684	-	.0246*	.0000
	View of the future	1	.21	-.0109	-	.0001	.6505
	<u>Contextual</u>						
	Family support	1	.06	.0086	-	.0000	.8000
	Parent-adolescent communication	1	13.45	-.1129	-	.0061	.0003
	Peer group characteristics	1	91.11	.2311	-	.0412*	.0000
	School climate	1	12.12	-.0912	-	.0055	.0005
	Overall Model	10	47.82	-	.2165	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 102

The Multiple Regression for the Criterion Variable of School Misconduct for Adolescents Age 12 ($N = 1,736$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Gender	1	7.06	-.0565	-	.0030	.0080
	Ethnicity/Race	1	8.54	-.0624	-	.0037	.0035
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.61	-.0250	-	.0003	.4352
	Extracurricular activities	1	5.31	.0499	-	.0023	.0213
	Religiosity	1	1.93	-.0309	-	.0008	.1650
	View of the future	1	2.84	-.0393	-	.0012	.0920
	<u>Contextual</u>						
	Family support	1	4.25	-.0684	-	.0018	.0394
	Parent-adolescent communication	1	.04	-.0062	-	.0000	.8364
	Peer group characteristics	1	217.73	.3479	-	.0934*	.0000
	School climate	1	37.25	-.1557	-	.0160*	.0000
	Overall Model	10	60.51	-	.2596	-	.0000

* Note.--Change represents an R^2 increase of at least 0.01.

Table 103

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Adolescents Age 13 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Gender	1	66.79	-.1302	-	.0159*	.0000
	Ethnicity/Race	1	53.94	-.1163	-	.0129*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.00	.0000	-	.0000	.9953
	Extracurricular activities	1	45.69	.1098	-	.0109*	.0000
	Religiosity	1	13.18	-.0606	-	.0031	.0003
	View of the future	1	.29	.0093	-	.0001	.5881
	<u>Contextual</u>						
	Family support	1	29.80	-.1321	-	.0071	.0000
	Parent-adolescent communication	1	1.38	.0263	-	.0003	.2407
	Peer group characteristics	1	492.99	.3938	-	.1176*	.0000
	School climate	1	18.89	-.0803	-	.0045	.0000
	Overall Model	10	121.60	-	.2901	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 104

The Multiple Regression for the Criterion Variable of Alcohol Use for Adolescents Age 13 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Gender	1	22.83	.0794	-	.0059	.3657
	Ethnicity/Race	1	1.63	-.0211	-	.0004	.2024
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.37	.0270	-	.0004	.2416
	Extracurricular activities	1	23.80	.0826	-	.0062	.0000
	Religiosity	1	11.38	-.0588	-	.0030	.0008
	View of the future	1	.52	.0130	-	.0001	.4688
	<u>Contextual</u>						
	Family support	1	22.79	-.1204	-	.0059	.0000
	Parent-adolescent communication	1	.17	.0096	-	.0000	.6802
	Peer group characteristics	1	509.72	.4175	-	.1322*	.0000
	School climate	1	6.15	-.0478	-	.0016	.0132
	Overall Model	10	87.91	-	.2280	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 105

The Multiple Regression for the Criterion Variable of Hard Drug Use for Adolescents Age 13 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	2.07	.0257	-	.0006	.1507
	Ethnicity/Race	1	7.82	.0497	-	.0024	.0052
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.27	-.0280	-	.0004	.2602
	Extracurricular activities	1	6.48	.0464	-	.0020	.0110
	Religiosity	1	.05	-.0041	-	.0000	.8263
	View of the future	1	2.92	-.0330	-	.0009	.0874
	<u>Contextual</u>						
	Family support	1	11.62	-.0926	-	.0035	.0007
	Parent-adolescent communication	1	2.54	.0401	-	.0008	.1111
	Peer group characteristics	1	189.05	.2739	-	.0569*	.0000
	School climate	1	1.22	-.0229	-	.0004	.2695
	Overall Model	10	34.71	-	.1044	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 106

The Multiple Regression for the Criterion Variable of Soft Drug Use for Adolescents Age 13 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	4.81	.0370	-	.0013	.0283
	Ethnicity/Race	1	.73	.0143	-	.0002	.3928
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.01	.0017	-	.0000	.9409
	Extracurricular activities	1	3.23	.0309	-	.0009	.0722
	Religiosity	1	9.11	-.0534	-	.0024	.0026
	View of the future	1	.27	-.0094	-	.0001	.6046
	<u>Contextual</u>						
	Family support	1	16.86	-.1052	-	.0045	.0000
	Parent-adolescent communication	1	4.83	.0521	-	.0013	.0280
	Peer group characteristics	1	453.10	.3996	-	.1211*	.0000
	School climate	1	6.92	-.0515	-	.0019	.0086
	Overall Model	10	76.50	-	.2045	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 107

The Multiple Regression for the Criterion Variable of Sexual Activity for Adolescents Age 13 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Gender	1	92.60	-.1637	-	.0252*	.0000
	Ethnicity/Race	1	24.06	-.0830	-	.0066	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.17	.0097	-	.0001	.6806
	Extracurricular activities	1	5.88	.0421	-	.0016	.0154
	Religiosity	1	27.77	-.0941	-	.0076	.0000
	View of the future	1	.40	.0117	-	.0001	.5249
	<u>Contextual</u>						
	Family support	1	10.98	-.0857	-	.0030	.0009
	Parent-adolescent communication	1	2.66	-.0391	-	.0007	.0128
	Peer group characteristics	1	144.30	.2277	-	.0393*	.0000
	School climate	1	31.11	-.1102	-	.0085	.0000
	Overall Model	10	69.29	-	.1887	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 108

The Multiple Regression for the Criterion Variable of School Misconduct for Adolescents Age 13 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Gender	1	.85	-.0148	-	.0002	.3570
	Ethnicity/Race	1	15.02	-.0618	-	.0036	.0001
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.36	.0134	-	.0001	.5465
	Extracurricular activities	1	15.45	.0643	-	.0037	.0001
	Religiosity	1	3.05	-.0294	-	.0007	.0811
	View of the future	1	.06	.0042	-	.0000	.8965
	<u>Contextual</u>						
	Family support	1	40.04	-.1542	-	.0097	.0000
	Parent-adolescent communication	1	.64	.0181	-	.0002	.4228
	Peer group characteristics	1	445.00	.3769	-	.1077*	.0000
	School climate	1	70.23	-.1560	-	.0170*	.0000
	Overall Model	10	115.43	-	.2795	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 109

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Adolescents Age 14 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Gender	1	142.28	-.1803	-	.0306*	.3657
	Ethnicity/Race	1	78.62	-.1340	-	.0169*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.42	-.0319	-	.0005	.1202
	Extracurricular activities	1	28.10	.0822	-	.0060	.0000
	Religiosity	1	26.90	-.0825	-	.0058	.0000
	View of the future	1	2.18	.0240	-	.0005	.1404
	<u>Contextual</u>						
	Family support	1	10.79	-.0766	-	.0023	.0010
	Parent-adolescent communication	1	.26	.0110	-	.0001	.6071
	Peer group characteristics	1	578.99	.3976	-	.1243*	.0000
	School climate	1	34.80	-.1007	-	.0075	.0000
	Overall Model	10	150.66	-	.3235	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 110

The Multiple Regression for the Criterion Variable of Alcohol Use for Adolescents Age 14 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Gender	1	15.79	.0621	-	.0036	.0001
	Ethnicity/Race	1	1.38	-.0183	-	.0003	.2404
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.42	.0330	-	.0006	.1201
	Extracurricular activities	1	29.53	.0871	-	.0068	.0000
	Religiosity	1	33.23	-.0948	-	.0076	.0000
	View of the future	1	.03	.0030	-	.0000	.8604
	<u>Contextual</u>						
	Family support	1	15.26	-.0942	-	.0035	.0001
	Parent-adolescent communication	1	.47	.0152	-	.0001	.4920
	Peer group characteristics	1	705.99	.4539	-	.1621*	.0000
	School climate	1	22.61	-.0839	-	.0052	.0000
Overall Model		10	120.56	-	.2767	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 111

The Multiple Regression for the Criterion Variable of Hard Drug Use for Adolescents Age 14 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.38	-.0109	-	.0001	.5379
	Ethnicity/Race	1	1.85	.0241	-	.0006	.1735
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.23	-.0359	-	.0007	.1353
	Extracurricular activities	1	5.87	.0440	-	.0017	.0155
	Religiosity	1	2.82	-.0313	-	.0008	.0933
	View of the future	1	.54	-.0141	-	.0002	.4608
	<u>Contextual</u>						
	Family support	1	21.19	-.1258	-	.0063	.0000
	Parent-adolescent communication	1	2.73	.0413	-	.0008	.0987
	Peer group characteristics	1	87.26	.1809	-	.0257*	.0000
	School climate	1	1.16	-.0215	-	.0003	.2815
	Overall Model	10	24.00	-	.0708	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 112

The Multiple Regression for the Criterion Variable of Soft Drug Use for Adolescents Age 14 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	1.28	.0178	-	.0003	.2573
	Ethnicity/Race	1	6.96	.0415	-	.0016	.0084
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.17	-.0231	-	.0003	.2804
	Extracurricular activities	1	.00	.0000	-	.0000	.9931
	Religiosity	1	18.81	-.0718	-	.0044	.0000
	View of the future	1	.27	.0088	-	.0001	.6028
	<u>Contextual</u>						
	Family support	1	10.84	-.0799	-	.0025	.0010
	Parent-adolescent communication	1	1.08	.0231	-	.0003	.2980
	Peer group characteristics	1	647.32	.4375	-	.1506*	.0000
	School climate	1	17.25	-.0738	-	.0040	.0000
	Overall Model	10	114.850	-	.2671	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 113

The Multiple Regression for the Criterion Variable of Sexual Activity for Adolescents Age 14 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Gender	1	49.85	-.1180	-	.0131*	.0000
	Ethnicity/Race	1	54.07	-.1229	-	.0142*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.00	.0015	-	.0000	.9459
	Extracurricular activities	1	.07	-.0046	-	.0000	.7903
	Religiosity	1	91.06	-.1678	-	.0239*	.0000
	View of the future	1	1.56	-.0225	-	.0004	.2125
	<u>Contextual</u>						
	Family support	1	1.63	-.0329	-	.0004	.2019
	Parent-adolescent communication	1	2.80	-.0394	-	.0007	.0945
	Peer group characteristics	1	158.90	.2303	-	.0417*	.0000
	School climate	1	4.01	-.0378	-	.0011	.0453
	Overall Model	10	65.23	-	.1712	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 114

The Multiple Regression for the Criterion Variable of School Misconduct for Adolescents Age 14 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Gender	1	8.51	-.0450	-	.0019	.0036
	Ethnicity/Race	1	41.15	-.0990	-	.0092	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.23	-.0100	-	.0001	.6325
	Extracurricular activities	1	10.96	.0524	-	.0025	.0009
	Religiosity	1	3.81	-.0317	-	.0009	.0512
	View of the future	1	.06	-.0039	-	.0000	.8141
	<u>Contextual</u>						
	Family support	1	2.15	-.0350	-	.0005	.1422
	Parent-adolescent communication	1	2.54	-.0347	-	.0006	.1111
	Peer group characteristics	1	553.12	.3969	-	.1239*	.0000
	School climate	1	95.79	-.0715	-	.0215*	.0000
	Overall Model	10	131.43	-	.2943	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 115

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Adolescents Age 15 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Gender	1	121.641	-.1703	-	.0276*	.0000
	Ethnicity/Race	1	96.35	-.1512	-	.0219*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.00	-.0014	-	.0000	.9454
	Extracurricular activities	1	27.13	.0836	-	.0062	.0000
	Religiosity	1	11.70	-.0557	-	.0027	.0006
	View of the future	1	2.26	.0253	-	.0005	.1333
	<u>Contextual</u>						
	Family support	1	17.04	-.0991	-	.0039	.0000
	Parent-adolescent communication	1	3.70	.0427	-	.0008	.0544
	Peer group characteristics	1	574.17	.4077	-	.1302*	.0000
	School climate	1	33.62	-.1028	-	.0076	.0000
	Overall Model	10	139.77	-	.3169	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 116

The Multiple Regression for the Criterion Variable of Alcohol Use for Adolescents Age 15 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Gender	1	7.09	.0419	-	.0017	.0078
	Ethnicity/Race	1	.53	-.0114	-	.0001	.4678
	<u>Individual-Behavioral</u>						
	Self-esteem	1	3.21	.0383	-	.0008	.0735
	Extracurricular activities	1	12.05	.0568	-	.0028	.0005
	Religiosity	1	48.00	-.1151	-	.0113*	.0000
	View of the future	1	.90	.0163	-	.0002	.3432
	<u>Contextual</u>						
	Family support	1	15.35	-.0960	-	.0036	.0001
	Parent-adolescent communication	1	2.49	.0357	-	.0006	.1148
	Peer group characteristics	1	722.76	.4664	-	.1704*	.0000
	School climate	1	24.65	-.0897	-	.0058	.0000
	Overall Model	10	122.96	-	.2898	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 117

The Multiple Regression for the Criterion Variable of Hard Drug Use for Adolescents Age 15 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	10.04	.0556	-	.0029	.0016
	Ethnicity/Race	1	15.47	.0689	-	.0045	.0001
	<u>Individual-Behavioral</u>						
	Self-esteem	1	6.59	-.0612	-	.0019	.0103
	Extracurricular activities	1	9.62	.0566	-	.0028	.0019
	Religiosity	1	5.34	-.0428	-	.0016	.0210
	View of the future	1	9.80	.0599	-	.0029	.0018
	<u>Contextual</u>						
	Family support	1	3.60	-.0518	-	.0011	.0578
	Parent-adolescent communication	1	1.76	.0334	-	.0005	.1847
	Peer group characteristics	1	244.51	.3024	-	.0716*	.0000
	School climate	1	4.10	-.0408	-	.0012	.0431
	Overall Model	10	40.10	-	.1175	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 118

The Multiple Regression for the Criterion Variable of Soft Drug Use for Adolescents Age 15 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.00	.0005	-	.0000	.9746
	Ethnicity/Race	1	7.62	.0434	-	.0018	.0058
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.32	-.0121	-	.0001	.5710
	Extracurricular activities	1	.20	-.0074	-	.0001	.6521
	Religiosity	1	31.58	-.0935	-	.0075	.0000
	View of the future	1	.95	.0167	-	.0002	.3310
	<u>Contextual</u>						
	Family support	1	28.58	-.1312	-	.0068	.0000
	Parent-adolescent communication	1	16.85	.0929	-	.0040	.0000
	Peer group characteristics	1	690.30	.4567	-	.1633*	.0000
	School climate	1	12.36	-.0637	-	.0029	.0004
	Overall Model	10	121.37	-	.2872	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 119

The Multiple Regression for the Criterion Variable of Sexual Activity for Adolescents Age 15 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Gender	1	19.32	-.0741	-	.0052	.0000
	Ethnicity/Race	1	33.84	-.0979	-	.0092	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.79	.0204	-	.0002	.3727
	Extracurricular activities	1	.91	-.0167	-	.0002	.3413
	Religiosity	1	130.73	-.2035	-	.0354*	.0000
	View of the future	1	3.78	.0358	-	.0010	.0519
	<u>Contextual</u>						
	Family support	1	2.38	-.0405	-	.0006	.1230
	Parent-adolescent communication	1	4.85	-.0533	-	.0013	.0277
	Peer group characteristics	1	143.27	.22225	-	.0388*	.0000
	School climate	1	14.93	-.0748	-	.0040	.0001
	Overall Model	10	68.03	-	.1840	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 120

The Multiple Regression for the Criterion Variable of School Misconduct for Adolescents Age 15 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Gender	1	5.74	-.0379	-	.0014	.0167
	Ethnicity/Race	1	59.73	-.1220	-	.0142*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.00	.0214	-	.0002	.3182
	Extracurricular activities	1	5.85	.0399	-	.0014	.0153
	Religiosity	1	3.35	-.0306	-	.0008	.0672
	View of the future	1	2.27	.0260	-	.0005	.1316
	<u>Contextual</u>						
	Family support	1	9.02	-.0740	-	.0022	.0027
	Parent-adolescent communication	1	.21	-.0103	-	.0001	.6504
	Peer group characteristics	1	438.07	.3651	-	.1044*	.0000
	School climate	1	130.30	-.2074	-	.0310*	.0000
Overall Model		10	118.42	-	.2821	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 121

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Adolescents Age 16 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Gender	1	129.73	-.1956	-	.0350 *	.0000
	Ethnicity/Race	1	54.99	-.1249	-	.0148 *	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	2.27	-.0349	-	.0006	.1318
	Extracurricular activities	1	22.51	.0844	-	.0061	.0000
	Religiosity	1	6.71	-.0469	-	.0018	.0096
	View of the future	1	1.91	.0252	-	.0005	.1676
	<u>Contextual</u>						
	Family support	1	1.04	-.0266	-	.0003	.3091
	Parent-adolescent communication	1	.09	-.0070	-	.0000	.7701
	Peer group characteristics	1	356.64	.3609	-	.0962 *	.0000
	School climate	1	50.37	-.1377	-	.0136 *	.0000
	Overall Model	10	112.43	-	.3033	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 122

The Multiple Regression for the Criterion Variable of Alcohol Use for Adolescents Age 16 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>							
<u>Individual-Organismic</u>							
	Gender	1	2.41	.0272	-	.0007	.1206
	Ethnicity/Race	1	.68	.0141	-	.0002	.4110
<u>Individual-Behavioral</u>							
	Self-esteem	1	2.82	.0397	-	.0008	.0930
	Extracurricular activities	1	7.88	.0510	-	.0022	.0050
	Religiosity	1	27.62	-.0972	-	.0078	.0000
	View of the future	1	.00	.0000	-	.0000	.9926
<u>Contextual</u>							
	Family support	1	6.70	-.0691	-	.0019	.0097
	Parent-adolescent communication	1	1.06	.0253	-	.0003	.3031
	Peer group characteristics	1	567.78	.4651	-	.1598*	.0000
	School climate	1	18.36	-.0849	-	.0052	.0000
Overall Model		10	97.10	-	.2732	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 123

The Multiple Regression for the Criterion Variable of Hard Drug Use for Adolescents Age 16 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.04	.0037	-	.0000	.8492
	Ethnicity/Race	1	.00	.0010	-	.0000	.9603
	<u>Individual-Behavioral</u>						
	Self-esteem	1	13.54	-.0972	-	.0048	.0002
	Extracurricular activities	1	5.79	.0489	-	.0020	.0162
	Religiosity	1	10.67	-.0675	-	.0038	.0011
	View of the future	1	2.13	.0304	-	.0008	.1448
	<u>Contextual</u>						
	Family support	1	3.34	-.0546	-	.0012	.0676
	Parent-adolescent communication	1	.76	.0240	-	.0003	.3833
	Peer group characteristics	1	106.28	.2250	-	.0374*	.0000
	School climate	1	.59	-.0170	-	.0002	.4419
	Overall Model	10	25.92	-	.0912	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 124

The Multiple Regression for the Criterion Variable of Soft Drug Use for Adolescents Age 16 ($N = 2,986$)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.01	.0019	-	.0000	.9119
	Ethnicity/Race	1	12.63	.0604	-	.0035	.0004
	<u>Individual-Behavioral</u>						
	Self-esteem	1	10.28	-.0748	-	.0028	.0014
	Extracurricular activities	1	.37	-.0108	-	.0001	.5457
	Religiosity	1	45.13	-.1227	-	.0124	.0000
	View of the future	1	.08	.0052	-	.0000	.7778
	<u>Contextual</u>						
	Family support	1	4.81	-.0578	-	.0013	.0283
	Parent-adolescent communication	1	15.54	.0958	-	.0043	.0001
	Peer group characteristics	1	473.65	.4196	-	.1300*	.0000
	School climate	1	23.68	.0953	-	.0065	.0000
Overall Model		10	106.05	-	.2911	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 125

The Multiple Regression for the Criterion Variable of Sexual Activity for Adolescents Age 16 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Gender	1	5.08	-.0415	-	.0016	.0244
	Ethnicity/Race	1	59.76	-.1398	-	.0186*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.69	-.0207	-	.0002	.4050
	Extracurricular activities	1	.58	-.0146	-	.0002	.4445
	Religiosity	1	132.36	-.2236	-	.0411*	.0000
	View of the future	1	2.25	.0294	-	.0007	.1335
	<u>Contextual</u>						
	Family support	1	3.17	-.0499	-	.0010	.0752
	Parent-adolescent communication	1	1.77	-.0344	-	.0006	.1837
	Peer group characteristics	1	119.96	.2247	-	.0373*	.0000
	School climate	1	.59	-.0159	-	.0002	.4440
Overall Model		10	63.23	-	.1965	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 126

The Multiple Regression for the Criterion Variable of School Misconduct for Adolescents Age 16 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Gender	1	5.76	-.0416	-	.0016	.0164
	Ethnicity/Race	1	50.51	-.1207	-	.0139*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.97	-.0229	-	.0003	.3258
	Extracurricular activities	1	9.33	.0548	-	.0026	.0023
	Religiosity	1	3.04	-.0318	-	.0008	.0815
	View of the future	1	.12	-.0063	-	.0000	.7331
	<u>Contextual</u>						
	Family support	1	5.34	-.0609	-	.0015	.0209
	Parent-adolescent communication	1	.83	.0221	-	.0002	.3626
	Peer group characteristics	1	383.81	.3777	-	.1053*	.0000
	School climate	1	95.91	-.1917	-	.0263*	.0000
Overall Model		10	106.07	-	.2911	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 127

The Multiple Regression for the Criterion Variable of Antisocial Behavior/Delinquency for Adolescents Age 17 (N = 2,986)

Criterion Variable	Predictor Variable	df	F	Standardized Beta	R ²	R ² Change	Significance
<u>Antisocial Behavior/Delinquency</u>	<u>Individual-Organismic</u>						
	Gender	1	88.58	-.1864	-	.0330 *	.0000
	Ethnicity/Race	1	25.24	-.0987	-	.0094	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.40	-.0307	-	.0005	.2365
	Extracurricular activities	1	2.93	.0353	-	.0011	.0872
	Religiosity	1	.17	-.0087	-	.0001	.6773
	View of the future	1	.04	-.0041	-	.0000	.8507
	<u>Contextual</u>						
	Family support	1	10.88	-.0972	-	.0041	.0010
	Parent-adolescent communication	1	1.54	.0346	-	.0006	.2146
	Peer group characteristics	1	273.04	.3603	-	.1017 *	.0000
	School climate	1	8.07	-.0636	-	.0030	.0045
	Overall Model	10	66.26	-	.2467	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 128

The Multiple Regression for the Criterion Variable of Alcohol Use for Adolescents Age 17 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Alcohol Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.65	.0154	-	.0002	.4199
	Ethnicity/Race	1	.25	.0095	-	.0001	.6142
	<u>Individual-Behavioral</u>						
	Self-esteem	1	1.49	.3005	-	.0005	.2221
	Extracurricular activities	1	3.32	.0363	-	.0012	.0684
	Religiosity	1	13.87	-.0748	-	.0048	.0002
	View of the future	1	8.53	.0614	-	.0030	.0035
	<u>Contextual</u>						
	Family support	1	3.67	-.0544	-	.0013	.0554
	Parent-adolescent communication	1	1.14	.0287	-	.0004	.2853
	Peer group characteristics	1	529.82	.4834	-	.1830*	.0000
	School climate	1	34.63	-.1268	-	.0120*	.0000
	Overall Model	10	87.20	-	.3012	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 129

The Multiple Regression for the Criterion Variable of Hard Drug Use for Adolescents Age 17 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Hard Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	7.31	.0585	-	.0033	.0069
	Ethnicity/Race	1	1.02	.0216	-	.0005	.3137
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.58	-.0215	-	.0003	.4477
	Extracurricular activities	1	.33	.0129	-	.0001	.5681
	Religiosity	1	3.18	-.0406	-	.0014	.0745
	View of the future	1	.06	-.0057	-	.0000	.8108
	<u>Contextual</u>						
	Family support	1	11.19	-.1076	-	.0050	.0008
	Parent-adolescent communication	1	5.67	.0724	-	.0025	.0174
	Peer group characteristics	1	126.53	.2679	-	.0562*	.0000
	School climate	1	1.89	-.0336	-	.0008	.1695
	Overall Model	10	22.89	-	.1017	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 130

The Multiple Regression for the Criterion Variable of Soft Drug Use for Adolescents Age 17 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Soft Drug Use</u>	<u>Individual-Organismic</u>						
	Gender	1	.42	-.0123	-	.0001	.5194
	Ethnicity/Race	1	3.05	.0331	-	.0011	.0809
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.03	-.0043	-	.0000	.8646
	Extracurricular activities	1	.01	-.0019	-	.0000	.9242
	Religiosity	1	14.85	-.0775	-	.0052	.0001
	View of the future	1	2.11	.0306	-	.0007	.1462
	<u>Contextual</u>						
	Family support	1	18.03	-.1206	-	.0063	.0000
	Parent-adolescent communication	1	11.67	.0918	-	.0041	.0006
	Peer group characteristics	1	474.27	.4582	-	.1644*	.0000
	School climate	1	21.34	-.0997	-	.0074	.0000
	Overall Model	10	86.23	-	.2989	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 131
The Multiple Regression for the Criterion Variable of Sexual Activity for Adolescents Age 17 (N = 2,986)

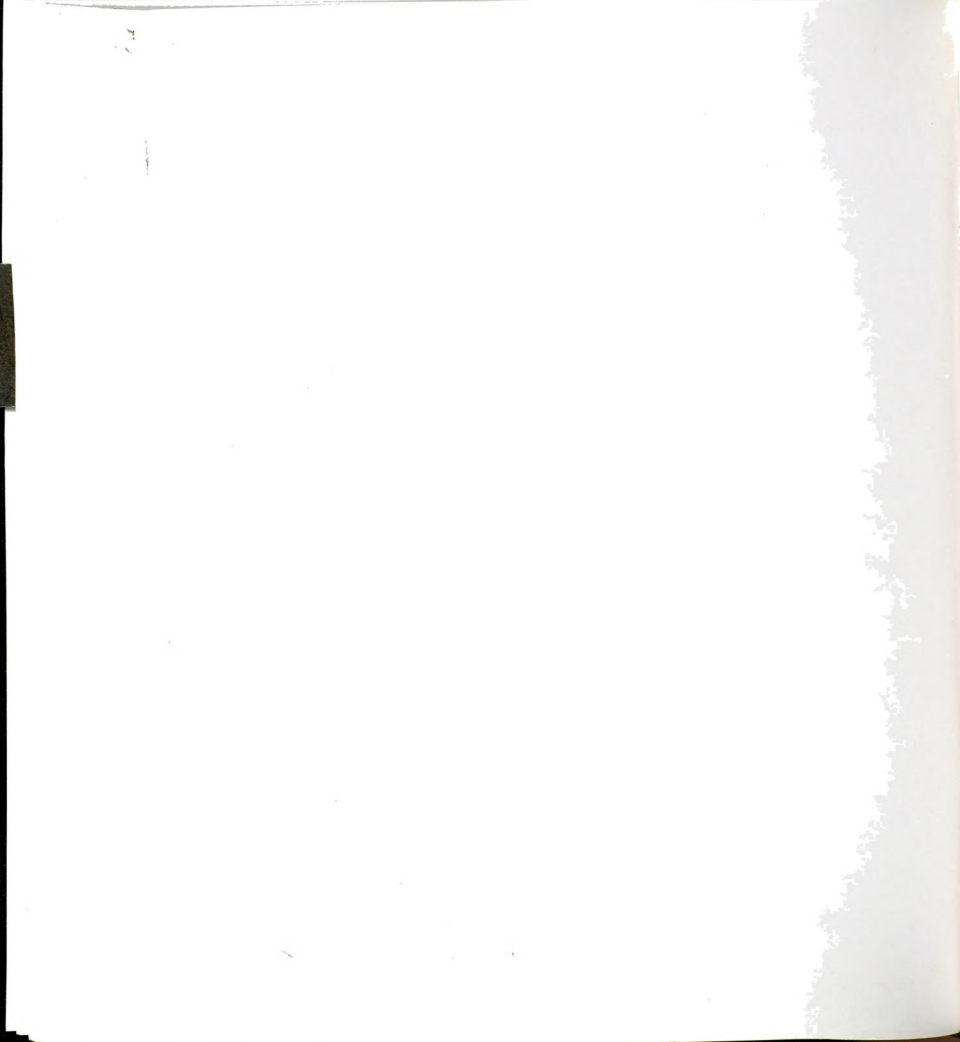
<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>Sexual Activity</u>	<u>Individual-Organismic</u>						
	Gender	1	.00	.0005	-	.0000	.9801
	Ethnicity/Race	1	56.28	-.1559	-	.0234*	.0000
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.16	.0110	-	.0001	.6880
	Extracurricular activities	1	1.95	-.0305	-	.0008	.1623
	Religiosity	1	85.12	-.2034	-	.0354*	.0000
	View of the future	1	.05	.0052	-	.0000	.8228
	<u>Contextual</u>						
	Family support	1	3.20	-.0555	-	.0013	.0738
	Parent-adolescent communication	1	.69	-.0243	-	.0003	.4077
	Peer group characteristics	1	69.35	.1922	-	.0289*	.0000
	School climate	1	3.81	-.0463	-	.0016	.0510
	Overall Model	10	37.60	-	.1565	-	.0000

* Note.--Change represents an R² increase of at least 0.01.

Table 132
The Multiple Regression for the Criterion Variable of School Misconduct for Adolescents Age 17 (N = 2,986)

<u>Criterion Variable</u>	<u>Predictor Variable</u>	<u>df</u>	<u>F</u>	<u>Standardized Beta</u>	<u>R²</u>	<u>R² Change</u>	<u>Significance</u>
<u>School Misconduct</u>	<u>Individual-Organismic</u>						
	Gender	1	.87	-.0184	-	.0003	.3503
	Ethnicity/Race	1	15.17	-.0759	-	.0056	.0001
	<u>Individual-Behavioral</u>						
	Self-esteem	1	.45	-.0172	-	.0002	.5037
	Extracurricular activities	1	.17	-.0084	-	.0001	.6829
	Religiosity	1	.29	-.0111	-	.0001	.5902
	View of the future	1	.01	.0025	-	.0000	.9070
	<u>Contextual</u>						
	Family support	1	8.32	-.0843	-	.0031	.0040
	Parent-adolescent communication	1	.14	.0105	-	.0001	.7045
	Peer group characteristics	1	270.26	.3557	-	.0991*	.0000
	School climate	1	70.60	-.1865	-	.0259*	.0000
	Overall Model	10	70.48	-	.2584	-	.0000

* Note.--Change represents an R² increase of at least 0.01.





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