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Assessing the Impact of Parental Drug Use, Family Structure, and Environmental Conditions on Adolescents' Self-Reported Drug Use, Serious Delinquency, and Deviant Behaviors

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Abstract

Empirical studies have demonstrated that youths reared in homes with parental drug use have a high risk of exhibiting maladaptive social behaviors encompassing delinquency, deviance, and criminality. Family transitions, such as changes in the configuration of one's family structure (i.e. single parent households due to divorce or separation) have shown to have a negative impact on the behavioral development of adolescents. Despite the axiomatic role of the home environment in engendering aberrant behaviors, key findings have also linked criminogenic forces at the neighborhood level to the outcomes of adolescents' drug use, serious delinquency, and deviance. The current study explored the impact of parental drug use, family structure, and environmental conditions on youths' self-reported drug use, serious delinquency, and deviance. The results of the study demonstrated that the outcome behaviors are impacted by both neighborhood and home conditions. However, the type of predictor variable mattered for the type of outcome behavior reported.

Introduction

Drug use, deviance, and serious delinquency of adolescents are of grave concern to educators, parents, criminal justice officials, and policy makers. Teenagers' participation in self-destructive activities may culminate in a host of behavioral and social adjustment problems that affects competency at school—resulting in poor academic performance, truancy, or dropout rates (Swaim, Beauvais, Chavez, & Oetting, 1997; Cairns, Cairns, & Neckerman, 1989), in the home—resulting in strained family relationships (Keller, Catalano, Haggerty, & Fleming, 2002), and in the broader public sphere. Maladaptive acts and behaviors attenuate possibilities of social mobility and perpetuate a cycle of drug abuse and criminality (Hagan, 1985; Crane, 1991).

Despite evidence that macro and micro variables contribute to drug use, deviance, and serious delinquency, much ambiguity remains as to the exact mechanism and impact of these variables (measured separately and simultaneously) in producing the previously mentioned outcome behaviors. Therefore, the purpose of the study is to examine whether parental drug use, family structure, and environmental factors correlate with adolescents' self-reported drug use, deviance, and serious delinquent behaviors and to assess the type of variables (i.e. macro or micro) that are stronger predictors of the respective outcome behaviors. It is hypothesized that adolescents who have experienced a reconfiguration in their family structure, witnessed parental drug use in the home, or grew up in a socially disorganized neighborhood will self-report high rates of drug use, serious delinquency, and deviant behaviors. Additionally, it is hypothesized that micro level variables (i.e. family structure and parental drug use) will be stronger predictors of the outcome behaviors than macro level measurements of neighborhood

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characteristics. This is predicated on the premise that adolescents are more likely to be directly influenced by behaviors of others closest to them, such as parents and siblings, than by ancillary agents of the neighborhood.

This study is worthy of investigation as it expands on the extant literature by analyzing both individual and macro-level correlates of drug use, deviance, and delinquent behaviors among adolescents. Moreover, the study demonstrates whether micro and macro level variables work in conjunction in effecting the aforesaid resulting behaviors or have separate and distinct effects on the measured outcomes. An investigation of both individual and structural predictors are now being used in ways it was not done in the past, and as such, this study particularly functions as an appendage to the existing literature and provides a comprehensive understanding of the different variables that impact the previously mentioned outcome behaviors.

Literature Review

Numerous theoretical perspectives have been raised to explain juveniles' involvement in serious delinquency, deviance, and drug use. These theoretical paradigms encompass Social Control theories, such as Hirschi (1969), Social Bond theory, Social learning theories, such as Sutherland (1947) Differential Association theory, and Shaw and McKay (1942) theory of Social Disorganization.

The central premise of Social Control theories is that people are inhibited from crime commission due to processes of social control that institutions and others in society exert over individuals' behaviors. Precisely, Hirschi (1969) postulates that an individual's bond to society serves to protect one from engagement in crime, but when this bond is broken or enfeebled delinquency will manifest. The chief elements of social bonds include: Attachment, Commitment, Involvement, and Belief. Attachment refers to the emotional ties of persons to others and institutions in a conventional society; it is through attachment that one internalizes the norms and values of society. Commitment denotes the idea that people's investment in conventional activities, such as employment and education works to avert delinquency due to fear of losing reputation, prospects, and goods they acquired from school and work.

The notion of Involvement proposes that one's gross engagement in conventional activities permits a marginal amount of time for engagement in delinquency. The premise of Belief rests on the notion that by virtue of adhering to the value system of society, individuals have a reduced probability of engaging in anti-social acts. Though a weaker belief in the conventional system amplifies the probability of crime, this is not to insinuate that delinquents do not believe in a conventional value system, but rather, their beliefs are contingent on other elements of the aforesaid social bonds (Hirschi, 1969). While Hirschi's (1969) theory provides a plausible explanation as to the process of desistance from crime, the theory fails to account for gender disparities in delinquency and the mechanisms through which these behaviors are practiced (Booth, Farrell, &Varano, 2008).

As mentioned, Social Control theories emphasize bonds as protective factors of delinquency, and while Social Learning theories highlight a similar process, the premise is reversed— meaning that ties to others in society through a process of social learning facilitates delinquency. Sutherland (1947), a prominent advocate of the social learning perspective, posits that criminal behavior is a result of a person's abilities and inclinations to commit crime. He outlined nine propositions that illustrate the mechanisms through which criminal behavior is learned. Sutherland (1947) notes that (1) criminal behavior is largely due to a process of social learning, (2) criminal behavior is learned through interaction and communication with others, (3) criminal behavior is learned in closed-knitted groups, (4) learning of criminal behaviors encompasses specific techniques, drives, and motivations, (5) the direction of these motives and drives result from learning of the definitions of legal codes as favorable or unfavorable, (6) when there is an excess of favorable definitions to violating the law over unfavorable definitions, delinquency occurs, (7) Differential Association differs in frequency, duration, priority, and intensity, (8) criminal behavior by association with criminal others involves the same mechanism implied in any other forms of learning, and (9), criminal behavior is an expression of the needs and values as non-criminal behaviors (Sutherland, 1947).

In relation to the broader social environment, Shaw and McKay's (1942) theory of Social Disorganization provides a viable explanation as to the impact of the environment on delinquency. The theorists hypothesize that environmental conditions, such as poverty (represented by low rentals and public relief), residential transience (measured by high population turnover) and ethnic heterogeneity (marked by the influx of immigrants) result in the breakdown of social institutions that facilitates control of community members. The deterioration of social control, in turn, enables the emergence of social disorganization that engenders criminality (Shaw & McKay, 1942). In areas of high delinquency, conflicting moral values due to heterogenic diversity makes it difficult to sustain uniformity in values and goals. This in turn produces legitimate and illegitimate value systems that are in discord. The presence of both proper and improper modes of conduct impedes the family's ability to maintain common values and social control of its members. In the sense that, the family itself may not be criminal but may be benefitting from family members' criminal enterprises (Shaw & McKay, 1942). While the authors briefly implied the importance of voluntary organizations and institutions in preventing delinquency, they failed to unravel the mechanisms through which these institutions work to avert delinquency. Bursik and Grasmick (1988) addressed this deficiency by expanding on Shaw and McKay's (1942) work, suggesting that parochial and private ties are necessary to engender collective efficacy. Collective efficacy works to avert crime by withdrawing social support from members who violate the norms of the neighborhood.

Adolescents' Drug Use

Over the past four decades, drug use has fluctuated among adolescents in the United States with more than half of American youths self-reporting experimentation with at least one form of illicit drugs. In the mid 1970s to the early 1980s, there was an increase in illicit drug use among high school teenagers, following a subsequent decline in 1992, a further increase of more than 50 percent in 1991, and a major decline in 2008 (Johnston, O'Malley, Bachman, & Schulenburg, 2008).

Alcohol and marijuana comprise the chief drugs used among high school youths. More than 50 percent of 12th graders and approximately 40 percent of 8th graders reported the use of alcohol. Marijuana, being the second most frequently used drug was self-reported by over 50 percent of high school youths in 1979. Accessibility and perceived benefits of these drugs parallel the extent and frequency of its use. For example, the larger proportion of students who use marijuana, in comparison to cocaine, is explained by the data which illustrates that 84 percent of 12th graders self-reported relative ease in accessing marijuana in comparison to 42 percent of 12th graders who self-reported similar access to cocaine (Johnson et al., 2008).

While much of the extant literature has focused on individual and environmental factors that influence the initiation of adolescents' drug use, no study to date has (and possibly cannot) account for all the risk factors that influence adolescents' drug use (Newcomb, Maddahian, Skager, & Bentler, 1987). However, what is clear is that adolescents with several risk factors, such as emotional distress (Newcomb, Maddahian, Skager, & Bentler, 1987), peer substance use (Adler &Loctecka, 1973) poor educational attainment (Fan & Chen, 2001; Frome & Eccles, 1998; Steinberg, Lamborn, Dornbusch, & Darling,1992; Cairns, Cairns, & Neckerman, 1989; Swaim, Beauvais, Chavez, & Oetting, 1997) and poor family structure (Keller, Catalano, Haggerty, & Fleming, 2002; Hoffman & Johnson,1998; Cernkovich & Giordano, 1987; Gove & Crutchfield, 1982; Flewelling & Bauman, 1990; Cherlin, Furstenberg, Chase-Linsdale, Kiernan, Robins, Morrison, & Teitler, 1991; Denton & Kampfe, 1994) are at an elevated risk of substance initiation and misuse.

Parental Drug Use

Teenagers' involvement in drugs correlates with family members' drug use (Nurco, Blatchley, Hanlon, & Grady, 1999; Stranger, Higgins, Bickel, Elk, Grabowski, Schmitz, Amass, Kirby, & Seracini, 1999; Keller, Catalano, Haggerty, & Fleming, 2002; Newcomb & Bentler, 1988; Bauman & Dougherty, 1983). However, this correlation appears to be contingent on the gender of the family member. For example, one

study found the impact of fathers' drug use to be less significant on children's subsequent involvement in drugs in comparison to the effects of the mothers' and siblings' drug use (Gfroerer, 1987).

Drug dependent parents are more likely to have psychiatric illnesses and mood disorders that incapacitate their ability to exhibit proper childrearing techniques and be receptive to the needs of their children, and as such, the behavior of the parent can engender mood disorders and behavioral problems for the child (Nurco, Blatchley, Hanlon, & Grady, 1999; Stranger, Higgins, Bickel, Elk, Grabowski, Schmitz, Amass, Kirby, & Seracini, 1999).

Children reared in homes of drug dependent parents are either left to their own human agency without many repercussions to their behaviors or they are not given ample autonomy to make independent decisions. It is no surprise, therefore, that children reared in these households report having little emotional and social connection to their parents (laissez faire homes) or report their parents being overly controlling, intrusive, and harsh in discipline (authoritarian homes). It is conjectured that the lack of autonomy may cause adolescents to turn to drugs in order to cope with life's problems and the lack of parental control serves to provide children with avenues to engage in deviance, drug use, and serious forms of delinquency (Denton & Kampfe, 1994).

Family Structure

Approximately 50 percent of children in the United States will experience living in a single parent household at some point in their lives (Cherlin, Furstenberg, Chase-Linsdale, Kiernan, Robins, Morrison, & Teitler, 1991). Living in a single parent household due to family transition has the concomitant effect of increasing drug use and delinquency. These delinquent behaviors encompass theft, graffitti, vandalism, the sale and distribution of drugs, among other offenses. Hoffman and Johnson (1998) asserted that youth from two parent households reported fewer drug use and delinquency than youth from single parent households. However, others have found a negligible association between family structure and delinquency (Flewelling & Bauman, 1990; Keller et al., 2002). It seems plausible that delinquency outcomes are contingent on the atmosphere and stability of the home environment rather than the structure of the family itself (Denton & Kampfe, 1990).

Family disruption may cause severe stress for adolescents, decreases the capacity to function normally, and amplifies the risk of drug use, aggression, and a host of behavioral problems (Keller, Catalano, Haggerty, & Fleming, 2002). A change in school, neighborhood, or residence may extenuate adolescents' stress and create a strained parent-child relationship that impedes the efficacy of parents as agents of social control (Wu & Thomson, 2001; Bahr, Maughan, &Marcos, 1998). Furthermore, lower income non intact families have greater economic burden that thwarts parents' capacity to monitor and supervise their children's activities. This deficiency in parental support and control reduces adolescents' motivation to succeed in school and in other areas of their life (Hoffman & Johnson, 1998).

The family context also provides opportunities for discourse on the sexual behaviors of adolescents. A distant relationship, particularly between mother and child, fosters a discrepancy between the mother's attitudes and expectations of the adolescent's sexual behaviors and the adolescent's actual sexual behavior. Sexual abstinence is contingent on the parenting style of the mother. For example, youths with permissive mothers are more likely to report early sexual involvement than adolescents of non-permissive mothers (Weinstein & Thorton, 1989).

Education

A voluminous body of literature indicates that parental involvement in their children's education correlates with ensuing academic success (Steinberg, Lamborn, Dornbusch, & Darling, 1992). Parental involvement is a multifaceted concept that may range from communicative behaviors, participation in school activities, and aspirations for their children. Parental engrossment in their children's education, and aspirations for their children, has a positive effect on children's educational performance across subject areas and cumulative GPA (Fan & Chen, 2001). The academic performance of a youth is somewhat

dependent on the parents' perception of the child's ability to succeed in school. Youths are so pervious to the perception of their parent's evaluation of their ability to perform an assignment that if the parent feels the child is inept at a certain task, this perception will be reflected in the actual performance of the child. Gender roles and expectations become even more relevant in parent's perception of their children's ability in Math and English. For example, daughters whose mothers are more likely to perceive them as incompetent in math self-reported lower grades in the subject than daughters whose parents perceived them as proficient in the subject. Similarly, boys whose mothers perceived them as erudite in a subject area outperform their same gendered peers (Frome & Eccles, 1998). The relationship of education on delinquency is crucial to investigate as adolescents with low educational attainment are more likely to drop out of school, affiliate with delinquent peers, and become delinquent (Cairns, Cairns, & Neckerman, 1989).

Poverty and Low Socioeconomic Status (SES)

The impact of poverty on delinquency has been raised by numerous scholars (Simcha-Fagan, Schwartz, 1986; Patterson, 1991; Enter Wright, Caspi, Miech, Silva, 1999; Braithwaite, 1981; Johnson, 1980) and even though there is not a consensus as to the impact of SES on delinquency, a certain outcome is that families at lower income brackets are more susceptible to a host of social ailments that manifest in crime and deviance than those in the higher income brackets. In the 1980s, 8 percent of whites were living below the poverty line in comparison to 28.9 percent of blacks and 23.2 percent of Hispanics. The highest rates of poverty have been steadily pronounced among minority groups despite fluctuations in the poverty levels for all races. Black children comprise 42 percent of all children living below poverty levels in 1980s, and Hispanic children followed suit at 33 percent while white children were at a distant 13.4 percent (US Census Bureau, 2012).

The income level of families in the United States demonstrates that almost three times the number of black families as compared to white families earn fewer than 10,000 dollars per year, 8.5 percent of whites were earning middle class income in comparison to 7.9 percent of black families and 8.2 percent of Hispanic families. However, a wider gap in income is illustrated by those earning in the top five percent quartile ($250,000 and above). For this category, whites comprise 2.8 percent, Hispanics comprises 1 percent and blacks make up less than 1 percent of those earning in the top 5 percent quartile (US Census Bureau, 2012). The concentration of poverty among black working class youth has devastating consequences for delinquency, drug use, and crime.

Disadvantaged communities produce more opportunities for children to model and engage in criminal behaviors. Due to the fact that African American communities are more likely to have higher poverty rates, they are also more likely to have higher property and violent crime rates. According to the Bureau of Justice Statistics, National Crime Victimization Survey, older adolescents, males, and black teenagers have a greater risk of victimization than their respective counterparts. Research on racial differences in victimization suggests that African American youths are disproportionately represented in violent crime and are also more likely to die by homicide than their white counterparts (Stewart, Simons, & Conger, 2002). In fact, black adolescents are five times more likely to be victims of homicide than their white counterparts and are seven times more likely to be homicide offenders than white youths (Bureau of Justice Statistics, NCVS, 2005).

Racial discriminatory practices (i.e. segregation) confine minority youths to disorganized neighborhoods providing a plethora of avenues for crime commission. Employment discrimination further precludes inner city youths from social advancement and provides no incentive for continued participation in the labor force. Youths in the inner city are barred from certain aspects of social mobility as most individuals lack the qualification to secure employment in the primary labor market. But, most importantly, discriminatory practices in the workplace serve to confine minority groups to secondary labor. Because secondary jobs rarely provide opportunities for professional development, individuals often become discontented and detached from the work arena and resort to crime for alternative means of earning capital (Crutchfield, Masueda, & Drakulich, 2006).

Neighborhood Disorder

Conditions of neighborhood disorder have a principal role in the proliferation of youth crime and delinquency. Disorder may encompass perceptible social maladies, such as physical decay, drunkenness, vandalism, panhandling, loitering youths in street gangs, widespread drug abuse, among other social nuisances. Neighborhood disorder causes anger and demoralization of community citizens. Many residents are also nonchalant about the conditions of their community and become impotent in deriving proactive measures to solve the problems of disorder. In areas where disorder is high, persons are less likely to protect each other's property and form collective and public cooperative actions (Skogan, 1990).

Middle class, highly educated, intact families are often dissatisfied with conditions of disorganized neighborhoods, and as such, are likely to transit out of these areas, rendering poor, black, and unmarried adults destitute in these communities. Racial discrimination occurs in disorderly neighborhoods as white middle class residents segregate themselves from poorer blacks and access to housing becomes inequitable or financially unattainable to impoverished ethnic minorities. Underprivileged minorities are then confined to these deprived communities where a culmination of persons with similar background and educational statuses engender further disorder (Skogan, 1990).

Method

The data was derived from a two wave panel study from the Inter-University Consortium for Political and Social Research database (ICPSR). However, only data from wave one was used in the present study. The sample is comprised of non-institutionalized young adults between the ages of 19 and 23 who were former students in Miami Dade Public School in South Florida. From that cohort, a representative sample was generated that will be used for the present project. The first survey interview was gathered January 1998 through June 2000 and the second wave of survey interviews conducted between January 2000 and April 2002. The population for both waves was 1803 and the sample was composed of all 410 females from the South Florida Youth Development Study and 1,273 randomly drawn males from the same project. There was an overall participation rate of 75.6 percent males and 80.5 percent females.

A stratification of the sample by sex, race, and ethnicity was performed with an equal proportion of males and females, African Americans, Cuban Americans, non-Cuban Hispanics, and non-Hispanic whites to the general population. Weights were developed to compensate for bias in the supplementary female sample and post stratification weights were used to adjust fractions in the sample to match the county and age cohort of the 1990 United States Census. The data was collected via computer-assisted personal interviews (CAPI) and face to face interviews using a combination of both methods.

Independent Variable

The independent variables of interest in the study consist of parental drug use, family structure (measured as habitation with a biological or stepparent), and structural conditions of the community. Parental drug use is an individual level predictor and is dichotomize as those who reported parental drug use being coded as 1 and those who did not report drug use being coded as 0. Family structure is measured as an individual predictor and includes questions that ask respondents about their family configuration, such as whether the respondent lived with their mother only, father only, or step parents during junior or middle years. The variables were dichotomized (No=0 and Yes=1). Poverty and SES are measured as individual level predictors and include questions about employment status and welfare benefits (No=0 and Yes=1).Structural conditions of the community are measured using variables capturing neighborhood disorder and discrimination measures. Participants indicated whether these conditions were found to be (not true=0 and true =1).

Dependent Variable

The dependent variables for this study include adolescents' self-reported drug use, serious delinquency, and deviant behaviors (i.e. risky sexual behaviors and poor educational performance). Adolescents' drug use was measured by asking whether respondent have ever tried a wide range of illicit substances, such as cigarettes, marijuana, powder cocaine, crack cocaine, among other drugs (No=0 and Yes=1). Delinquency was measured by asking respondents about gang involvement, gang activities, and arrest history. These variables were also dichotomized (No=0 and Yes=1). Risky sexual behaviors were measured by asking respondents about their use of alcohol or drugs during sexual activities, whether respondent used a condom during sex, and whether respondent ever contracted an STD (No=0 and Yes=1). Low academic achievement was measured by asking whether respondent ever failed a grade in high school (No=0 and Yes=1).

Control Variables

Being that race, age, and gender are prominent correlates of the measured outcome behaviors; these variables will be controlled in the relevant analyses. Race is defined as African Americans (Yes=1, No=0), white, defined as non-Hispanic white (Yes=1, No=0), Hispanics collapsed as Hispanic black and Hispanic white (Yes=1, No=0) and those who identify themselves from another racial or ethnic group (Yes=1, No=0). Age is a continuous variable ranging from 19 to 23, and gender is dichotomize (male=1 and female=0).

Analytical Strategy

Four separate analyses using Logistic Regression, with a total of twelve analytical models, were conducted to determine whether the independent variables are predictive of the outcome behaviors. The first analysis assessed drug use considering micro-level conditions only (Model 1), then macro-level conditions (Model 2), and lastly a combined model including both types of predictors (Model 3). The second analysis measured serious forms of delinquency using the same strategy. The third and final set of analyses assessed deviant measures of risky sexual behaviors and deviant measures of poor educational performance using the same strategy. Even though risky sexual behaviors and poor educational performance measures are assessing deviance, they are computed in separate analysis because they are distinct forms of deviance and did not load well together on the varimax rotation. Computing individual and structural predictors separately will allow for an examination of each type of variable on the outcome behavior. Additionally, running a combined analysis of both micro and macro level variables will permit a stronger scrutiny of the impact of these variables in predicting the likelihood of the dependent variable occurring.

Results

Preliminary Analyses

Due to the diverse nature of questions aimed at measuring factors of drug use, deviance, and serious delinquency, preliminary analyses were done to determine correlation, significant relationships, and commonality among variables. Bivariate correlations of all the variables were computed to determine the significant relationships and correlation among items. Additionally, Reliability Analysis using the Cronbach's Alpha (.05 or above) were used to estimate the extent of covariance among items. The Cronbach Alpha reliability coefficient for the outcome measure of drug use is .820. The reliability coefficient for delinquency is .566, and the Cronbach Alpha for the deviant measure of risky sexual

behaviors is .073. Being that there was only one item assessing poor educational performance, reliability analysis could not be computed for this variable.

Principal Component Analysis with varimax rotation was performed to examine the extent of commonality in survey items measuring parental drug use, family structure, and neighborhood conditions. The Factor Analyses revealed two components measuring parents' drug use. Items measuring alcohol and tobacco were reduced into one factor based on commonality among these items and are labeled *Parents' legal drug use*. Similarly, items assessing marijuana, crack/cocaine, and other drugs are labeled *Parents illegal drug use*.

Variables measuring family structure were reduced into two categories labeled as *Biological parent*, this measures the child's habitation during junior years with his or her father and mother, and *Step parent*, this variable measures the child's junior year's tenancy with step mother or stepfather. Items assessing neighborhood conditions measure the safeness of the neighborhood and incidences of gang violence and drug problems in the community. Due to the high commonality among these items, they were reduced in one factor labeled *neighborhood disorder*.

Variables measuring poverty and low SES did not load well together on the Factor Analysis, and as such, are included in the final analyses. Additionally, measures of racial discrimination were collapsed into three categories, labeled *job discrimination*, *residential discrimination*, and *discriminatory treatment*. Difficult neighbors and poverty and SES constructs did not share commonality with any of the other variables, and as such, they are computed separately using Logistic Regression.

Final Analyses

The tables below illustrate the results for the twelve analytical models assessing micro and macro variables collectively and separately on the respective outcome behaviors of drug use, deviance, and serious delinquency. In addition to these variables, controls for age, race, and gender are also included in the models.

Models Predicting Drug Use

Table 7 presents the results of the BLR model predicting drug use. Out of all the variables in the model, only three revealed statistically significant relationships. For the individual predictors, parents' legal drug use was statistically significant and for the structural predictors, discriminatory treatment and job discrimination were significant predictors of respondents' drug use after controlling for age, race, and gender. The coefficient of all predictors are positive, parents' legal drug use (b =.430), discriminatory treatment (b =.291), and job discrimination (b=.279). When the variables were measured in a combined model, interesting differences emerged. For the individual predictors of drug use, parents' legal drug use (b=.418) remained significant. However, for the structural predictors, only discriminatory treatment (b =.279) remained significant, as job discrimination was no longer a significant predictor of drug use. The Cox & Snell and Nagelkerke pseudo R^2 for the model demonstrates that individual level predictors have a stronger effect on the outcome behavior of self-reported drug use than structural predictors.

Table 7. Logistic regression models predicting drug use

Variables	Model 1 b	Model 1 SE	Model 2 b	Model 2 SE	Model 3 b	Model 3 SE
Individual Characteristics						
Age	.140	.095			.135	.096
Gender	.452*	.182			.357	.188
White **(reference group)**						
Hispanics	-.560	.289			-.535	.291
Blacks	-1.173***	.302			-1.248***	.310
Other race	-.220	.654			1.00	.773
Biological parent	.019	.095			.050	.096
Stepparent	.173	.125			.161	.126
Parents' illegal drug use	.210	.129			.191	.132
Parents' legal drug use	.430***	.085			.418***	.087
Welfare	.792	.630			.725	.636
Current income	.157	.194			.195	.196
Structural Characteristics						
Neighborhood Disorder			-.059	.082	-.118	.089
Discriminatory Treatment			.291**	.106	.279*	.115
Job Discrimination			.279**	.104	.179	.106
Residential Discrimination			-.046	.092	.027	.106
Difficult Neighbors			.048	.267	.131	.306
Cox & Snell R^2	.049		.039		.058	
Nagelkerke R^2	110		.086		.131	

† $p<.10$. *$p<.05$. **$p<.01$. ***$p<.001$

Models Predicting Delinquency

Items predicting delinquency are shown in Table 8. For the individual predictor variables, habitation with a biological parent during the junior years (b=-.167), parents illegal drug use (b=.209), and welfare (b=.791) were significant predictors of delinquency. In regard to structural characteristics, neighborhood disorder (b=.355), discriminatory treatment (b=.320), and job discrimination (b=.284) were significant predictors of the outcome behaviors after controlling for age, race, and gender. Except for the variable measuring family structure (i.e. habitation with a biological parent), all the significant variables have a positive relationship with the outcome behavior of delinquency. However, habitation with a biological parent during their junior years was conversely related with outcomes of delinquency.

When the variables were computed in a combined model, the individual level predictors remained significant (i.e. parents' illegal drug use (b=.167) and habitation with biological parent (b=-.129)) except for the welfare variable. For the structural predictors, all the previously significant variables (i.e. neighborhood disorder (b=.331), discriminatory treatment (b=.328), and job discrimination (b=.247)), remained significant .The finding demonstrates the stronger significance of structural characteristics in predicting delinquency.

Table 8. Logistic regression models predicting delinquency

	Model 1		Model 2		Model 3	
	b	**SE**	**b**	**SE**	**b**	**SE**
Variables						
Individual Characteristics						
Age	.062	.058			.075	.061
Gender	1.202***	.113			1.084***	.118
White **(reference group)**						
Hispanics	.345*	.137			.337*	.142
Blacks	-.049	.165			-.510**	.179
Other race	.358	.312			.275	.330
Biological parent	-.167**	.059			-.129*	.062
Stepparent	.025	.055			.047	.057
Parents' illegal drug use	.209***	.057			.167**	.060
Parents' legal drug use	.083	.057			.036	.059
Welfare	.791*	.328			.586	.342
Current income	-.038	.119			.015	.124
Structural Characteristics						
Neighborhood Disorder			.355***	.057	.331***	.060
Discriminatory Treatment			.320***	.061	.328***	.063
Job Discrimination			.284***	.056	.247***	.059
Residential Discrimination			-.074	.059	-.065	.061
Difficult Neighbors			.003	.159	-.013	.167
Cox & Snell R^2	.088		.127		.144	
Nagelkerke R^2	.120		.173		.195	

† $p<.10$. *$p<.05$. **$p<.01$. ***$p<.001$

Models Predicting Risky Sexual Behaviors

Items assessing deviance were measured separately as risky sexual behavior and poor educational performance. The results for risky sexual behaviors are presented in table 9. The significant variables in the model predicting risky sexual behaviors encompass habitation with a step parent during their junior years (-.188), welfare (b=-.950) and neighborhood disorder (b=.118). The coefficient for neighborhood disorder is positive suggesting that respondents who indicated high levels of neighborhood disorder also self-reported high levels of risky sexual behaviors. However, habitation with a step parent and being a welfare recipient had a negative relationship with the outcome variable of risky sexual behaviors, suggesting that respondents who reported being a welfare recipient and lived with a step parent during their junior years were less likely to self-report risky sexual behaviors.

When the variables are measured in a combined model, all variables (i.e. habitation with a stepparent (b=-.168), welfare (b=-.948), and neighborhood disorder (b=.125) remained significant with no significant variables emerging. The Cox & Snell and Nagelkerke pseudo R^2 demonstrates that micro variables are stronger predictors of risky sexual behaviors.

Table 9. Logistic regression models predicting risky sexual behavior

	Model 1		Model 2		Model 3	
	b	**SE**	**b**	**SE**	**b**	**SE**
Variables						
Individual Characteristics						
Age	-.100	.060			-.103	.060
Gender	.616***	.113			.618***	.117
White **(reference group)**						
Hispanics	-.492***	.142			-.487***	.143
Blacks	.149	.174			.108	.180
Other race	.063	.358			.187	.367
Biological parent	-.060	.063			-.061	.064
Stepparent	-.188***	.057			-.168**	.057
Parents' illegal drug use	.082	.058			.083	.059
Parents' legal drug use	-.061	.061			-.061	.061
Welfare	-.950**	.349			-.948**	.352
Current income	.024	.125			.028	.125
Structural Characteristics						
Neighborhood Disorder			.118*	.057	.125*	.061
Discriminatory Treatment			-.009	.061	.019	.064
Job Discrimination			-.046	.056	-.068	.058
Residential Discrimination			-.039	.056	-.035	.058
Difficult Neighbors			-.058	.156	-.059	.162
Cox & Snell R^2	.066		.058		.070	
Nagelkerke R^2	.089		.078		.094	

† $p<.10$. *$p<.05$. **$p<.01$. ***$p<.001$

Models Predicting Poor Educational Performance

Table 10 shows the predictor variables that are significant for the outcome of poor educational performance. These include habitation with a biological parent (b=-.139), neighborhood disorder (b=.126), job discrimination (b=.186), and residential discrimination (b=.140). With the exception of habitation with a biological parent, the relationship between the predictors and outcome variables are positive, indicating that respondents who self-reported neighborhood disorder and job and residential discrimination also self-reported poor educational performance. However, individuals who reported habitation with a biological parent self-reported minimal or lower levels of poor educational achievement. In other words, respondents who lived with a biological parent are less likely to perform poorly in school.

When both individual and structural predictors were computed in a combined model, living with a biological parent (b=-.103) and neighborhood disorder (b=.116) were no longer significant. However, job (b=.196) and residential (b=.147) discrimination remained significant. The Cox & Snell and Nagelkerke pseudo R^2 for the combined model suggests that macro variables are stronger predictors of poor educational performance.

Table 10. Logistic regression models predicting poor educational performance

	Model 1		Model 2		Model 3	
Variables	**b**	**SE**	**b**	**SE**	**b**	**SE**
Individual Characteristics						
Age	.578***	.064			.578***	.066
Gender	.310*	.126			.239	.131
White **(reference group)**						
Hispanics	1.030***	.178			1.038***	.182
Blacks	.840***	.205			.686***	.215
Other race	.311	.407			.242	.410
Biological parent	-.139*	.064			-.103	.065
Stepparent	.071	.060			.087	.060
Parents' illegal drug use	-.005	.065			-.032	.066
Parents' legal drug use	.047	.064			.016	.065
Welfare	.317	.338			.139	.342
Current income	-.211	.135			-.183	.136
Structural Characteristics						
Neighborhood Disorder			.126*	.060	.116	.064
Discriminatory Treatment			.093	.066	.057	.069
Job Discrimination			.186**	.060	.196**	.062
Residential Discrimination			.140*	.057	.147*	.059
Difficult Neighbors			-.031	.174	.007	.181
Cox & Snell R^2	.089		.104		.105	
Nagelkerke R^2	.135		.157		.159	

† $p<.10$. *$p<.05$. **$p<.01$. ***$p<.001$

Discussion

The findings from the study buffers the extant literature that teenagers' involvement in drugs correspond with parents' drug use, although the literature did not differentiate between legal and illicit drug use and whether differences in the status of the drug mattered for emulation of drug taking behavior (Nurco, Blatchley, Hanlon, & Grady, 1999; Stranger, Higgins, Bickel, Elk, Grabowski, Schmitz, Amass, Kirby, & Seracini, 1999; Keller, Catalano, Haggerty, & Fleming, 2002; Newcomb & Bentler, 1988). Based on the present study, it can be surmised that differences in the legal status of a drug are important for predicting particular outcome behaviors. For example, parents' legal drug use predicted respondents' self-reported drug use but not delinquency. Similarly, parents' illegal drug use predicted respondents' self-reported delinquency but not drug use. The ease in access to legal drugs may explain their significant predictive effect on adolescents' drug use. In other words, drugs that are legal and available for purchase over the counter are more likely to be used by young people than drugs that are difficult to obtain.

The fact that parents' illegal drug use is a significant predictor of delinquency could largely mean that adolescents who witness their parents using illegal drugs are more likely to have fewer rules, supervision, and guidance that would circumvent engagement in anti-social acts and criminal behavior. The use of powder cocaine, marijuana, or crack cocaine by a parent figure may instill the notion that drug involvement is acceptable, and as such, adolescents may move beyond the personal use of drugs to the sale and distribution of drugs—which in and of itself is a serious delinquent behavior.

The mechanism through which discrimination leads to drug use and delinquency remains ambiguous. However, one proposition may be that some other intervening variables, such as peer influence, may be involved. For example, it could be that adolescents raised in socially disorganized neighborhoods have encountered discrimination and that these individuals tend to associate with drug using peers and the frequency of this association amplifies the risk of drug involvement and delinquent acts. Similarly, those who experienced discriminatory treatment are often confined to the same neighborhoods with similar conditions and the availability of drugs as well as the association with other drug users lends itself to personal drug use and delinquency.

The present study's finding of the family structure variable on risky sexual behavior is unexpected given the literature's exposition of the influence of family structure on adolescents' sexual behaviors. The literature suggests that a modification in family configurations through separation or divorce may create negative implications for adolescents' sexual behaviors. For example, living with a step parent may increase the initiation of early sexual activities, premarital coitus, and unwed pregnancies (Weinstein & Thornton 1989, Capaldi, Crossby, & StoolMiller, 1996; Wu &Thomson, 2001; Bahr, Maughan, & Marcos, 1998). The results of this study, however, suggest that living with a stepparent decrease risky sexual behaviors. Perhaps the addition of a step parent figure enhances discipline by providing rules, guidance, and advice on dating and sexual relationships. It may be that social control of the step parent hinders adolescents' engagement in premarital coitus.

In regard to the last measure of deviance (i.e. poor educational performance), the finding implies that parental influence in adolescents' educational performance may become diminished or nullified when conditions of the environment are taken into account. This is an interesting finding given that the literature accentuates the impact of parents on their offspring's educational performance (Fan & Chen, 2001). A possible explanation for the stronger impact of structural conditions (i.e. discrimination measures) over individual predictor variables in predicting poor educational performance is that individuals who experienced job and residential discrimination may not see much value in educational pursuits in order to take their education seriously. Additionally, it could be that the educational systems in some communities are so poor, due to prevailing racist practices, that youths' motivation to succeed in school is increasingly diminished.

The fact that discrimination measures were significant predictors of almost all of the outcome variables is a cause for concern and warrants further consideration. It is important to further investigate the extent to which discrimination at both the individual and structural levels functions to engender drug use, serious delinquency, and deviance among youth. It should be noted that this variable is especially relevant for the outcome behaviors of minority youths as they are most likely to experience elements of discrimination and are also more likely to self-report involvement in anti-social acts.

Limitations and Conclusions

The major limitation of this study is that I only employed one wave of the data from a two wave longitudinal study due to identifiers being removed from the data making it impossible to match responses from time one to time two. Because I employed one wave of the survey data, I am unable to draw temporal inferences or identify measured differences in the self-reported outcome behaviors that would provide a more comprehensive understanding of the phenomenon. Another limitation of my study is the absence of psychological variables and peer and sibling variables that would have provided a more concrete prediction of the outcome behaviors. Additionally, the results of this study cannot be generalized as the sample only employed youths/young adults from Miami Dade Public school.

Moreover, the sample employed a high proportion of minority youths in comparison to white youths. Therefore, if a more diverse sample was used, it is expected that the outcome of the study would have been slightly different for the measured dependent variables, especially those variables assessing conditions of the environment and family structure. This is predicated on the grounds that white youths are significantly less likely to be affected by disorganized neighborhood conditions and are less likely to experience reconfiguration of their family structure.

In summary, the goal of this research was to assess whether parental drug use, family structure, and environmental conditions impact adolescents' self-reported drug use, serious delinquency, and deviant behaviors. Based on the results of the study, parents' drug use impact self-reported personal drug use and delinquency. However, whether the drug is legal or illegal has different consequences for the type of outcome behavior. Additionally, living with a biological parent reduces serious delinquency but increases educational performance. Living with a stepparent reduces risky sexual behaviors. This study markedly shows that criminogenic factors of the home and neighborhood function to attract and sustain youths' involvement in drug use, deviance, and serious delinquency. As such, policy efforts must be driven to address neighborhood disorder, systematic discriminatory practices, and family dysfunction within homes in order to reduce the range and frequency of delinquent acts. Youth delinquency generally foreshadows future criminal behavior. Therefore, early detection and prevention is paramount in diverting future adult crimes.

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Appendix

Table 1. Descriptive statistics of micro predictor variables

Variable	Mean	Median	Standard Deviation	%
Individual Characteristics				
Parents drug use				
Alcohol				82.8
Tobacco				56
Marijuana				29
Crack/Cocaine				10.7
Other drug				6.2
Family Structure				
Lived w/ mother junior years				92.1
Lived w/ father junior years				59.4
Lived w/ stepdad junior years				10.9
Lived w/ step mom junior years				2.0
Poverty and SES				
Employed				67.5
Welfare dependency				2.8

Source: Drug Use Trajectories: Ethnic/Racial Comparisons, 1998-2002 (ICPRS 30862)
The descriptive statistics are based on the unweighted sample of parents' drug use for alcohol (n=1493), tobacco (n=1009), marijuana (n=522), crack/cocaine (n=193), other illegal drugs (n=112).
Family structure is indicated as years with mother, father, stepfather, and stepmother during ages 1-6, elementary, and junior years.
Ages 13-18 with mother (n=1661), ages 13-18 with father (n=1071), ages 13-18 with stepmother (n=36), ages 13-18 with stepfather (196).
Variables of current employment are (n=1217), and welfare (n=51).

Table 2. Descriptive statistics of macro predictor variables

Variable	Mean	Median	Standard Deviation	%
Structural Characteristics				
Neighborhood Disorder				
Conditions unsafe	1.30	1.00	.630	
Gunshots	1.21	1.00	.525	
Gang violence	1.17	1.00	.476	
Drug use/sale	1.41	1.00	.702	
Travel carefully	1.13	1.00	10.1	
Discrimination				
Fired/denied promotion				19.1
Not been hired				19.9
Realtor/landlord refuse housing				14.4
Difficult neighbors				3.4
People insult				15.1
Bad service at public places				20.9
People act as they are better than r				51.9
People act as they are afraid of r				32.2
People deem r dishonest				18

Source: Drug Use Trajectories: Ethnic/Racial Comparisons, 1998-2002 (ICPRS 30862)
The descriptive statistics are based on the unweighted sample of neighborhood conditions: unsafe (n=379), gunshots (n=282), gang violence (n=225), drug problems (n=513), and travel (n=182).
Racial discrimination measures are Fired/denied promotion (n=345), not hired (n=359), realtors refuse housing (n=61), difficult neighbors (n=260). Other measures of racial discrimination include respondents' experiences of negative treatment by others: negative service at public restaurants (n=376), people afraid of respondent (n=580), people believe respondent is dishonest (n=325), people act as if they are better than respondent (n=935), and people insult respondent (n=272).

Table 3. Descriptive statistics of the dependent variable on drug use

Variable	Mean Median	Standard Deviation	Maximum	Minimum	%
Outcome behaviors					
Drug use					
Cigarettes			1	0	23.5
Sedatives/barbiturates			1	0	11.6
Amphetamine/Stimulant			1	0	11.3
Analgesics			1	0	36.2
Tranquilizers			1	0	22.2
Inhalants			1	0	11.8
Marijuana			1	0	56.1
Hallucinogen			1	0	22.7
Alcohol			1	0	86.7
Powder cocaine			1	0	15.9
Crack cocaine			1	0	2.7
Heroin			1	0	1.4

Source: Drug Use Trajectories: Ethnic/Racial Comparisons, 1998-2002 (ICPRS 30862)
The descriptive statistics are based on the unweighted sample of adolescents' self-reported drug use: cigarettes (n=423), sedatives or barbiturates (n=209), amphetamines or stimulant (n=204), analgesics (n=652), tranquilizers (n=400), inhalants (n=213), marijuana (n=1012), powder cocaine (286), crack cocaine (n=48), hallucinogens (n=409), heroin (26), alcohol (n=1563).

Table 4. Descriptive statistics of the dependent variable on serious delinquency

Variable	Mean Median	Standard Deviation	Maximum	Minimum	%
Outcome behaviors					
Serious delinquency					
Gang involvement			1	0	4.1
Gang colors			1	0	1.4
Gang signs			1	0	4.5
Drugs w/gang			1	0	12.8
Leisure w/gang			1	0	23.6
Vandalism			1	0	3.5
Car theft			1	0	1.7
Handgun			1	0	5.3
Arrested/Juvenile hall			1	0	17.1

Source: Drug Use Trajectories: Ethnic/Racial Comparisons, 1998-2002 (ICPRS 30862)
The descriptive statistics are based on the unweighted sample of adolescents' involvement in serious delinquency. Current or previous gang membership (n=74), display gang colors (n=26), display gang signs (n=81), drugs or alcohol with gang (n=231), leisure with gang (n=426), vandalism (n=63), car theft (n=31), hang gun possession (95), arrested or stayed in jail or juvenile hall (n=308).

Table 5. Descriptive statistics of the dependent variable on deviance

Variable	Mean Median	Standard Deviation	Maximum Minimum		%
Outcome behaviors					
Deviance					
Condom			1	0	41.4
Alcohol w/sex			1	0	9.8
Drugs w/sex			1	0	9.8
Herpes			1	0	.7
Chlamydia			1	0	3.3
HIV/AIDS			1	0	.1
Other STD			1	0	.7
Fail grade			1	0	23.5

Source: Drug Use Trajectories: Ethnic/Racial Comparisons, 1998-2002 (ICPRS 30862)
The descriptive statistics are based on the unweighted sample of self-reported risky sexual behaviors of respondents: condom (n=747), alcohol w/sex (n=176), drugs w/sex (n=89), chyalmidia (n=59), HIV/AIDS (n=2), herpes (n=12), other std (n=12). For the deviance measure of weak educational performance, respondents indicated if they have failed a grade in school (n=423).

Table 6. Descriptive statistics of control variables

Variables	Mean	Median	Standard Deviation	%
Age	*20.01*	*20.00*	.943	
White ***(reference group)***				
Hispanic				47.1
African Americans				24.1
Other				3.2
Male				53
Female				47

Source: Drug Use Trajectories: Ethnic/Racial Comparisons, 1998-2002 (ICPRS 30862)
For the control variables, the weighted sample of adolescents' self-reported demographic characteristics are non-Hispanic white (n=460), Hispanics (n=850), blacks (n=434), and other (n=57). Gender is male (n=955) and female (n=848). Respondents indicated their age to be 18 (n=28), 19 (n=547), 20 (n=748), 21 (n=361), 22 (n=98), 23 (n=21). The racial grouping of Hispanic includes categories of Hispanic non-white and Hispanic black.