

**VIOLENT AND CRIMINAL BEHAVIORS IN RURAL AND NON-RURAL
AFRICAN AMERICAN YOUTH:
A RISK-PROTECTIVE FACTOR APPROACH***

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ABSTRACT

Once believed to be a poor inner city neighborhood characteristic, youth violence and crime are now recognized as problems in rural areas as well (Osgood and Chambers 2000). Studies on their etiology remain scarce, particularly with a focus on minority youth. Given the importance of individual characteristics and a positive future orientation (educational aspirations) during adolescence, the current study tested a risk-protective factor approach with measures of risk proneness, self-esteem, educational commitment, and educational expectations to predict both direct and "indirect" measures of violence and criminal behaviors (assault, encounters with law enforcement, and court appearances) in samples of rural (n=687) and non-rural (n=182) African American youth. Results show that self-esteem, risk-proneness, and educational commitment were highly associated with measures of violent and criminal behaviors in both samples. Importantly, no differences were found in how risk or protective factors were associated with measures of violence and crime in rural and non-rural developmental contexts.

Rural communities are often perceived as safe areas that are generally less prone to violence and criminal behaviors (Frank 2003). This view is corroborated by official data reporting that, for example in 2005, whereas rates of violent crimes accounted for 514.6 violent incidents per 100,000 inhabitants in urban areas, rural areas reported only 199.2 violent incidents per 100,000 (NCVS 2005). In addition,

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the Uniform Crime Reports (UCR 2006) reported higher rates of violent crimes among urban areas compared with rural areas in 2006; that is, 404.2 versus 197.1 violent crimes per 100,000 inhabitants, respectively. However, official data also show that the greatest decrease of violent crimes has taken place in non-rural areas over the last five years (NCVS 2005); and, the increasing trends on criminal incidents among rural youth have gained the attention of some scholars in recent years. For instance Mink et al. (2005) sampled 9–12th graders (N=13,601) living in urban (n=5,113), suburban (n=7,144) and rural (n=1,263) areas and found evidence that rural youth were at equal or greater risk for being exposed to violent behaviors, such as weapon carrying, fighting, and suicidal behaviors than their urban and suburban counterparts. Other studies have also provided evidence of significantly higher risk for weapon carrying, gun carrying, exposure to violence, and verbal and physical aggression (e.g., verbal harassment, making threats, pushing, shoving, kicking, being in a fight) among rural youth compared with urban ones (Atav and Spencer 2002; Slovak and Singer 2002; Swaim, Henry, and Kelly 2006).

While understanding crime and violence among rural youth is a pressing need, noting that scholarship in this area needs to overcome key limitations in previous studies is important. For example, many studies have included multiple confounds (e.g., SES, ethnicity/race, poverty) by comparing Caucasian youth with ethnic minority adolescents, and in many of these studies minorities are often significantly underrepresented in the comparisons (Mink et al. 2005). This, in turn, may result in misleading generalizations about characteristics of a particular group of youth (Brewer and Heitzeg 2008; Covington 1995). For example, nationally surveyed African American and White youth reported similar rates of weapon carrying, gun carrying, and of being involved in a physical fight in 2003 (15.2% and 17.9%; 6.5% and 5.5%; and 36.5% and 32.5%, respectively; CDC 2003). In addition, White youth reported having committed almost twice the number of violent crimes (59%) in comparison to African American adolescents in 2005 (25%; BJS 2005). Finally, African American youth showed the greatest decline in homicide rates across all racial/ethnic groups between 1993 and 2003 (NCVS 2005). Nonetheless, African American youth reported being arrested at a rate nearly two to three times that of White adolescents (69 to 137 times compared with 30 to 48 times per 100,000 individuals; Snyder 2003). This phenomenon is not unique to the urban areas, but also a noticeable problem in rural communities – “between 1993-1998, 90% of the rural population was White and [they] were perceived to have committed 72% of

rural violent crimes. Although Blacks comprised [only] 8% of the rural population, they were perceived to have committed 16% of rural violent crimes" (Small 2001:2).

A closely associated issue is the scarcity of comparative studies that examine within group similarities or differences in developmental outcomes across contexts (e.g., rural versus non-rural African American youth; Farmer et al. 2004; Hawkins 1995, 1999; Osgood and Chambers 2000). In part, this limitation may be because numerous studies rely on official data (UCR) and self-reported victimization data (NCVS) which may not adequately test racial/ethnic and contextual comparisons with a focus on perpetration (Donnermeyer 1995; Hawkins et al. 2000). Other causes may relate to the lack of agreement among scholars about how urban models of crime and violence replicate or not across rural areas; some researchers adhere to the generalized view that rural areas are structurally homogenous in comparison to urban areas, and thus, youth in both contexts experience completely different patterns of violence and crime (Branas et al. 2004; Weisheit and Wells 2001).

Because of the abovementioned gaps, the current study aimed to examine violent and criminal behaviors (e.g., assault, encounters with law enforcement, and court appearances) in two samples of African American youth, one rural and one non-rural. More specifically, it tested a risk-protective factor model that considered risk proneness, self-esteem, educational commitment, and educational expectations. The current study used a comparative approach to test for potential moderation effects by developmental context (rural and non-rural). Theoretical underpinnings and empirical research on the risk/protective factor approach in the study of youth violence and crime are discussed in the following section.

THE RISK-PROTECTIVE FACTOR APPROACH

There is substantial theoretical and empirical support for the key role that risk and protective factors play in the etiology of violence and crime among youth. Jessor and colleagues (1995) define risk factors as conditions or variables that increase the likelihood of adolescents engaging in problem behaviors, whereas protective factors are those that either directly decrease the likelihood of participation in problem behaviors or moderate the effects of risk factors. Empirical evidence has shown that the cumulative effect of multiple risk factors may increase the likelihood of involvement in violent and criminal behaviors among youth (Earls 1994; Herrenkohl et al. 2000; Rutter, Giller, and Hagell 1998; Thornberry 1998).

Studies on risk and protective factors for youth violence have consistently pointed out the importance of individual characteristics particularly because

adolescents might be more vulnerable to risk factors surrounding their physical and social environments due to the major maturational changes and the expansion of social networks experienced during this developmental stage (Ollendick 1996; Reese et al. 2001; Webber 1997). Thus, several individual characteristics during this transitional stage are early predictors of problem behaviors (WHO 2002). For example, low self-esteem has been identified as a risk factor for aggression, delinquency, and violence (Donnellan et al. 2005; Jessor et al. 1995), whereas high self-esteem has been associated with positive outcomes including academic achievement, social relationships, and positive psychological functioning (Hirsch and DuBois 1991; Reasoner 1992; Rosenberg 1986; Zimmerman et al. 1997). Similarly, risk proneness—described as attraction to excitement and risk and a lack of awareness of negative consequences (Beyth-Marom and Fischhoff 1997; Crockett et al. 2006)—has been significantly associated with aggression (e.g., Joireman, Anderson, and Strathman 2003; Swain et al. 2006) and delinquency in youth (e.g., White, Labouvie, and Bates 1985; Zuckerman 1974, 1979). Some scholars have suggested that the relationship between individual characteristics and violence and crime in youth may vary due to ethnic and racial background; however, most findings are generally inconclusive due to methodological limitations (e.g., race/ethnicity and SES confounds; Rhodes et al. 2004). For instance, Hubbard (2006) found that self-esteem was a protective factor for Caucasian youth whereas among African American adolescents, as self-esteem increased, their likelihood of being arrested also increased. In contrast, other studies reported higher levels of self-esteem associated with less aggression among urban African American youth (Li, Nussbaum, and Richards 2007; Yakin and McMahon 2003).

From a developmental perspective, adolescence also represents an important time to contemplate life aspirations, career, and occupational goals. Empirical evidence has shown that a positive school environment not only encourages adolescents to thrive and pursue their goals, but also represents an important predictor of behavioral outcomes in youth (Arthur et al. 2002; Hawkins, Von Cleve, and Catalano 1991; McNeely 2003). In fact, school connectedness, academic performance, educational commitment, and career expectations have been consistently cited in the literature as key predictors of multiple problem behaviors including aggression, delinquency, violence, and crime (e.g., Battistich and Hom 1997; Freeman 1996; Hawkins et al. 2001; Jessor et al. 1995; Maguin and Loeber, 1996; McNeely 2003; Resnick et al. 1997; Swaim et al. 2006; Tremblay et al. 1992). Again, some scholars have argued that African American adolescents are less likely

to feel connected to the school due to perceived rejection, anticipated lower performance, and lower career expectations by teachers and staff when compared with students from other ethnic/racial backgrounds (Griffin 2002). This, in turn, may result in limited occupational opportunities and lower socioeconomic attainment that could potentially lead to delinquency and crime (Caldwell, Sturges, and Silver 2007; Dornbusch et al. 2001; Morretti 2005).

Few previous studies have documented the associations among individual characteristics, educational achievement, and crime in youth across developmental contexts (e.g., rural versus non-rural), and findings have been inconsistent. For instance, rural youth have been described to have lower educational expectations and future aspirations than urban youth due to geographical isolation, limited educational and recreational resources, higher levels of poverty, and reduced career and professional opportunities (Apostal and Bilden 1991; Markstrom, Marshall, and Tryon 2000). In turn, these factors may result in lower self-esteem and subsequent engagement in violent and criminal incidents (Korbin 2003; Rhodes et al. 2004). In addition, it has also been suggested that youth living in high poverty urban neighborhoods develop a sense of hopelessness and future failure that may result in engagement in maladaptive behaviors (Bolland 2003; Greene 1993). Moreover, other scholars report no differences across developmental contexts and ethnic groups in levels of school factors and their associations with maladjustment among youth (Swaim et al. 2006).

In summary, understanding the links between individual characteristics, school factors (e.g., educational commitment and expectations), and violence among youth is a pressing issue considering the increasing crime rates among rural and non-rural youth as well as the alarming school dropout rates, particularly among urban African American youth for whom rates reached 50% between 2002 and 2003 (Swanson 2003). Furthermore, although previous studies have documented the association of individual and school related risk factors to violence and crime among multiethnic youth, within group similarities and differences, namely rural versus non-rural African American youth, remains for the most part unexplored (Farmer et al. 2004; Hawkins 1999).

METHODOLOGY

Data and Sampling Methodology

Data collection for the current study was approved by a University Institutional Review Board and included a self-report data instrument administered to African

American youth living in one rural and one non-rural location in the Southeastern region of the United States ($n = 869$). The rural data was collected at a county school with a total population of 851 students; the participants for the rural sample included 7th through 12th grade adolescents ($n = 687$; mean age 15.7 years). The rural school is located in a small town in a “Black Belt”¹ county with a population of 73% African Americans, an unemployment rate of 8.1%, a median household income of approximately \$20,600, and a poverty rate of 33.5% (Vazsonyi and Crosswhite 2004). The non-rural data was collected at a high school in a small university town outside the Black Belt with a population of 73% Whites, a median household income level of \$30,950, and a poverty rate of 21.8% (Vazsonyi et al. 2001). The school had a total population of 1,134 students of which 289 were African Americans; participants for the current study included 9th-12th grade adolescents ($n = 182$).

Variables

Demographic variables. Age of participants was measured by two items indicating year and month of birth of participants; mean ages for the rural and non-rural samples were 15.7 years and 16.5 years, respectively. Sex was measured by a single item: “What is your sex?” (1=male and 2=female); the samples were gender balanced (46.6% and 48.9% males in the rural and non-rural samples). For family structure, most of the youth reported living with both biological parents or biological mother only; thus, family structure was recoded as 1=two biological parents and 2=other. Finally, socioeconomic status was assessed based on the job category of the household’s primary wage earner (1=Laborer, 2=Semiskilled, 3=Clerical, 4=Semi-professional, 5=Professional, 6=Executive).

Independent variables

Risk proneness was measured by a scale containing 10 items from the Low Self-Control Scale (Grasmick et al. 1993) and Weinberger Adjustment Inventory (Weinberger and Schwartz 1990) (e.g., “I do things without giving them enough thought;” 1=strongly disagree to 5=strongly agree). Rationale for selecting the items for both scales was based on Beyth-Marom and Fischhoff’s (1997) description

¹The Black Belt comprises an area of 623 disadvantaged rural-non-metropolitan counties characterized by high rates of poverty, unemployment, infant mortality, poor health, and low academic achievement (U.S. Census 2003, 2006).

of risk proneness: attraction to risk and lack of awareness of negative consequences. An exploratory factor analysis (EFA) was conducted to examine construct validity of the scale and item loadings for each factor. Reliabilities were $\alpha=.81$ for the rural and $\alpha=.79$ for the non-rural sample. *Self-esteem* was measured by a subscale that is part of the 62-item Weinberger Adjustment Inventory (Weinberger and Schwartz 1990). The scale contained 7 items rated on a 5-point Likert-type scale ranging from 1=never to 5=always (e.g., wish was someone else); reliability coefficients were $\alpha=.72$ for the rural sample and $\alpha=.76$ for the non-rural sample. *Educational commitment* was measured by a scale composed of 10 items (e.g., does extra work to improve grades) drawn from Thornberry and colleagues' Commitment to School Scale (1991) and Buriel, Calzada, and Vazquez's Educational Expectations and Aspirations scale (1982). The items were rated on a 4-point Likert-type scale (1=strongly disagree to 4=strongly agree)²; reliability coefficients were $\alpha=.72$ for the rural sample and $\alpha=.74$ for the non-rural sample. *Educational expectations* were measured by a scale containing 2 items (e.g., how likely will graduate from a 2-year college & how likely will attend a vocational/technical school) rated on a 4-point Likert-type scale (1=definitely won't to 4=definitely will). The items were based on "general" conceptual work by Hamilton and Lempert (1996); reliability coefficients were $\alpha=.71$ for the rural sample and $\alpha=.64$ for the non-rural sample. *Cumulative Risk* was computed by dichotomizing the predictor variables (risk-proneness, self-esteem, educational commitment, and educational expectations) into "0=low risk" and "1=high risk;" these values were assigned based on examination of frequencies as well as means of each variable to ensure that the cut-off point was consistent with the presence or absence of risk. For example, the item "I wish I was someone else" (self-esteem) was rated on a scale that ranged from 1=never to 5=always; thus, youth who answered never and not often were coded as "0=low risk," whereas youth who answered often, sometimes, and always were recoded as "1=high risk;" the same procedure was followed to recode risk-proneness, self-esteem, educational commitment, and educational expectations scales. Then, dichotomized variables were summed to produce a cumulative risk index that ranged from 0-4.

²Some items were slightly reworded to correspond better with Likert scales and to alternate between positive and negative orientations of the items.

Dependent variables

Violent and criminal behaviors were measured by two subscales from the Normative Deviance Scale (Vazsonyi et al. 2001), namely assault (six items; e.g., used force/violence/threats to get money from someone) and weapon carrying (two items; e.g., carried weapon to use/intention to fight); assault had good internal consistency across the rural ($\alpha=.92$) and non-rural ($\alpha=.83$) samples, and item correlations for weapon carrying were high in both samples ($r=.85$ and $r=.90$, respectively). In addition, encounters with law enforcement and court appearances were measured by four single items, namely “being pulled over by the police for speeding,” “being pulled over by the police for something else,” “appeared before court,” and “being arrested.” All dependent variables were rated on a 5-point Likert-type scale (1=never to 5=more than six times).

RESULTS

Results from comparisons of demographic characteristics showed only two significant differences across samples, namely age and family structure. More specifically, non-rural youth were older than rural youth (16.5 years and 15.7 years, respectively). In addition, most rural youth reported living with their biological mother only ($n=252$) and with a step father ($n=108$), whereas most non-rural youth reported living with both biological parents ($n=78$) or biological mother only ($n=57$); Table 1 provides detailed information on demographic characteristics by sample. Correlational analysis provided evidence that main study constructs were significantly correlated in the expected directions across samples; Table 2 depicts the correlation coefficients by sample.

In a next step, one-way ANOVAs were performed to test for potential mean differences on violent and criminal behaviors by cumulative risk across samples. Due to significant differences found across samples on age and family structure and to remove potential confounds due to demographic variables scores were residualized by age, sex, family structure, and SES. In addition, post hoc tests using Scheffé’s procedure were used for multiple comparisons. For simplicity purposes, the results of the comparisons will be discussed for the dependent variables that were based on two or more items, namely, assault and weapon carrying; the results are plotted in Figures 1 and 2 by sample. Overall, pairwise comparisons of adjacent cumulative risk categories by levels of assault and weapon carrying showed significantly higher levels of the two constructs for 3 and 4 risk factors ($p < 0.05$) across variables in comparison to lower levels for 0 to 2 risk factors; thus, results

TABLE 1. FREQUENCIES OF DEMOGRAPHIC VARIABLES BY RURAL VERSUS NON-RURAL DEVELOPMENTAL CONTEXT

	DEVELOPMENTAL CONTEXTS		χ^2
	RURAL AFRICAN AMERICAN YOUTH n=687	NON-RURAL AFRICAN AMERICAN YOUTH n=182	
Age	15.7 years	16.5 years	F=31.2**
Sex			ns
Male	46.6 (320)	48.9 (89)	
Female	53.4 (369)	50.5 (92)	
Family structure			16.15***
Two biological parents	176	78	
Other	461	102	
Primary wage earner			ns
Laborer	6.0	4.0	
Semiskilled	24.3	20.2	
Clerical	14.7	14.5	
Semi-professional	31.2	28.2	
Professional	15.9	20.2	
Executive	7.8	12.9	

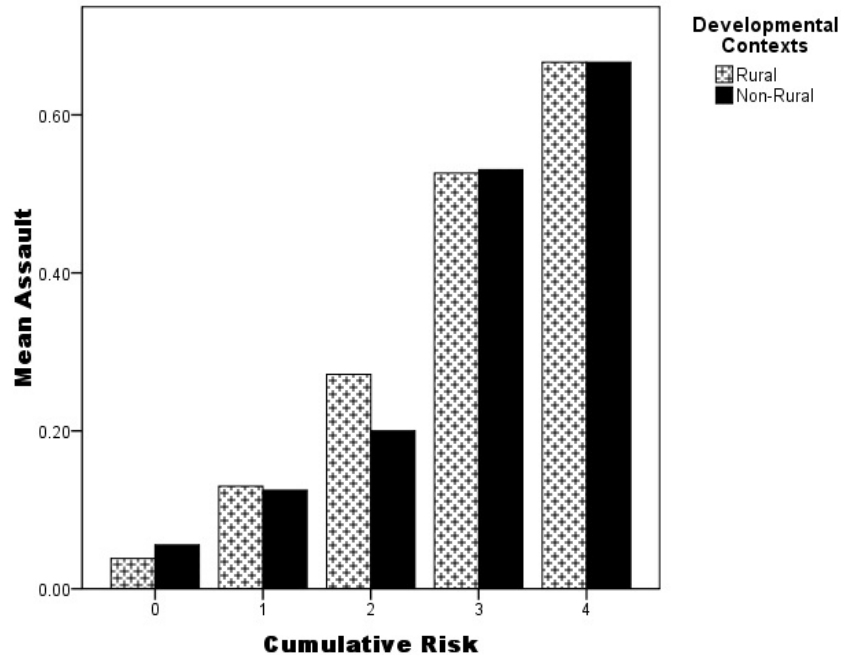
Note: ** $p < .01$, *** $p < .001$; ns=not significant. Percentages are based on those who answered because the question applied to them. Participants were given the option to answer "does not apply" for parental education and employment; these figures are not included in the table and make up the difference between the sum of all categories and 100%.

TABLE 2. CORRELATIONS AMONG MAIN STUDY CONSTRUCTS

	1	2	3	4	5	6	7	8	9	10	11
1. Risk proneness		-.20**	-.10**	-.14**	.27**	.25**	.27**	.31**	.23**	.22**	.48**
2. Self-esteem	-.07*		.49**	.05	-.35**	-.31**	-.36**	-.34**	-.27**	-.39**	-.65**
3. Education commitment	-.24**	.35**		.12*	-.40**	-.34**	-.37**	-.35**	-.29**	-.38**	-.72**
4. Educational expectations	-.13*	.23**	.30**		.01	-.12*	-.21*	-.03*	-.08*	-.07*	-.48**
5. Assault	.38**	-.32**	-.39**	-.23**		.76**	.70**	.71**	.71**	.75**	.42**
6. Weapon carrying	.33**	-.10*	-.35**	-.13*	.64**		.57**	.58**	.56**	.58**	.35**
7. Been pulled over for speeding	.20**	-.23**	-.33**	-.25**	.46**	.29**		.01*	.01*	.00	.38**
8. Been pulled over for something else	.28**	-.34**	-.42**	-.22**	.58**	.45**	.52**		.62**	.67**	.36**
9. Appeared before court	.16**	-.27**	-.31**	-.23**	.48**	.35**	.45**	.56**		.73**	.29**
10. Been arrested	.25**	-.26**	-.30**	-.21**	.65**	.34**	.49**	.68**	.64**		.41**
11. Cumulative risk	.54**	-.55**	-.65**	-.61**	.42**	.34**	.38**	.45**	.34**	.39**	

Notes: * $p < .05$, ** $p < .01$. Rural African American youth are above the diagonal, while Non-Rural African American youth are below.

FIGURE 1. MEAN ASSAULT SCORES BY LEVELS OF CUMULATIVE RISK (BY DEVELOPMENTAL CONTEXT).

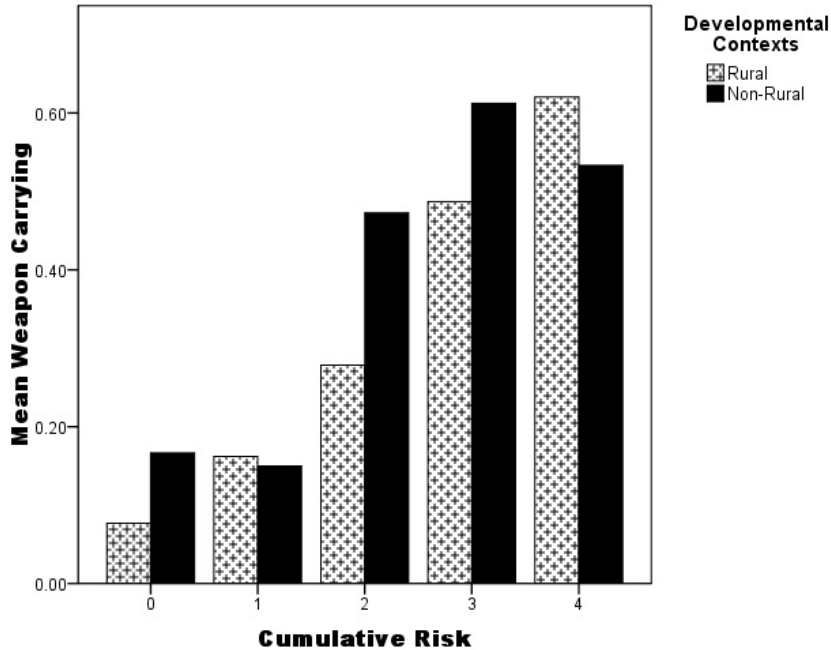


suggested that as the number of risk factors increased the levels of assault and weapon carrying increased significantly.

To be able to test potential moderation effects by developmental contexts (rural and non-rural) on the association between risk/protective factors and violent and criminal behaviors, interaction terms were introduced in the last step of the logistic regression models, namely self-esteem*sample, risk proneness*sample, educational commitment*sample, and educational expectations*sample. Although educational expectations were not significantly associated with any of the dependent measures, it was still tested in these analyses. The results showed that none of the interactions were statistically significant; this suggested that developmental context (rural versus non-rural) did not moderate the relationship between risk and protective factors and measures of violence and crime across samples. Table 3 includes the results from the final model step without interaction effects.

Results from logistic regressions showed that self-esteem, risk proneness, and educational commitment were significantly associated with all measures of violent and criminal behaviors (e.g., assault, weapon carrying, court appearances, and encounters with the law). Unexpectedly, educational expectations were not

FIGURE 2. MEAN WEAPON CARRYING SCORES BY LEVELS OF CUMULATIVE RISK (BY DEVELOPMENTAL CONTEXT).



associated with any of the measures. Based on pseudo R squared values, models explained between 20% and 40% of the variance in assault, between 7% and 9% in weapon carrying, between 18% and 21% for having been pulled over by the police for speeding, between 19% and 27% for having been pulled over by the police for something else, between 21% and 29% for having appeared in court, and between 22% and 32% for having been arrested.

The results for individual factors showed that adolescents with low self-esteem were 2.5 times more likely to report having committed assault, 3 times more likely to report having been pulled over by the police for speeding, 3.3 times more likely to report having been pulled over by the police for something else, 3 times more likely to report having appeared in court, and 5.2 times more likely to report having been arrested; weapon carrying was not significantly associated with self-esteem. The results also showed that adolescents with high levels of risk-proneness were 5.9 times more likely to report having committed assault, 3 times more likely to report having carried a weapon, 2.2 times more likely to report having been pulled over by the police for speeding, 6.5 times more likely to report having been pulled over by the police for something else, and 4.3 times more likely to report having

TABLE 3. FINAL MODEL STEP OF LOGISTIC REGRESSION ANALYSES FOR AFRICAN AMERICAN YOUTH TOTAL SAMPLE (N=869).

					Been pulled over by		Been pulled over by					
	Assault		Weapon carrying		the police for something else		the police for speeding		Appeared before court		Been arrested	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
<i>Individual Factors</i>												
Self-esteem	2.51 ^{***}	1.47-4.28	1.45	.88-2.38	3.28 ^{***}	1.87-5.77	3.06 ^{***}	1.77-5.30	3.01 ^{***}	1.74-5.22	5.22 ^{***}	2.82-9.64
Risk proneness	5.88 ^{***}	2.38-14.54	3.05 ^{**}	1.48-6.26	6.50 ^{***}	2.31-18.27	2.22 [*]	1.00-4.93	1.64	.74-3.62	4.26 ^{**}	1.55-11.70
<i>School Factors</i>												
Educational commitment	5.91 ^{***}	3.26-10.70	4.49 ^{***}	2.63-7.66	4.70 ^{***}	2.48-8.92	4.64 ^{***}	2.50-8.60	3.50 ^{***}	1.86-6.60	9.62 ^{***}	4.25-21.79
Educational expectations	1.18	.69-2.01	.78	.47-1.25	1.08	.62-1.89	1.34	.78-2.31	.59	.34-1.01	1.34	.73-2.47
<i>Cumulative risk</i>	2.80 ^{***}	2.15-3.64	1.94 ^{***}	1.55-2.41	2.75 ^{***}	2.09-3.62	2.45 ^{***}	1.90-3.17	1.94 ^{***}	1.51-2.48	4.01 ^{***}	2.86-5.63
LR c ² (df)	39.2(1)		32.4(1)		36.6(1)		26.9(1)		15.5(1)		40.4(1)	
Cox & Snell R ²	.02		.07		.19		.18		.21		.22	
Nagelkerke R ²	.04		.09		.27		.21		.29		0.32	

Notes: OR: odds ratio; CI: confidence interval. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

been arrested; risk proneness was not significantly associated with having appeared in court.

Findings for the school factors showed that youth reporting low levels of educational commitment were 5.9 times more likely to report having committed assault, 4.5 times more likely to report having carried a weapon, 4.6 times more likely to report having been pulled over by the police for speeding, 4.7 times more likely to report having been pulled over by the police for something else, 3.5 times more likely to report having appeared in court, and 9.6 times more likely to report having been arrested. Additional analyses tested the association between the cumulative risk index and violent and criminal behaviors; as expected, cumulative risk was significantly associated with all the outcomes. High risk youth were 2.8 times more likely to report having committed assault, 1.9 times more likely to report having carried a weapon, 2.5 times more likely to report having been pulled over by the police for speeding, 2.8 times more likely to report having been pulled over by the police for something else, 1.9 times more likely to report having appeared in court, and 4 times more likely to report having been arrested.

DISCUSSION AND CONCLUSIONS

Current research on violence and crime across rural and non-rural areas suggests that although for decades rates of crime and violence in rural areas were lower than urban areas (with a significant rise in rural areas during the last decade), the patterns of crime and violence are not homogeneous across either context. For example, significant variation in crime rates has been documented across neighborhoods in metropolitan areas as well as rural areas (Weisheit and Donnermeyer 2000; Wells and Weisheit 2004). Similarly, the factors associated with crime and violent acts (e.g., poverty, unemployment) may follow different patterns that are not homogenous across rural and non-rural contexts and may also vary depending on additional factors that are particular to one area but not the other (e.g., local resources; Osgood and Chambers 2000; Wells and Weisheit 1996). Thus, youth violence remains a serious concern to the American public – a phenomenon described as a “public health issue because of its tremendous impact on the health and well-being of youth” (CDC 2006:2). In addition, despite the current national prevention efforts and the emerging scholarship in this area, African American adolescents continue to be understudied.

The main objective of the current study was to examine potential differences or similarities in crime and violence among African American youth living in rural and

non-rural areas. Our interest rests particularly on addressing two important caveats of extant literature on crime and violence among African American youth: first, the inclusion of ethnicity/race as a confound by comparing African American youth with Caucasian and/or other minority youth, and second, the prevalent inconsistencies on empirical research about predictors of crime and violence among youth living in rural and non-rural areas. Thus, we aimed to contribute to these gaps by first examining violent and criminal behaviors based on a risk-protective factor model, and second, by using a comparative approach to tease apart the potential developmental contextual effects on measures of adjustment in African American youth.

Consistent with previous literature (Donnellan et al. 2005; Li et al. 2007; Yakin and McMahon 2003) and except for weapon carrying, self-esteem was significantly associated with assault, encounters with the police (e.g., being pulled over by the police for speeding, being pulled over by the police for something else, being arrested), and court appearances. Similarly, risk proneness was associated with most measures of violence and crime, except for court appearances; this finding was largely consistent with previous work (White et al. 1985; Zuckerman 1974, 1979). For school factors, educational commitment was significantly associated with all measures of violence and crime as documented by previous studies (Hawkins et al. 2001; McNeely 2003; Resnick et al. 1997; Swaim et al. 2006); surprisingly, educational expectations were not associated with any of the dependent measures. It is important to note that the lack of associations among some variables may be partly due to the limited number of items included on each measure, for example, court appearances and educational expectations (1 and 2 items, respectively). In addition, the modest amount of variance explained in weapon carrying (2 items) may also be because this behavior was endorsed by few youth (267 out of 677), thus presenting a restriction in range problem. Other limitations of the study include the exclusive use of self-report data and the cross-sectional nature of the data that does not allow for causal inferences.

The most salient finding from the current study is that developmental contexts (rural and non-rural) did not moderate the relationship between individual characteristics and school factors and both violence and crime measures. Thus, our results provide evidence that the risk/protective factors associated with crime and violent acts did not differ by developmental contexts. These results are inconsistent with previous studies documenting adjustment differences in youth across developmental contexts (e.g., Atav and Spencer 2002; Mink et al. 2005; Slovak and

Singer 2002); however, these findings provide support for other studies that have examined adjustment on rural and non-rural African American youth and found no differences across groups (e.g., Farmer et al. 2004; Hawkins 1995, 1999). Furthermore, since both rural and non-rural samples were African American and the risk/protective model functioned in an invariant way across groups, the results underscore the importance of conducting more comparative studies to examine within group differences/similarities. As suggested by Scheer, Borden, and Donnermeyer (2000:112): “*It would appear that the basic etiology is the same for various ethnic groups in American society. However, variations within different ethnic groups may account for additional variance and suggest directions for future research.*”

From a practical perspective, these findings have important implications for prevention and intervention efforts that work primarily with African American youth in rural and non-rural areas by providing insights on the key role that individual characteristics and school factors play on violent and criminal behaviors. In addition, school programs aimed to build self-esteem and foster educational commitment may find this information useful in promoting positive well-being particularly among youth who may be at risk for negative outcomes. Finally, although the current study represents only a small step forward in understanding the etiology of violence and crime among rural and non-rural African American youth, it provides the foundation for future scholarship on this area for this population and other ethnic minority youth.

REFERENCES

- Apostal, Robert and Janet Bilden. 1991. “Educational and Occupational Aspirations of Rural High School Students.” *Journal of Career Development* 18:153-60.
- Arthur, Michael W., J. David Hawkins, John A. Pollard, Richard F. Catalano, and A.J. Baglioni, Jr. 2002. “Measuring Risk and Protective Factors for Substance Use, Delinquency, and other Adolescent Problem Behaviors: The Communities That Care Youth Survey.” *Evaluation Review* 26:575-601.
- Atav, Serdar and Gale A. Spencer. 2002. “Health Risk Behaviors among Adolescents Attending Rural, Suburban, and Urban Schools: A Comparative Study.” *Family and Community Health* 25:53-64.
- Battistich, Victor and Allen Hom. 1997. “The Relationship between Students’ Sense of Their School as a Community and Their Involvement in Problem Behaviors.” *American Journal of Public Health* 87:1997-2001.

- Beyth-Marom, Ruth and Baruch Fischhoff. 1997. "Adolescents' Decisions about Risks: A Cognitive Perspective." Pp. 110-35 in *Health Risks and Developmental Transitions During Adolescence*, edited by J. Schulenberg, J.L. Maggs, and K. Hurrelmann. Cambridge, UK: Cambridge University Press.
- Bolland, John M. 2003. "Hopelessness and Risk Behavior among Adolescents Living in High-Poverty Inner-City Neighborhoods." *Journal of Adolescence* 26:145-58.
- Branas, Charles C., Michael L. Nance, Michael R. Elliott, Therese S. Richmond, and C. William Schwab. 2004. "Urban-Rural Shifts in Intentional Firearm Death: Different Causes, Same Results." *American Journal of Public Health* 94:1750-55.
- Brewer, Rose M. and Nancy A. Heitzeg. 2008. "The Racialization of Crime and Punishment." *American Behavioral Scientist* 51:625-44.
- Bureau of Justice Statistics (BJS). 2005. "Juvenile Victimization and Offending, 1993-2003." Retrieved January 27, 2008 (<http://www.ojp.gov/bjs/pub/pdf/jvo03.pdf>).
- Buriel, Raymond, Silverio Calzada, and Richard Vasquez. 1982. "The Relationship of Traditional Mexican American Culture to Adjustment and Delinquency among Three Generations of Mexican American Male Adolescents." *Hispanic Journal of Behavioral Sciences* 4:41-55.
- Caldwell, Roslyn M., Susan M. Sturges, and N. Clayton Silver. 2007. "Home Versus School Environments and their Influences on the Affective and Behavioral States of African American, Hispanic, and Caucasian Juvenile Offenders." *Journal of Child and Family Studies* 16:119-32.
- Center on Disease Control (CDC). 2003. "Youth Risk Behavior Surveillance." *Morbidity and Mortality Weekly Report* 51:1-64. Retrieved on November 14, 2007 (<http://www.cdc.gov/mmWR/preview/mmwrhtml/ss5302a1.htm>).
- _____. 2006. "Web-Based Injury Statistics Query and Reporting System (WISQARS)." Retrieved on February 5, 2008 (<http://www.cdc.gov/ncipc/wisqars>).
- Covington, Jeanette. 1995. "Racial Classification in Criminology: The Reproduction of Racialized Crime." *Sociological Forum* 10:547-68.
- Crockett, Lisa J., Kristin L. Moilanen, Marcela Raffaelli, and Brandy A. Randall. 2006. "Psychological Profiles and Adolescent Adjustment: A Person-Centered Approach." *Development and Psychopathology* 18:195-214.

- Donnellan, M. Brent, Kali H. Trzesniewski, Richard W. Robins, Terrie E. Moffitt, and Avshalom Caspi. 2005. "Low Self-Esteem is Related to Aggression, Antisocial Behavior, and Delinquency." *Psychological Science* 16:328-35.
- Donnermeyer, Joseph F. 1995. "Crime and Violence in Rural Communities." Pp. 27-63 in *Perspectives on Violence and Substance Use in Rural America*, edited by S.M. Blaser, J. Blaser, and K. Pantoja. Oakbrook, IL: North Central Regional Educational Laboratory.
- Dornbusch, Sanford M., Kristan Glasgow Erickson, Jennifer Laird, and Carol A. Wong. 2001. "The Relation of Family and School Attachment to Adolescent Deviance in Diverse Groups and Communities." *Journal of Adolescent Research* 16:396-422.
- Earls, Felton J. 1994. "Violence and Today's Youth." *Critical Issues for Children and Youth* 4:4-23.
- Farmer, Thomas W., LeShawndra N. Price, Keri K. O'Neal, Man-Chi Leung, Jennifer B. Goforth, Beverley D. Cairns, and LeRoy E. Reese. 2004. "Exploring Risk in Early Adolescent African American Youth." *American Journal of Community Psychology* 33:51-60.
- Frank, Russell. 2003. "When Bad Things Happen in Good Places: Pastoralism in Big-City Newspaper Coverage of Small-Town Violence." *Rural Sociology* 68:207-30.
- Freeman, Richard B. 1996. "Why do so Many Young American Men Commit Crimes and What Might We Do About It?" *The Journal of Economic Perspectives* 10:25-42.
- Grasmick, Harold G., Charles R. Tittle, Robert J. Bursik, and Bruce J. Arneklev. 1993. "Testing the Core Empirical Implications of Gottfredson and Hirschi's General Theory of Crime." *Journal of Research in Crime and Delinquency* 30:5-29.
- Greene, Michael B. 1993. "Chronic Exposure to Violence and Poverty: Interventions that Work for Youth." *Crime and Delinquency* 39:106-124.
- Griffin, Bryan W. 2002. "Academic Disidentification, Race, and High School Dropouts." *The High School Journal* 85:71-81.
- Hamilton, Stephen F. and Wolfgang Lempert. 1996. "The Impact of Apprenticeship on Youth: A Prospective Analysis." *Journal of Research on Adolescence* 6:427-55.
- Hawkins, Darnell F. 1995. "Ethnicity, Race, and Crime: A Review of Selected Studies." Pp. 11-45 in *Ethnicity, Race and Crime: Perspectives across Time and Place*, edited by D.F. Hawkins. Albany, NY: State University of New York Press.

- _____. 1999. "What can we Learn from Data Disaggregation? The Case of Homicide and African Americans." Pp. 195-210 in *Homicide: A Sourcebook of Social Research*, edited by M.D. Smith and M. Zahn. Thousand Oaks, CA: Sage Publications, Inc.
- Hawkins, Darnell F., John H. Laub, Janet L. Lauritsen, and Lynn Cothorn. 2000. "Race, Ethnicity, and Serious and Violent Juvenile Offending." Office of Juvenile Justice and Delinquency Prevention. Retrieved on February 2, 2008 (<http://www.ncjrs.gov/pdffiles1/ojjdp/181202.pdf>).
- Hawkins, J. David, Jie Guo, Karl G. Hill, Sara Battin-Pearson, and Robert D. Abbott. 2001. "Long-Term Effects of the Seattle Social Development Intervention on School Bonding Trajectories." *Applied Developmental Science* 5:225-36.
- Hawkins, J. David, Elizabeth Von Cleve, and Richard F. Catalano. 1991. "Reducing Early Childhood Aggression: Results of a Primary Prevention Program." *American Academy of Child Adolescent Psychiatry* 30:208-17.
- Herrenkohl, Todd L., Eugene Maguin, Karl G. Hill, J. David Hawkins, Robert D. Abbott, and Richard F. Catalano. 2000. "Developmental Risk Factors for Youth Violence." *Journal of Adolescent Health* 6:176-86.
- Hirsch, Barton J. and David L. DuBois. 1991. "Self-Esteem in Early Adolescence: The Identification and Prediction of Contrasting Longitudinal Trajectories." *Journal of Youth and Adolescence* 20:53-72.
- Hubbard, Dana J. 2006. "Should we be Targeting Self-Esteem in Treatment for Offenders: Do Gender and Race Matter in Whether Self-Esteem Matters?" *Journal of Offender Rehabilitation* 44:39-57.
- Jessor, Richard, Jill Van Den Bos, Judith Vanderryn, Frances M. Costa, and Mark S. Turbin. 1995. "Protective Factors in Adolescent Problem Behavior: Moderator Effects and Developmental Change." *Developmental Psychology* 31:923-33.
- Joireman, Jeff, Jonathan Anderson, and Alan Strathman. 2003. "The Aggression Paradox: Understanding Links among Aggression, Sensation Seeking, and the Consideration of Future Consequences." *Journal of Personality and Social Psychology* 84:1287-1302.
- Korbin, Jill E. 2003. "Children, Childhoods, and Violence." *Annual Review of Anthropology* 32:431-46.

- Li, Susan T., Karin M. Nussbaum, and Maryse H. Richards. 2007. "Risk and Protective Factors for Urban African-American Youth." *American Journal of Community Psychology* 39:21-35.
- Maguin, Eugene and Rolf Loeber. 1996. "Academic Performance and Delinquency." Pp. 145-264 in *Crime and Justice: A Review of Research*, edited by M. Tonry. Chicago, IL: University of Chicago Press.
- Markstrom, Carol A., Sheila K. Marshall, and Robin J. Tryon. 2000. "Resiliency, Social Support, and Coping in Rural Low Income Appalachian Adolescents from Two Racial Groups." *Journal of Adolescence* 23:693-703.
- McNeely, Clea. 2003. "Connection to School as an Indicator of Positive Youth Development." Retrieved January 3, 2008 (<http://www.childtrends.org/Files/McNeely-paper.pdf>).
- Mink, Michael D., Charity G. Moore, Andrew O. Johnson, Janice C. Probst and Amy B. Martin. 2005. "Violence and Rural Teens: Teen Violence, Drug Use, and School-Based Prevention Services in Rural America." Rockville, MD: South Carolina Rural Health Research. Retrieved on January, 27, 2008 (http://rhr.sph.sc.edu/report/SCRHRC_TeenViolence.pdf).
- Moretti, Enrico. 2005. "Does Education Reduce Participation in Criminal Activities?" Retrieved on February 21, 2008 (http://devweb.tc.columbia.edu/manager/symposium/Files/74_Moretti_Symp.pdf).
- National Crime Victimization Survey (NCVS), Bureau of Justice Statistics. 2005. "Crime and Victim Statistics." Retrieved January 27, 2008 (http://www.ojp.usdoj.gov/bjs/cvict_c.htm#violent).
- Ollendick, Thomas H. 1996. "Violence in Youth: Where Do We Go From Here? Behavior Therapy's Response." *Behavior Therapy* 27:485-514.
- Osgood, D. Wayne and Jeff M. Chambers. 2000. "Social Disorganization Outside the Metropolis: An Analysis of Rural Youth Violence." *Criminology* 38:81-115.
- Reasoner, Robert. 1992 "Self-Esteem: A Solution for Today's Schools." *The National School Administrator, AASA*. Retrieved January 15, 2008 (http://www.politicsoftrust.net/policy/self_esteem/can_se_programs_reduce_problem_behaviors.pdf).
- Reese, Le'Roy E., Elizabeth M. Vera, Kyle Thompson, and Raquel Reyes. 2001. "A Qualitative Investigation of Perceptions of Violence Risk Factors in Low-Income African American Children." *Journal of Clinical Child Psychology* 30:161-71.

- Resnick, Michael D., Peter S. Bearman, Robert W. Blum, Karl E. Bauman, Kathleen M. Harris, Jo Jones, Joyce Tabor, Trish Behring, Renee E. Sieving, Marcia Shew, Marjorie Ireland, Linda H. Bearinger, and J. Richard Udry. 1997. "Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health." *Journal of the American Medical Association* 278:823-32.
- Rhodes, Jean, Jennifer Roffman, Ranjini Reddy, Katia Fredriksen. 2004. "Changes in Self-Esteem During the Middle School Years: A Latent Growth Curve Study of Individual and Contextual Influences." *Journal of School Psychology* 42:243-61.
- Rosenberg, M. 1986. "Self-Concept from Middle Childhood through Adolescence." Pp. 107-36 in *Psychological Perspectives on the Self*, Vol. 3, edited by J. Suls. Hillsdale, NJ: Erlbaum.
- Rutter, Michael, Henri Giller, and Ann Hagell. 1998. *Antisocial Behavior by Young People: A Major New Review*. Cambridge, England: Cambridge University Press.
- Scheer, Scott D., Lynne M. Borden, and Joseph F. Donnermeyer. 2000. "The Relationship Between Family Factors and Adolescent Substance Use in Rural, Suburban, and Urban Areas." *Journal of Child and Family Studies*, 9: 105-115.
- Slovak, Karen and Mark I. Singer. 2002. "Children and Violence: Findings and Implications from a Rural Community." *Child and Adolescent Social Work Journal* 19:35-56.
- Small, Mark A. 2001. "Rural Crime Facts." Institute on Family & Neighborhood Life. Clemson University. Retrieved on January 22, 2008 (http://virtual.clemson.edu/groups/ncrj/Assets/Adobe_Acrobat_Files/rural_crime_facts.pdf).
- Snyder, Howard N. 2003. Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice. "Juvenile Arrests 2001." Retrieved on February 2, 2008 (<http://www.ncjrs.gov/html/ojjdp/201370/contents.html>).
- Swaim, Randall C., Kimberly L. Henry and Kathleen Kelly. 2006. "Predictors of Aggressive Behaviors among Rural Middle School Youth." *Journal of Primary Prevention* 27:229-43.
- Swanson, Christopher B. 2003. *Ten Questions (and Answers) About Graduates, Dropouts, and NCLB Accountability*. Washington, DC: The Urban Institute.
- Thornberry, Terence P. 1998. "Risk Factors for Gang Membership." Pp. 147-66 in *Serious and Violent Delinquent Offenders: Risk Factors and Successful Interventions*, edited by R. Loeber and D.P. Farrington. Thousand Oaks, CA: Sage Publications.

- Thornberry, Terence P., Alan J. Lizotte, Marvin D. Krohn, Margaret Farnworth, and Sung J. Jang. 1991. "Testing Interactional Theory: An Examination of Reciprocal Causal Relationships among Family, School, and Delinquency." *The Journal of Criminal Law & Criminology* 82:3-35.
- Tremblay, Richard, Benoit Masse, D. Perron, Marc LeBlanc, Alex Schwartzman, and J. Ledingham. 1992. "Early Disruptive Behavior, Poor School Achievement, Delinquent Behavior, and Delinquent Personality: Longitudinal Analyses." *Journal of Consulting and Clinical Psychology* 60:64-72.
- Uniform Crime Reports, Federal Bureau of Investigation (UCR). 2006. "Crime in the United States in 2006." Retrieved on January 22, 2008 (http://www.fbi.gov/ucr/cius2006/data/table_61.html).
- U.S. Census Bureau. 2003. "Income, Poverty, and Health Insurance Coverage in the United States: 2005." Retrieved on September 5, 2006 (<http://www.census.gov/prod/2006pubs/p60-231.pdf>).
- _____. 2006 "African Americans by the Numbers." Retrieved on September 21, 2006 (http://www.census.gov/PressRelease/www/releases/archives/facts_for_features_special_editions/006088.html).
- Vazsonyi, Alexander T. and Jennifer M. Crosswhite. 2004. "A Test of Gottfredson and Hirschi's General Theory of Crime in African American Adolescents." *Journal of Research in Crime and Delinquency* 41:407-32.
- Vazsonyi, Alexander T., Lloyd E. Pickering, Marianne Junger, and Dick Hessing. 2001. "An Empirical Test of General Theory of Crime: A Four-Nation Comparative Study of Self-Control and the Prediction of Deviance." *Journal of Research in Crime and Delinquency* 38:91-131.
- Webber, Jo 1997. "Comprehending Youth Violence: A Practicable Perspective." *Remedial and Special Education* 18:94-104.
- Weinberger, Daniel A. and Gary E. Schwartz. 1990. "Distress and Restraint as Superordinate Dimensions of Adjustment: A Typological Perspective." *Journal of Personality* 58:381-417.
- Weisheit, Ralph A. and Joseph F. Donnermeyer. 2000. "Change and Continuity in Crime in Rural America." Pp. 309-57 in *The Nature of Crime: Continuity and Change*, edited by G. LaFree (309-57). Washington, DC: National Institute of Justice.
- Weisheit, Ralph A. and L. Edward Wells. 2001. "Gangs in Rural America." Retrieved on February 3, 2008 (<http://www.ncjrs.gov/pdffiles1/nij/grants/190228.pdf>).

- Wells, L. Edward and Ralph A. Weisheit. 2004. Patterns of Rural and Urban Crime: A County-Level Comparison. *Criminal Justice Review* 29:1-22.
- White, Helen R., Erich W. Labouvie, and Marsha E. Bates. 1985. "The Relationship between Sensation Seeking and Delinquency: A Longitudinal Analysis." *Journal of Research in Crime and Delinquency* 22:197-211.
- World Health Organization. 2002. "World Report on Violence and Health." Retrieved on February, 17, 2008 (http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf).
- Yakin, Jeanne A. and Susan D. McMahon. 2003. "Risk and Resiliency: A Test of a Theoretical Model for Urban, African-American Youth." *Journal of Prevention and Intervention in the Community* 26:5-19.
- Zimmerman, Marc A., Laurel A. Copeland, Jean T. Shope, and Terry E. Dielman. 1997. "A Longitudinal Study of Self-Esteem: Implications for Adolescent Development." *Journal of Youth and Adolescence* 26:117-41.
- Zuckerman, Marvin. 1974. "The Sensation Seeking Motive." Pp. 79-148 in *Progress in Experimental Personality Research*, Vol. 7, edited by B.A. Maher. New York: Academic Press.
- _____. 1979. "Sensation Seeking and Risk Taking." Pp. 163-97 in *Emotions in Personality and Psychopathology*, edited by C.E. Iazard. New York: Plenum Press.