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**The Influence of Labor Market and Educational
Experiences on Drug Use and Violence among Inner City
Puerto Rican Adolescents**

SUMMARY

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A large body of literature has established a strong link between drug and alcohol use and violence as well as other types of delinquency. The research has also established onset and continuance patterns over the adolescent and young adult life span. Important examples are the precedence of delinquency over substance use in onset, graduation from less serious to more serious substances over the two age periods, and mismatches in desistance, with maturation out of delinquency from late adolescence to young adulthood and increasing substance use over the same span.

By now we also know much about the factors that influence substance use and delinquency. Studies using aggregate level national and cross-national data generally show a strong relationship between labor market experiences and property crime, and between inequality and violent crime. Notably, few studies of this kind have examined how these factors influence substance use. Over the past three decades substantial theoretically based research has examined the interrelated roles of socioeconomic factors such as educational and occupational experiences, social psychological factors such as the influence of family and peer groups, and psychological factors such as anger, depression and self-esteem. Because these studies have access to a richer set of variables, they have shown a more complex picture of how labor market - related factors influence crime and substance use. Accompanying the basic research has been the development of research based prevention approaches to reducing substance use and delinquency. However, the best of our knowledge, the most empirically grounded and scientifically rigorous, is based on surveys of white middle class populations. We know much less about how our current theories apply to poor, minority ethnic group populations, and have much less research available to test and refine these theories to render them applicable to these groups.

Given the salience of educational achievement, occupational

experiences, and other socioeconomic conditions in the life chances of marginal populations, an important issue to consider is whether socioeconomic conditions have greater influence in delinquency formation and substance use than they do among more affluent groups. This paper explores this issue by examining the influence of parental socioeconomic status and educational and labor market experiences on violence and substance use among Puerto Rican adolescents living in a marginal area of New York City.

This study's focus also has implications for assessing efforts to prevent violence and substance use among marginal populations. The idea that people's labor market experiences can influence their propensity to commit crime has enjoyed intuitive appeal, as has its corollary assumption, that improving people's labor marketability, or the market's receptivity to potential workers, can reduce people's crime involvement. We know now that the crime - labor market relationship is more complex than the intuitive notion behind it. In the United States 1960s, when policy makers first began to explicitly consider the provision of employment and employment training as a crime reduction strategy, the underlying assumption was that the State could intervene to counteract some of the market mechanisms that were believed to propel poor youth into crime. Two important features were the focus on increasing the educational levels of poor minority youth and the focus on job training and job readiness efforts, both through formal schooling and special programs, emphasized training for males in manufacturing and for females in white collar occupations. We are limited in how much we can conclude from these programs' experiences. Many were never formally evaluated. Among those that have been evaluated, evaluation outcomes do not consistently show reductions in crime, although some of the most rigorously evaluated programs (for example Head Start and the Job Corps) have shown significant crime reduction. Moreover, most of these programs formally focused on crime, and not substance use. By examining the influences of labor

market-related factors on violence and substance use, our study may provide some insights into the factors that prevention programs for marginal populations should consider.

Our analysis objective is to determine how adolescents' educational and employment experiences, in combination with parental socioeconomic characteristics, (referred to in this paper as the socioeconomic factors) influence their involvement in violence and substance use. Since violence and substance use are correlated, two causal models were considered: one in which substance use mediates the influence of the socioeconomic factors on violence and a second one in which the violence is the mediator. Given the established findings that delinquency precedes substance use developmentally, we hypothesized that the first model, violence acting as a mediator, was the most likely.

Data, Measures, and Analysis

Data are drawn are drawn from the Puerto Rican Adolescent Survey, a two-wave panel survey (1986 and 1987) of a probability sample of the South Bronx's Puerto Rican male adolescent population ages 12-19 (N =1170). To get information on family socioeconomic and social psychological characteristics, one parent was also interviewed in first wave. The overall response rate over two waves was over .8.

Table 1 provides statistical descriptives for the variables used in the analysis. The following measures are utilized in the analysis:

Delinquency types and drug use. Based on 23 items from Elliott et al.'s General Delinquency Scale. Nine categorical responses ranging from 1 for "None" to 9 for "2-3 times a day" were used to construct and derive summary scores for four delinquency type subscales: property offenses (seven offenses, e.g., auto theft); violence (ten offenses, e.g., attacked someone with the idea of seriously hurting or killing); and petty offenses (six offenses, e.g., vandalism, running away). The T1 drug use measure replicates Elliott et al.'s, based on

self-reported use of hallucinogens, amphetamines, barbiturates, heroin and cocaine. In addition to the above five substances, the T2 measure included use of tobacco, alcohol, alcohol, crack cocaine, PCP, other narcotics and other non-prescription drugs. Nine categorical responses ranging from 1 for "None" to 9 for "2 to 3 times a day" were used.

Parental income source. Dichotomous measure: 1 (Public assistance), 2 (other).

Total family income. Ten category scale ranged from 1 (\$6,000 or less total family income last year) to 10 (\$38,000 or more).

Youth educational status. Dichotomous measure: whether or not youth attended school last year (1, 0, respectively)..

Youth grade point average. Five point scale, from 1 (mostly failing grades) to 5 (mostly A's), applied to current school year or last year in school.

Youth employment status. Recoded into a dichotomous measures: whether youth was employed last year or previously (0) or never worked (1).

The analysis utilized followed the multiple regression approach proposed for assessing mediation effects. The hypothesized mediating variable was regressed on the independent variables. The dependent variable was then regressed on the independent variables, and finally the dependent variable was then regressed on the independent and mediating variables. Mediation effects are then indicated by reductions in the magnitude and significance, in the third regression, of the independent variables' effects on the dependent variable. Table 2 shows results for two models.

Results

The table shows strong effects of violence on drug use and vice-versa, strong influences of school attendance, employment, and age on violence and drug use. Grade point average, parental socioeconomic variables, family income level and income source

had weak effects or none. In tables not shown, these effects are generally replicated when property or petty crimes are examined, and when T1 delinquency, drug use and schooling and work variables are used.

Notably, for some of the variables, the direction of causality differs between drug use and violence. School attendance and a high GPA are associated with less violence and less drug use. Labor market experiences, currently working or having worked previously, are associated with higher levels of violence, but not with higher use of substances. That work experience may influence delinquency appears counterintuitive, but the effect has been documented in other studies. In line with our knowledge of crime and substance use developmental trajectories, age is negatively associated with violence and positively associated with drug use.

The table shows good evidence for a mediating effect of violence on drug use. As seen in the third regression, adding drug use to the independent variable array has little effect on the beta coefficients for violence. On the other hand, the coefficient for school attendance is considerably reduced when violence is added to the independent variables predicting drug use. On the other hand, the coefficients for employment and age increase in significance when violence is added to the regression. Rather than indicating mediating effects, masking effects, are suggested. In tables not shown, the mediating effects of violence on drug use are found when T1 independent and dependent variables are used. The effects also hold petty offenses, but not for property offenses.

Conclusions

The findings suggest several implications for the design of interventions to reduce violence and drug use in schools. First, the findings support policies that emphasize improving adolescents educational achievement, for example preventing dropout, as a means of reducing delinquency. On the other hand,

if the aim is to reduce substance use, youths' co-occurring involvement in violence needs to be considered if the intervention focus is educational achievement. Even more caution is suggested when the focus is on job training and employment experience as a means to reduce delinquency and substance use. For marginal youth, employment may be associated with the need to consume rather than the motivations assumed by prevention programs.

Finally, other analyses using these data replicate the robust effects that peer deviance, family socialization, By implication, the findings also suggest that practitioners looking to design effective prevention programs for marginal populations would do well to consider existing knowledge about the etiology of drug use and delinquency among white middle class populations, which points to social-psychological in addition to socioeconomic factors on violence and drug use. In sum, programs to help marginal youth avoid dysfunctional behaviors would do well to consider and build interventions around socioeconomic factors, but social-psychological milieus cannot be ignored.

Table 1: Puerto Rican Adolescents Survey
Variables Used in Analysis

Variable	Mean	Min	Max	Label (reflecting high value on variable)
T2 DRUGS	.18	0	21	T2 frequency of drug use score
T2 VIOL	9.33	8	36	T2 frequency of violence score
EMPLINC	1.28	1	2	T1 family income source: employment
FAMINC	2.14	1	10	T1 total family income
YSCHOOL	.66	0	1	T2 youth in school
GPA	3.41	1	5	T2 youth grade point average
YNOTWORK	.24	0	1	T2 youth never worked
AGE	15.63	11	19	youth's age

Table 2. Puerto Rican Adolescent Survey
Beta Coefficients for Regression of T2 Violence and Drug Use
on Socioeconomic Variables and Violence/ Drug Mediators

	T2 Drug	T2 Viol	T2 Viol	T2 Viol	T2 Drug	T2 Drug
YSCHOOL	-.14 ***	-.68 ***	-.67 ***	-.68 ***	-.14 ***	.00
GPA	-.03	-.07 **	-.07 **	-.07 **	-.03	-.01
YNOTWORK	.06	-.14 ***	-.15 ***	-.14 ***	.06	.09*
FAMINC	.01	.05	.04	.05	.01	.02
EMPLINC	-.08 +	.00	.01	.00	-.08 +	-.08 +
AGE	.13* **	-.27 ***	-.29 ***	-.27 ***	.13* **	.19* **
T2 DRUG	- -	- -	.12* **	- -	- -	- -
T2 VIOL	- -	- -	- -	- -	- -	.21* **

Variable Key

T2 DRUGS	T2 frequency of drug use score
T2 VIOL	T2 frequency of violence score
EMPLINC	T1 family income source: employment
FAMINC	T1 total family income
YSCHOOL	T2 youth in school
GPA	T2 youth grade point average
YNOTWORK	T2 youth never worked
AGE	Youth's age

Significance level: *** < .001 ** < .01 * < .05 + < .1

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