

## **Assessing the Differential Impact of Risk Indicators on the Delinquency of African American and White Females**

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### **Abstract**

*The criminal justice system and indeed the research community have recognized the need to focus on the delinquent behavior of females. Unfortunately, much of the research being conducted on female delinquency focuses on the differences between males and females and does not address differences that exist among females to include race and class differences. The findings from this study show there are significant differences in the impact of risk factors on the delinquency of White and African American females that highlight the need for race specific research. Implications for delinquency prevention and intervention programs are discussed.*

**Keywords:** Race, Delinquency, Females

### **Introduction**

The criminal justice system and indeed the research community have recognized the need to focus on the delinquent behavior of females. In 2004, the Office of Juvenile Justice and Delinquency Prevention convened the Girls Study Group to address several questions to understand among other things which girls become delinquent and what factors put girls at more risk for delinquency (Zahn, Hawkins, Chiancone, & Whitworth, 2008). Unfortunately, much of the research being conducted on female delinquency focuses on the differences between males and females and does not address differences that exist among females to include race and class differences (see Holsinger & Holsinger, 2005). The research assumes that risk factors for delinquency are the same for all females and that they are in fact a homogeneous group. In addition, much of the research on females use institutional or program level data to draw conclusions. The goal of the present study is to assess the impact of risk factors on the delinquency of African American and White females using a national data set. The current study, therefore addresses a void in the literature by examining potential racial differences for girls regarding risk models of delinquent behavior and does so with a nationally representative data set. Through the examination of racial differences, implications regarding the ways in which African American and White girls are effectively dealt with in both the juvenile and criminal justice systems may be considered.

### **Literature Review**

Much of the research on juvenile delinquents has focused on the behaviors of males, as they represent the majority of individuals arrested for delinquency (Zahn, Hawkins, Chiancone, & Whitworth, 2008). Female offending became a focus in the 1990's when the arrest rates for females began to increase. The 1990's also saw a decrease in the overall offending of juveniles. However, the arrest rates for various crimes for females either increased at a faster rate or decreased at slower rate than their male counterparts. By 2004, females accounted for 30 percent of all juvenile arrests.

Although majority of the research on delinquency and risk factors focus on males, studies that do include females show that risk factors have differential impacts when gender is considered (Holsinger and Holsinger, 2005; Obeidallah-Davis, 2002).

For example, research shows that sexual abuse and maltreatment, depression and anxiety, romantic partners, sensitivity to victimization, and mental health problems have a substantial impact on female delinquency, as compared to male delinquency (Cauffman, 2008; Zahn et al., 2008). However, there are consistencies in delinquency risk factors for both genders, which include the impact of family dynamics, the neighborhood a child lives in, and a child's involvement in school (Cauffman, 2008; Zhan et al., 2008).

### ***Delinquency Risk Factors***

Past research shows a well established connection between peer delinquency and involvement in crime. Research shows characteristics of friends influence the motivation and attitudes of the adolescent. In addition, empirical data have shown the tendency of an individual to engage in deviant behavior is affected by the prevalence of that behavior among their peers. In terms of race however, peer influence appears to have less influence on the delinquency of African American youth than White youth (Holmes, Jones-Sanpei & Day, 2009).

As it relates to alcohol and illegal substances, there is a well established association to delinquency (Belcher & Shinitzky, 1998; Gilvarry & McArdle, 2007; Hawkins, Catalano, & Miller, 1992; Merline, O'Malley, Schulenberg, Bachman, & Johnston, 2004). Research shows that smoking cigarettes, alcohol, and marijuana use are gateways to other deviant behavior, as well as social adjustments (Crone and Reijneveld, 2007; Dube et al., 2006, Eaton et al., 2004). In addition, findings indicate there are differences when race is considered, in that the prevalence and incidence of drug and alcohol use is worse for Whites than African American youth. However, African American youth tend to have more serious outcomes as a result of their use than their White counterpart. Some argue this is the result of structural inequalities associated with being African American (Brown et al., 2007; Holmes, Jones-Sanpei & Day, 2009). As it relates to gender, alcohol and other substance uses are considered externalizing behaviors, which are associated more often with males than females.

### ***Mental Health Risk Factors***

Youth in the juvenile justice system are at higher risk for mental health problems overall than youth who are not involved in the system. In fact, estimates are that one-fifth of children in the juvenile justice system have a serious mental health problem, the range of which includes depression, attention deficit and hyperactivity, anxiety, substance abuse, bipolar and trauma (Welch-Brewer, Stoddard-Dare & Mallett, 2011; Cocozza and Skowrya, 2000). In addition, research on juveniles show that females have higher rates of mental health problems and poorer outcomes as a result of their mental health than their male counterparts (Cauffman, 2004). The higher incidences of depression among females is thought to be the coping strategy females employ, whereas females internalize their feelings which lead to depression, males externalize their feelings leading to higher rates of delinquency (Avison and McAlpine, 1992; Kessler et al., 1994; Rosenfeld, Lennon and White, 2005; Meadows, 2007).

As it relates to race, research suggests that while White females internalize behaviors that lead to depression, African American females often externalize their feelings, which is consistent with male behavior. This finding might help explain the higher rates of delinquency among African American females, as compared to White females (Brown et al., 1999; Hughes, 2003; Williams and Harris- Reid, 1999; Williams, Takeuchi, and Adair, 1992).

### ***Exposure to Crime***

Exposure to crime is proximal, which ranges from hearing about crime, seeing it occur, to directly experiencing crime as a victim. Research has found that exposure to crime has negative developmental outcomes for children to include aggression and antisocial behaviors (Lord and Mahoney, 2007; Salzinger, Feldman Stockhammer and Hood, 2002). Research also show that exposure to crime can have long term affects for girls. Widom (2000) found that girls who are victims of abuse or neglect are almost twice as likely to be arrested as juveniles and also twice as likely to be arrested as adults.

### **Family Risk Factors**

An association between delinquency and family dynamics has long been established (see in particular, comprehensive reviews by Free, 1991 and Wells and Rankin, 1991). There are many aspects to parenting that can affect social development and behavior in particular delinquent behavior. As it relates to gender, research is divergent on whether family risk factors impact males or females more. Bachman and Peralta (2002) found that girls who lived with both natural parents were less likely to be delinquent than females who lived in nontraditional homes. However, much more research suggests that nontraditional families may influence delinquency more for boys (Peterson & Zill, 1986; Santrock & Warshak, 1979; Zaslow, 1988). Research has found that males are more likely to react to stressful situations (like familial disruption) with externalizing behavior (e.g., delinquency) while females are more likely to respond with internalizing behavior (e.g., depression, substance use, and other self destructive action) (Emery et al., 1985; Hoffman & Su, 1997; Peterson & Zill, 1986; Zaslow, 1988).

In terms of race, there are mixed findings on the impact of family structure on delinquency. Some research findings have concluded that African American youth appear to be more resistant to the negative effects of being raised in a nontraditional family structure than White adolescents (Dunifon & Kowaleski-Jones, 2002; Ruggles, 1994). These authors reason that African American communities often have stronger extended family structures in place, which help mitigate the negative effects of father absence.

### **Method**

#### **Participants and Data**

The study sample is drawn from the National Survey of Adolescents in the United States, conducted by David Kilpatrick and Benjamin Saunders for the National Institutes of Justice. The original study collected data on youth in the United States ages 12-17 who lived with a parent or guardian and who could speak English or Spanish. All interviews were conducted with both adolescents and parents using Computer Assisted Telephone Interviewing (CATI) technology. The original data consisted of two sub samples that included a national probability sample of households of 3, 161 adolescents and a probability oversample of 962 adolescents residing in central city areas of the United States for a total of 4, 023 adolescents.

For the present study, the sample includes adolescents who were female and either self reported their race as African American or White. Individuals of other races including biracial categories were discarded. Of the 4,023 adolescents that were original to the data set 1,117 remained. African American females represented 17% and White females were 83% of the sample. Age was another specifying indicator in the sample. Females who indicated they were age 14, 15 or 16 in the original study were included in the study, as this is considered to be the time period in adolescence where delinquency peaks. The mean age for the sample was slightly over 15 ( $M=14.51$ ;  $SD= 1.09$ ). The average grade level was about 10th grade level ( $M=9.97$ ;  $SD=1.24$ ), which is consistent with the average age. Parental income showed an average of between \$30,000 and \$40, 000. Finally, the average number of people who lived in the respondents' household was about 4 ( $M=4.15$ ;  $SD= 1.275$ ).

### **Measures**

*Delinquency.* The dependent variable *delinquency* is a six item self report inventory, which measures serious delinquency. The items elicit whether the respondent had ever stolen more than \$100, stole a motor vehicle, broken and entering, involved in gang fights, strong armed robbery, and/or attacked someone with the intent to maim. Higher scores on the inventory are associated with higher delinquency ( $\alpha= .684$ ).

*The Delinquency Risk Model.* The delinquency risk model uses *friend's delinquency*, *drug use*, *cigarette smoking*, and *drinking*, as factors identified in the literature as having an impact on delinquency. *Friend's delinquency* consists of 13 yes-or-no items, which measure minor delinquent acts of the respondent's friends. Higher items on the scale are consistent with more delinquent peers ( $\alpha= .867$ ). The *drug use* indicator consists of 5 yes-or-no items. Study participants were asked whether they had ever taken tranquilizers, sedatives, steroids, stimulants or pain killers. Higher items on the scale are consistent with more drug use ( $\alpha= .523$ ). The *cigarette smoking* and *alcohol use* were single indicators that asked respondents had they ever smoked a cigarette or had ever drank alcohol.

*Mental Health Risk Model.* The indicators for the mental health risk model are *life disruptions*, *depression*, and *post traumatic stress symptoms*. *Life disruptions* is a 13 item yes-or-no scale that measures disruptions in family dynamics, school, and friendships in the past year for respondents. Higher items on the scale are consistent with more disruptions ( $\alpha = .569$ ). *Depression* is measured with a 10 item scale that asked respondents how many of the items on the scale had they experienced in the past 12 months - higher scores indicate more depression ( $\alpha = .808$ ). The *post traumatic stress symptoms* indicator was measured with a 20 item yes-or-no scale. Higher scores on the scale indicate more symptoms of post traumatic stress ( $\alpha = .869$ ).

*Exposure to Crime Risk Model.* The indicators representing the proximity to crime risk model consists of *witnessing criminal acts to crime*, *neighborhood safety*, *community problems*, *physically assaulted*, and *sexually assaulted*. This risk model covers the range of exposure from witnessing crime to study participant's actually experiencing victimization, as a result of physical and sexual assault. Witnessing crime is a five item yes-or-no scale that measures whether the study participants had seen someone actually shoot someone, being mugged or robbed, threatened with a gun or knife, or beaten up or punched. The higher scores indicate the respondent witnessed more crime ( $\alpha = .608$ ). Neighborhood safety is a 3 item yes-or-no proxy measure that asks the parent whether they were concerned with the safety of their child in the neighborhood, on the way to school or while at school. Higher scores on the scale indicate problems with neighborhood safety ( $\alpha = .788$ ). The community problems measure is a three item likert scale that asked parents their opinions regarding problems in their community. Higher items are consistent with more parent concern regarding community problems ( $\alpha = .583$ ). Physical assault and sexual assault are both one item measures that asked whether the study participant had ever been a victim of either assault.

*Family Risk Model.* The indicators that represent the family risk model consist of *parent concern*, *parent problems*, *live with natural parents*, *family drink*, and *family drugs*; these indicators are identified in the literature as having an impact on delinquency. *Parent concern* is a 4 item likert measure that asks respondent's parent how concerned is s/he with violent crime, drug use, education quality and gangs. High levels of concerned are associated with higher scores on the scale. The second indicator in the family risk model is *parent problems*, which is a 5 item yes-or-no measure. Respondents were asked in the past year had their mother, father or both experienced problems with family/friends, work, injuries or accidents, health, or was in trouble with the law. Higher items on the scale are consistent with more parent problems ( $\alpha = .746$ ). *Family drink* and *family drug use* are one item indicators that asked respondents do they know of a family member who has a problem with alcohol or drug use.

### **Analytic Strategy**

The analysis plan proceeded in several steps. First, descriptive statistics are presented on the study variables to include the dependent variable as well as the indicators that comprise each risk model. Second, *t*-tests were used to determine whether there were any mean differences regarding race for variables that are continuous measures. Then, a series of correlations that assess the relationship between the risk indicators on the dependent variable are presented. Finally, a series of Ordinary Least Squares Regression are assessed to determine which risk model(s) overall and specifically which indicators are more explanatory of delinquent behavior for Whites and African American females holding the effects of the other indicators in the model constant. An overall model is presented for each group with the indicators that were found to be significant from the previous regression analyses.

## **Results**

### **Descriptive Results**

The results of the descriptive findings are in Table 1. The findings for the indicators comprising the *delinquency risk model* show low levels of friend's delinquency ( $M=16.73$ ;  $SD = 3.13$ ) and very little drug use ( $M=4.13$ ;  $SD=.44$ ). However, in terms of smoking cigarettes and drinking alcohol, the results indicate about half of the respondents ( $n=579$ ) admitted to smoking cigarettes at least once and about two-thirds of the sample ( $n= 735$ ) indicated they had drunk alcohol. As it relates to the *mental health risk model*, the respondents show very few life disruptions ( $M= 18.78$ ;  $SD= 2.17$ ) as well as symptoms of post traumatic stress disorder ( $M= 24.35$ ;  $SD= 3.99$ ). The findings indicate, the highest mean score in the mental health risk model was for depression ( $M= 13.94$ ;  $SD= 15.84$ ). This indicates that a substantial portion of the sample exhibit symptoms of depression.

The *exposure to crime risk model* show respondents have witnessed some crimes ( $M=6.27$ ;  $SD = 1.13$ ) and that parents of the respondents were concerned about their neighborhood and community safety. In addition, the findings show some respondents have been victims of physical ( $n= 181$ ) and sexual assault ( $n=169$ ).

Finally, the *family risk model* show parents of respondents indicate they are very concerned about their children ( $M=5.11$ ;  $SD=1.76$ ) and respondents believed their parents had few problems ( $M=.31$ ;  $SD= .85$ ). The data reflects, about two-thirds of the respondents have lived with their biological parents since birth ( $n= 689$ ) and relatively few problems exists with drinking ( $n=188$ ) and drug use ( $n=132$ ) among family members.

## **Bivariate Results**

### **T-tests**

A *Student's t-test* was used to determine if there were any mean differences among the continuous measures for delinquency used in this study. The results are located in Table 1. The findings show the means for eight of the 11 continuous measures for delinquency are significantly different for the African American and White females. This finding is preliminary evidence suggesting the need to further examine the differential impact of the delinquency measures for each race group.

### **Correlations**

A Pearson's  $r$  was used to determine what effect the indicators comprising each of the risk models had on the dependent variable delinquency for each group. The main effects will be discussed and compared and contrasted for each race group, the results are in Table 2.

Overall, all model indicators for the *delinquency risk model* show a significant relationship with delinquency for the White sample. The strongest indicator of delinquency in the model was friends' delinquency for both groups (Whites  $r= .360$ ; African Americans  $r=.355$ ). This was followed by drug use for both race groups; the relationship was stronger for African American females ( $r= .268$ ) than White females ( $r=.180$ ).

The findings for the *mental health risk model* show an association between all of the risk factors for both groups; however, the indicators show stronger relationships for the White sample. Of the three mental health indicators post traumatic stress symptoms had the strongest relationship to delinquency for both groups (Whites  $r= .294$ ; African Americans  $r=.296$ ), the positive relationship indicates that respondents who exhibited symptoms of post traumatic stress are associated with delinquency. In addition to post traumatic stress symptoms, for White females depression shows a moderately strong relationship to delinquency ( $r= .294$ ;  $p=.000$ ); Therefore, the positive relationship indicates respondents who are depressed are associated with delinquency. For African Americans life disruptions also impacts delinquency ( $r=.272$ ;  $p=.000$ ), which means increased disruptions in the life of African American girls increases their incidences of delinquency.

The *exposure to crime risk model* shows more variance in the relationships between the indicators and delinquency by race. The findings show more significant relationships for Whites; however, physical assault (Whites  $r=.296$  and African Americans  $r=.321$ ) and witnessing crime (Whites  $r=.328$  and African Americans  $r=.367$ ) were strongly associated with delinquency for both groups. Finally, the *family risk model* shows the most variance in the relationships between the indicators and delinquency by race. Of the five indicators representing the family risk model, parent concern ( $r=-.020$ ;  $p= .784$ ) and parent problems ( $r= .105$ ;  $p= .154$ ) did not show statistically significant relationships to delinquency for African American females. The strongest relationship for African American females is the relationship between family drug problem and delinquency ( $r=.235$ ;  $p=.000$ ). The relationship indicates that respondents whose family has drug problems have higher incidences of delinquency. For the White sample the strongest relationship to delinquency is with parent problems ( $.296$ ;  $p=.000$ ). The more a White respondent perceived her parents had problems the higher the propensity to commit delinquent acts. Parent concern was a weak measure for both races. For African Americans parent concern showed no association with any indicator to include delinquency, and for Whites although there were statistically significant relationships the amount of explained variance was weak.

### **Multivariate Regression Results**

The purpose in conducting the regression analyses was to assess the effects of the indicators in the risk models while holding the effects of the other indicators constant. For the purpose of this study, the statistical technique that will be used in the multivariate analysis will be Ordinary Least Square (OLS) Regression. Consistent with the correlation analyses, OLS Regression was conducted using each of the risk models for each race group. The results of these analyses are in Table 3.

The *delinquency risk model* for Whites and African American females is significant for both groups [Whites ( $F=31.131$ ;  $p \geq .001$ ); African Americans ( $F=7.385$ ;  $p \geq .001$ )]. The  $R^2$  shows the model has slightly more explanatory power for African Americans ( $R^2 = .158$ ) than Whites ( $R^2 = .130$ ). In terms of the indicators, friend's delinquency shows a statistically significant relationship to delinquency for both groups. Friend's delinquency also has the highest effect on delinquency among the indicators in the delinquency risk model for both groups as indicated by the standardized Beta. In addition to friend's delinquency, drug use was significant for African Americans in the delinquency risk model.

The mental health risk model for both Whites and African American females show the model is significant for both groups [Whites ( $F=35.495$ ;  $p \geq .001$ ); African Americans ( $F=7.950$ ;  $p \geq .001$ )]. The  $R^2$  shows the model has slightly more explanatory power for African Americans ( $R^2 = .121$ ) than Whites ( $R^2 = .107$ ). In terms of the indicators life disruptions and post traumatic stress symptoms were significant in the model for Whites, whereas, life disruption was the only significant indicator in the model for African Americans.

The *exposure to crime risk model* show the model is significant for both groups [Whites ( $F=32.782$ ;  $p \geq .001$ ); African Americans ( $F=7.869$ ;  $p \geq .001$ )]. The  $R^2$  shows the model has slightly more explanatory power for African Americans ( $R^2 = .190$ ) than Whites ( $R^2 = .158$ ). In terms of the indicators, having experienced sexual assault, followed by physical assault and then witnessing violence were significant in the model for Whites, whereas, having experienced physical assault followed by witnessing crime were significant indicators in the model for African Americans.

The Family Risk Model for both Whites and African American females show the model is significant for both groups [Whites ( $F=29.365$ ;  $p \geq .001$ ); African Americans ( $F=5.528$ ;  $p \geq .001$ )]. The  $R^2$  shows the model has slightly more explanatory power for Whites ( $r^2 = .139$ ) than African Americans ( $r^2 = .134$ ). In terms of the indicators, study subjects who perceived their parents were having problems, family drinking problems and family drug use were all significant indicators in the model for Whites. Parent problems followed by family drug problems had the most effect on delinquency for Whites. For African Americans, living with their natural parents, family drinking and family drug problems were significant indicators in the family risk model. Family drink had the most effect on delinquency for African Americans in the model followed by living with natural parents.

A final regression model was fitted for each group to make an overall determination of the differential impact of the delinquency indicators assessed in this study for Whites and African Americans. The findings are in Table 4. For the White sample, the final model shows that friend's delinquency, witnessing crime, physical assault, sexual assault, parent problems, and family drug use remained significant. Friend's delinquency and parent problems had the most impact on the delinquency of White females overall. As it relates to the African American sample, friend's delinquency, life disruptions, witnessing crime and family drug use remained significant in the final model. Witnessing crime followed by friend's delinquency had the most impact on the delinquency of African American delinquency.

### **Discussion**

In the quest to understand female delinquency, race and ethnicity has been overshadowed in favor of treating females as a monolith (Zahn, Hawkins, Chiancone, & Whitworth, 2008). In addition, research on females often uses data that is limited in the ability to make generalizable conclusions (Holsinger and Holsinger, 2005). Consequently, the current research contributes to the overall understanding of how delinquency risk factors contribute to our understanding of delinquency for African American and White females using a nationally representative data set. The current findings show there are differences between African American and White females in terms of the risk indicators impacting delinquency, which is consistent with past research (Cauffman, 2008; Cauffman et al., 2008).

The individual indicators overall appear to show slightly more support for the explanation of White female delinquency, although the explanatory power of the models overall were higher for African Americans than Whites.

The delinquency risk model shows more support for the explanation of African American female delinquency; both friend's delinquency and drug use were predictors of delinquency for this group. Friend's delinquency was the only indicator significant for White females. Past research has shown friends can influence the motivation and attitudes of adolescents. In addition, empirical data have shown the tendency of an individual to engage in deviant behavior is affected by the prevalence of that behavior among their peers (Holmes, Jones-Sanpei & Day, 2009). The present findings contradict past research, which show that friend's delinquency has less impact on the delinquency of African American youth than White youth (Holmes, Jones-Sanpei & Day, 2009). In the current study, the impact of friend's delinquency on the dependent variable showed marginal differences, which indicate that friend's delinquency does impact the behavior of both African American and White females, similarly. The finding in the present study highlight the need for gender specific research, as it appears that females regardless of race are indeed social beings and based on the present findings are influenced by their peers.

The findings in this study on drug use also contradict past research, as the present findings indicate that drug use may influence African American female delinquency. In contrast, past research shows the prevalence and incidence of drug and alcohol use is worse for Whites than African American youth (Brown et al., 2007). As it relates to gender, alcohol and other substance uses are considered externalizing behaviors, which are associated more often with boys, however the present research lends support to past gender specific research that suggests African American females use externalization as a means to cope as oppose to internalizing which is associated more with white females (Brown et al., 1999; Hughes, 2003; Williams and Harris- Reid, 1999; Williams, Takeuchi, and Adair, 1992).

The mental health risk model shows more support for the explanation of White female delinquency. Life disruptions and post traumatic stress symptoms appear to influence delinquency for White females. Life disruption is the only significant indicator for African Americans among the indicators in the mental health risk model. The present study is consistent with past research on race and gender (Brown et al., 1999; Hughes, 2003; Williams and Harris- Reid, 1999; Williams, Takeuchi, and Adair, 1992). The present study shows the internalizing indicators of depression and post traumatic stress symptoms have more influence over the behavior of White females than African American females.

Research has found that exposure to crime has negative developmental outcomes for children to include aggression and antisocial behaviors and for girls it can have long term affects on their behavior (Lord and Mahoney, 2007; Salzinger, Feldman Stockhammer and Hood, 2002; Widom, 2000). In the present study the indicators for exposure to crime again are more explanatory of White female delinquency. Specifically, sexual assault, physical assault, and witnessing crime impact delinquency for White females. For African American females, physical assault and witnessing crime, impact their delinquency. Widom (2000) found that girls who are victims of abuse or neglect are almost twice as likely to be arrested as juveniles; this finding is also supported by the present study. However, the present study does show that the effect of exposure on delinquency have contextual differences for Whites and African American females.

The family risk model shows the most consistency for explaining the delinquency of White and African American females. This finding is consistent with past research that has long since established an association between delinquency and family dynamics (Free, 1991 and Wells and Rankin, 1991). The contextual influences from the family risk model were different for White and African American females in this study. The results show for Whites, delinquency is influenced by parent problems, family drinking and family drug use. Whereas, African American female delinquency is influenced by whether the respondent lives with their natural parents, family drinking problems and family drug use. The association between delinquency and whether the respondent lives with their natural parents offers support for the debate that family structure can indeed impact the delinquency of African American females (Dunifon and Kowaleski-Jones, 2002). The results from this study show that African American females who live with their parents are less likely to be involved in delinquent behavior and vice versa.

Overall the findings from this study suggest the need to conduct research that place race as a determining influence in the analyses.

The final regression models clearly show there are differential explanations of delinquency for African American and White females. In addition, the current research should influence implications on delinquency prevention and intervention programs, in that the findings clearly show the need to consider cultural differences when developing policy and programs related to females.

### ***Limitations and Suggestions for Future Research***

Limitations of this research include the use of secondary data. The measures for the models were constructed from existing measures in the data set, which might have impacted the ability to detect differences between the groups in this study. This was seen to be problematic where the Cronbach's Alphas were low, and where only one indicator was used to represent a concept.

Another limitation of this study is the use of cross-sectional data. Therefore readers should refrain from attributing causality to any of the relationships that were detected in the research. The relationships that were detected should be viewed as correlations and not causations, as causality can only be revealed in a longitudinal study.

Future research should consider the use of longitudinal data to assess causality among the indicators. In addition, better measures should be constructed to measure the constructs in this study and many other studies where the reliability scores are considered weak, as the quality of data analysis and findings can only be enhanced with the use of better measures.

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**Table 1. Descriptive Statistics for Study Variables (Entire Sample n=1,116)**

Measures	Percentages	Range	Means	t-Tests
<b>Dependent Variable</b>				
Delinquency		8-12 <sup>a</sup>	8.11 (.41)	-2.48*
<b>Delinquency Risk Model</b>				
Friends' Delinquency		13-26 <sup>b</sup>	16.73 (3.13)	1.08
Drug Use		4-8 <sup>c</sup>	4.13 (.44)	3.03**
Ever Smoked				
Yes (n=579)	52%			
No (n=537)	48%			
Ever Drank				
Yes (n=735)	66%			
No (n=381)	34%			
<b>Mental Health Risk Model</b>				
Life Disruptions		16-28 <sup>d</sup>	18.78 (2.17)	-6.43***
Depression		0-55 <sup>e</sup>	13.94 (15.84)	.81
Post Traumatic Stress Symptoms		21-40 <sup>f</sup>	24.35 (3.99)	-1.94*
<b>Exposure to Crime Risk Model</b>				
Witnessed Violence		5-10 <sup>g</sup>	6.27 (1.13)	-6.75***
Neighborhood Safety		3-12 <sup>h</sup>	7.49 (2.72)	-14.96***
Community Problems		3-12 <sup>i</sup>	7.50 (1.99)	-2.39*
Physically Assaulted				
Yes (n=181)	16%			
No (n=936)	84%			
Sexually Assaulted				
Yes (n=169)	15%			
No (n=948)	85%			
<b>Family Risk Model</b>				
Parent Concern		4-16 <sup>j</sup>	14.80 (1.85)	-5.47***
Parent Problems		0-5 <sup>k</sup>	.31 (.85)	-.97
Live with Natural Parents				
Yes (n=689)	62%			
No (n=427)	38%			
Family Drink				
Yes (n=188)	17%			
No (n=928)	83%			
Family Drugs				
Yes (n=132)	12%			
No (n=980)	88%			

a. Higher scores on the delinquency indicator are indicative of more serious delinquency. b. Higher scores on friends' delinquency indicate more incidences of delinquency identified by the respondent c. Higher scores on drug use indicate higher incidences of use. d. Higher scores on life disruptions indicate more disruptions in the respondent's life. e. Higher scores indicate higher levels of depression. f. Higher scores indicate more symptoms of post traumatic stress. g. Higher scores indicate respondent witnessed more criminal acts h. Higher scores indicate parents of respondent perceive problems with neighborhood violence i. Higher scores indicate parents of respondent perceive problems with crime in the community j. Higher scores on this scale indicate parents are more concerned. k. Higher scores on this scale indicate the respondent perceive there are more problems with her parent(s).

**Table 2. Results of Bivariate Findings with Delinquency and Model Indicators as a Function of Race**

Measure	Entire Sample	Whites	African Americans
<b>Delinquency Risk Model</b>			
Friends' Delinquency	.356***	.360***	.355***
Drug Use	.179***	.180***	.268***
Ever Smoked Cigarettes	.150***	.153***	.211**
Ever Drank Alcohol	.139***	.135***	.205**
<b>Mental Health Risk Model</b>			
Life Disruptions	.259***	.244***	.272***
Depression	.242***	.252***	.220**
Post Traumatic Stress Symptoms	.298***	.294***	.296***
<b>Exposure to Crime Risk Model</b>			
Witnessing Crime	.347***	.328***	.367***
Neighborhood Safety	.121***	.084*	.155*
Community Problems	.176***	.154***	.232**
Sexual Assault	.197***	.239***	.031
Physical Assault	.309***	.296***	.321***
<b>Family Risk Model</b>			
Parent Concern	.070*	.075*	-.020
Parent Problems	.259***	.296***	.105
Live with Natural Parents	.177***	.150***	.228**
Family Drinking Problem	.235***	.241***	.225**
Family Drug Problem	.267***	.272***	.235***

Note: \*\*\*p ≤ .001, \*\*p ≤ .01, \*p ≤ .05

**Table 3: Results of the Multiple Regressions for each Model as a Function of Race**

Measures	Whites <i>Std. β</i>		African Americans <i>Std. β</i>
<b>Delinquency Risk Model</b>			
Friends' Delinquency <sup>a</sup>	.345***		.316***
Drug Use <sup>b</sup>	.056		.143*
Ever Smoked Cigarettes	-.052		.068
Ever Drank Alcohol	.004		.052
F = 31.13***	R <sup>2</sup> =.130	F = 7.385***	R <sup>2</sup> =.158
<b>Mental Health Risk Model</b>			
Life Disruptions <sup>c</sup>	.148***		.203**
Depression <sup>d</sup>	.059		.050
Post Traumatic Stress Symptoms <sup>e</sup>	.189***		.184
F-Statistic = 35.495***	R <sup>2</sup> =.107	F = 7.950***	R <sup>2</sup> =.121
<b>Exposure to Crime Risk Model</b>			
Witnessing Crime <sup>f</sup>	.217***		.245**
Neighborhood Safety <sup>g</sup>	.021		.112
Community Problems <sup>h</sup>	.016		.099
Physical Assault	.163***		.189*
Sexual Assault	.137***		-.034
F-Statistic = 32.782***	R <sup>2</sup> =.158	F = 7.869***	R <sup>2</sup> =.190
<b>Family Risk Model</b>			
Parent Concern <sup>i</sup>	.032		-.026
Parent Problems <sup>j</sup>	.195***		-.19
Live with Natural Parents	.034		.205**
Family Drinking Problem	.093**		.166*
Family Drug Problem	.178***		.208**
F-Statistic = 29.365***	R <sup>2</sup> =.139	F = 5.528***	R <sup>2</sup> =.134

\*\*\*p ≤ .001, \*\*p ≤ .01, \*p ≤ .05

**Table 4: Final Regression Models for White and African American Females**

Measures	<i>Std. <math>\beta</math></i>
<i>White Females</i>	
Friends' Delinquency	.194***
Witnessing Crime	.148***
Physical Assault	.074*
Sexual Assault	.069*
Parent Problems	.189***
Family Drug Use	.079*
F-Statistic = 42.021***	R <sup>2</sup> = .232
<i>African American Females</i>	
Friends' Delinquency	.204**
Life Disruptions	.141*
Witnessing Crime	.234**
Family Drug Use	.186*
F-Statistic = 12.653***	R <sup>2</sup> = .244

\*\*\*p ≤ .001, \*\*p ≤ .01, \*p ≤ .05