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Involvement in the Juvenile Justice System for African American Adolescents: Examining Associations with Behavioral Health Problems

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Abstract

While researchers have found that African American youth experience higher levels of juvenile justice involvement at every system level (arrest, sentencing, and incarceration) relative to their other ethnic counterparts, few studies have explored how juvenile justice involvement and number of contacts might be correlated with this broad range of problems. A convenience sample of 638 African American adolescents living in predominantly low-income, urban communities participated in a survey related to juvenile justice involvement. Major findings using logistic regression models indicated that adolescents who reported juvenile justice system involvement versus no involvement were 2.3 times as likely to report mental health problems, substance abuse, and delinquent or youth offending behaviors. Additional findings documented that the higher the number of juvenile justice system contacts, the higher the rates of delinquent behaviors, alcohol and marijuana use, sex while high on drugs, and commercial sex. These findings suggest that identifying and targeting youth who have multiple juvenile justice system contacts, especially those in low-resourced communities for early intervention services, may be beneficial. Future research should examine whether peer network norms might mediate the relationships between juvenile justice involvement and youth problem behaviors.

Keywords

African American adolescents; delinquency; juvenile justice system involvement; mental health; recidivism; sexually transmitted infection risks; substance use

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Introduction

Researchers have shown that juvenile justice system involvement is correlated with delinquency or youth offending, substance use, poor mental health, and sexual risk behaviors (Abram et al., 2004; Shufelt, & Cocozza, 2006; Teplin, Mericle, McClelland, & Abram, 2003). However, although low-income African American youth are disproportionately affected by these behavioral health concerns (Chauhan, Reppucci, & Turkheimer, 2009), there are few studies examining how juvenile justice system involvement and episodes for these adolescents might correlate with these behavioral health problems. This study addresses this gap by focusing on the extent to which juvenile justice system involvement and contacts are related to a broad spectrum of youth behavioral and health problems. Such problems include poor mental health, delinquency or youth offending, substance use, sexually transmitted infection (STI) risk behaviors, and exposure to community violence among low-income African American adolescents.

A large number of American youth are involved in the juvenile justice system with daily estimates reaching more than 100,000 (Sickmund & Puzzanch, 2014). In 2013, a total of 1,058,500 delinquency cases and 278,300 American youth were handled by the juvenile courts in the United States (Hockenberry & Puzzanchera, 2015). African American youth relative to their other ethnic peers are overrepresented in the U.S. juvenile justice system. In 2013, African American juveniles comprised 35% of public order offense cases and 35% of those detained, although they represented less than 13% of the overall youth population (Chauhan et al., 2009; Hockenberry & Puzzanchera, 2015). Moreover, delinquency or youth offending cases involving property crimes have declined for all racial/ethnic groups with the exception of African American youth (Sickmund & Puzzanch, 2014). This overrepresentation of African Americans occurs at every level of the U.S. juvenile justice system, from initial contact with law enforcement to sentencing and incarceration (Stahl, Finnegan, & Kang, 2006). Not surprisingly, this overrepresentation continues into adulthood, with African American males representing the overwhelming majority of the incarcerated adult population in the United States (Hockenberry & Puzzanchera, 2015). Therefore, a better understanding of correlates associated with juvenile justice system contacts can help to identify possible interventions to slow the pipeline from juvenile justice system involvement to adult penal institutions.

Literature Review

Correlates and Outcomes of Juvenile Justice System Involvement

In this section, the literature is explored that examines the relationship between juvenile justice system involvement and youth behavioral problems. In general, youth and adolescents with juvenile justice system contacts experience higher rates of behavioral health problems than their peers with no juvenile justice system participation.

Compared to youth who have not had involvement, youth who have been involved in the U.S. juvenile justice system report higher prevalence of co-occurring psychiatric disorders (e.g., affective disorders and posttraumatic stress disorders [PTSD]; Abram et al, 2004; Domalanta, Risser, Roberts, & Risser, 2003; Ford, Hartman, Hawke, & Chapman, 2008;

Teplin, Abram, McClelland, Duncan, & Mericle, 2002; Tripodi, Springer, & Corcoran, 2007). This is particularly acute among African American and Hispanic/Latino adolescents. In a sample of 898 African American and Hispanic youth in Chicago, most participants (92.5%) reported that they had experienced one or more traumas, and 11.2% of the sample in the past year met criteria for posttraumatic stress disorder (PTSD) with more than half of the participants with PTSD reporting having witnessed violence as the precipitating trauma (Abram et al., 2004). This PTSD prevalence estimate is more than triple the 25% estimate of exposure to psychological trauma documented in an epidemiological study of a representative sample of youth in the community (Costello, Erkanli, Fairbank, & Angold, 2002). In general, PTSD prevalence estimates are four to eight times higher in juvenile justice system populations than in similar-age youth in studies using community samples (Saigh, Yasik, Oberfield, Halamandaris, & McHugh, 2002; Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001). Unfortunately, the preceding studies did not examine whether detention episodes were related to higher rates of psychological problems.

Substance use and disorders are also prevalent among youth and adolescents with juvenile justice system involvement (Chassin, 2008; Shufelt & Cocozza, 2006; Teplin et al., 2002). However, it is important to distinguish between substance use and clinical substance use disorders (SUDs), where SUD refers to significant impairment related to substance use. Rates of SUD in this population vary substantially depending on where substance use diagnoses are made and in what setting (e.g., juvenile detention, secure confinement, and entry into the system; Chassin, 2008). Among a sample of 920 African American, Hispanic, and White youth ages 10 to 18 years, approximately 25% and 45% reported alcohol and marijuana use disorders, respectively (Teplin et al., 2002). A multistate study examined the prevalence of alcohol abuse among 1,400 African American, Hispanic, Native American, and White youth from 29 different programs and facilities in Louisiana, Texas, and Washington and found that approximately 42% reported substance abuse (Shufelt, & Cocozza, 2006). Another study estimated that two thirds of adolescents entering the Illinois juvenile corrections system met clinical diagnostic criteria for substance use disorders (Johnson, Cho, Fendrich, & Pickup, 2004). Unfortunately, these studies did not examine whether more frequent detention episodes were related to higher substance use rates.

Delinquent or youth offending behaviors are characterized as lying, stealing, truancy, and vandalism (Barnow, Lucht, & Freyberger, 2005). It is not surprising that high levels of psychological problems, substance use disorders, and other acts of delinquency are prevalent among youth and adolescents who come into contact with juvenile justice system authorities. Many of these behavioral health problems might explain initial contacts with these systems (Sickmund & Puzzanch, 2014). However, it is also plausible that once involved in the juvenile justice system, the trauma and disruption of social networks resulting from being detained might exacerbate any behavioral health issues. The relationship between juvenile justice system involvement and youth behavioral health problems is probably bidirectional. Behavioral problems lead to detention which subsequently leads to more behavioral health problems. However, few studies to date have examined the relationship between frequency of juvenile justice system contacts and rates of delinquency among low-income African American youth and adolescents.

Existing research also provides evidence that juvenile justice system involvement is associated with much higher rates of sexually transmitted infections (STIs) and STI risk behaviors, such as multiple sexual partners, sex while being high on drugs, and sex without condoms, relative to peers with no juvenile justice system involvement (Crosby, Salazar, & DiClemente, 2004; DiClemente, Lanier, Horan, & Lodico, 1991; Romero et al., 2007; Teplin et al., 2003). In a study with a sample of 197 female adolescents ages 14 to 18 years, results indicated that 20% of the sample tested positive for an STI, and 32.2% had ever been pregnant. Of those reporting sexual activity, 33.9% had not used any form of contraception in the past 2 months, and about 40% reported having recent sex with a casual partner (Crosby et al., 2004). A comparison study of 804 high school youth and 113 youth detained in San Francisco showed that both groups had similar knowledge of acquired immune deficiency syndrome (AIDS) although detained youth were less likely to be knowledgeable of prevention strategies- especially the protective value of condoms. Incarcerated youth were more likely to be sexually active, had initiated sex at an earlier age, and reported more sexual partners; a smaller proportion reported using condoms consistently (DiClemente et al., 1991). A more recent longitudinal study of 460 African American, Hispanic/Latino, and White youth ages 10 to 18 years who were juvenile detainees in Chicago indicated that 60% had multiple sexual partners in the past 3 months; 35% had unprotected vaginal sex in the past month; and 68% had sex while high or drunk (Teplin et al., 2003). However, this study did not examine whether detention episodes were related to higher rates of sexual risk behaviors.

Exposure to community violence is defined as violence taking place outside the home (Krug, Mercy, Dahlberg, & Zwi, 2002). Two main forms of community violence are identified in the literature: victimization and witnessing. Victimization is conceptualized as being the object of deliberate harm initiated by another person or persons, such as being robbed, theft, physical attack, being shot or stabbed; witnessing includes hearing or seeing these events (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009). Exposures to community violence and other forms of trauma may be very common among youth with juvenile justice system involvement (Abram et al., 2004; Patchin et al., 2006). Many of these youth may live in low-income communities with high social disorganization and crime (Krug et al., 2002). One study among 264 African American, Hispanic/Latino, and White juvenile justice involved males in Connecticut, ages 10 to 17 years, showed that most respondents (89%) acknowledged experiencing at least one potentially traumatic event in their lives (e.g., witnessed family or community violence, sexual abuse, or traumatic loss; Steiner, Garcia, & Matthews, 1997). Similarly, a Chicago-based study of 898 African American, Hispanic/ Latino, and White youth in juvenile justice detention documented that 35% had been seriously beaten and attacked, 58% had been threatened with a weapon, and 23% had seen a dead body or pictures of a dead body of someone close to them (Abram et al., 2004). However, few studies have examined whether juvenile justice system involvement, including frequency of contacts, is related to higher rates of exposure to community violence among a sample of low-income African American youth.

The Present Study

As the brief review of the literature suggests, no prior investigation has simultaneously examined whether juvenile justice system involvement and frequency of contacts are correlated with a broad spectrum of youth behavioral and health problems such as mental health problems, substance use (e.g., alcohol, cigarettes, marijuana, and ecstasy), delinquency or youth offending, STI sexual risk behaviors, and exposure to community violence among low-income African American youth. In addition, few studies have focused specifically on African American youth who are at highest risk for juvenile justice system involvement (Hockenberry & Puzzanchera, 2015).

Low-income African American youth and adolescents are not a homogenous group. While existing research has shown that youth with juvenile justice system contacts versus their counterparts who have had no such history report a higher number of behavioral health problems (e.g., substance use, poor mental health, and risky sex; Abram et al., 2004; Shufelt, & Cocozza, 2006; Teplin et al., 2003), few studies have examined whether frequency of juvenile justice system contacts might correlate with particular or larger numbers of behavioral health problems. The current literature has traditionally oversimplified measures of criminal justice system involvement by dichotomizing contacts (i.e., contact or not) rather than frequency of contacts. This study examines whether youth and adolescents with detention histories vary on behavioral risk factors depending on frequency of system contacts.

In exploring whether the frequency of juvenile justice system contacts correlates with youth behavioral health problems, researchers in one study attempted to determine whether number of incarceration episodes was related to substance use problems among 54 African American, Asian, Hispanic/Latino, and White female youth ages 14 to 18 years in California. Of the overall sample, 80% had symptoms of an emotional disorder or substance use problem, and almost two thirds (63%) had a history of recidivism. Among recidivistic youths, 82% had a history of a substance use problem, suggesting that such concerns were related with number of incarceration episodes (Kataoka et al., 2001). However, there were several gaps: Given the small sample, results based on race/ethnicity were not explored; recidivism was calculated on the basis of prior involvement and not the degree of involvement; behavioral health problems were limited to mental health and substance use without attention to STI risk behaviors and delinquency; and results only pertained to females. Addressing this gap is critical to developing potential interventions to reduce the pipeline from juvenile justice system involvement to adult incarceration, while also improving health and well-being for at-risk youth and adolescents. Study data may also inform postdischarge services, differentiate relative treatment needs on the basis of system contacts, and provide data to support policy and treatment approaches advocating for community-based versus high-cost juvenile justice system involvement. In addition to implications for juvenile justice and social service delivery, identifying the effect of chronic system involvement on adolescent health could shed important insight into policies designed to prevent youth from becoming entrenched in juvenile and eventually adult criminal justice systems. Moreover, elucidating the deleterious effect of system involvement on adolescent

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health could support alternatives to justice systems, namely community-based social service and psychological interventions.

To address this scholarly gap, cross-sectional correlational analyses were utilized to explore these primary research questions: (a) Is there a relationship between juvenile justice system involvement versus no such involvement in terms of rates of behavioral and health concerns such as mental health problems, delinquency and youth offending, substance use, STI sexual risk behaviors, and exposure to community violence? (b) Does frequency of juvenile justice system contacts relate to youth behavioral health problems? This study hypothesizes that juvenile justice system involvement is related to youth behavioral health problems. It is also hypothesized that a higher number of juvenile justice system contacts would be related to greater youth behavioral and health problems.

Methodology

Sample and Setting

Between August 2013 and January 2014, youth were recruited in three high schools, one youth church group, two community youth programs, and four public venues frequented by youth such as parks, fast-food outlets, and movie theaters in the Midwest. Youth were eligible for study participation if they self-identified as African American and were between the ages of 13 and 24. Minors provided informed assent and had a legal caregiver who provided informed consent; those age 18 and older provided consent. This age range was selected because it covers early to late adolescence. The majority of the participants were recruited in schools and community centers (88%), and the rest were recruited in churches (9%) and public venues (4%). The response rate was approximately 87% of the 753 participants who were initially invited to enroll in the study.

Participants were recruited from low-income communities consisting of predominantly African American residents, where the average annual median incomes ranged from \$24,049 to \$35,946, with the city average being \$43,628. Communities were predominantly classified as racially and socioeconomically homogenous. The percentage of single-female-headed households in these areas ranged from 28.9% to 32.3%, with the city average being 13.9% (City-Data, 2015).

Procedure

Permission was obtained from principals and leaders of church groups and youth programs to recruit participants for the study. Flyers describing the study were posted at each of these locations, and trained research assistants introduced the study to potential participants in these settings. All research assistants that distributed the surveys completed human subjects training, which included informed consent, protecting the rights and privacy of study participants, and limits to confidentiality. Each participant was provided with a detailed letter describing the study along with parental consent forms. Youth who returned signed consent forms were enrolled in the study. Youth recruited in public venues were only asked to participate if a parent was present to provide consent. Questionnaires were administered in small groups when possible.

Research assistants supervised all participants completing the self-administered questionnaire to minimize interruptions and to maintain confidentially. Those recruited from schools, community programs, and churches were administered the questionnaire in those respective locations in spaces assigned by the venue. The few individuals who were recruited in public venues (e.g., parks and fast-food venues) were administered the questionnaire in quiet spaces at or near those venues. In such instances, questionnaires were only administered if a parent was present to provide consent and the questionnaire could be immediately administered. Youth participants took up to 45 minutes to complete the questionnaire, and they were each compensated \$10. The University Institutional Review Board approved the study.

Instruments and Measures

A general questionnaire composed of 42 items was developed to gather study-specific information. The questionnaire was composed of three previously validated scales and other item used to assess demographics, juvenile justice involvement, substance use, and sexual behaviors.

Demographics

Information was collected on a variety of demographic variables, including age, gender, sexual orientation (How do you identify yourself? 1 = *heterosexual*; 2 = *homosexual*; 3 = *bisexual*; 4 = *transgender*; 5 = *pansexual*; 6 = *other*), and socioeconomic status (Are you currently receiving reduced lunch and/or SNAP benefits [Link Card]? No/Yes).

Juvenile Justice System Involvement

Two questions assessed juvenile justice involvement. Data were collected on juvenile justice involvement ever ("Have you even been involved in the juvenile justice system?" [No/Yes]) and number of juvenile justice involvement episodes ("How many times have you been involved in the juvenile justice system?" [list number of times]).

Mental Health Problems

Mental health concerns were assessed with the Brief Symptom Inventory (Derogatis, 2000), which contains 18 items about mental health symptoms during the past 7 days. Examples of questions are the following: "In the past 7 days including today have you felt lonely?" "In the past 7 days including today have you been suddenly scared for no reason?" Response options were based on a 5-point scale (not at all, a little bit, moderately, quite a bit, or extremely). A composite mental health score was calculated by summing the responses for the 18 items. Cronbach's alpha was a = .92. The composite score was also dichotomized into poor or good mental health, based on the median split of 8.0 (range 0 to 61).

Substance Use

Cigarette, alcohol, marijuana, and ecstasy history were assessed. Participants were asked whether they had ever used or taken cigarettes, alcohol, ecstasy, and marijuana. Response options were no/yes. Substance use was also assessed within the past 30 days. Response categories were 0, 1, 3–5, 6–9, 10–19, 20–29, all 30 days (DiClemente et al., 2004).

Delinquent or Youth Offending Behaviors

Delinquent or youth offending behaviors were measured with a revised version of an instrument used in a prior study (Chen, Voisin, & Jacobson, 2013). For the current study, 10 items investigated the frequency of illegal, norm-violating, and aggressive behaviors in the past 12 months. Examples of questions were as follows: "In the past 10 months have you ever taken something not belonging to you?" "In the past 10 months have you taken an expensive part of a car without permission of the owner?" Responses were rated on a 6-point scale (0 times, 1–2 times, 3–5 times, 6–8 times, 9–11 times, and 12 or more times), and a composite delinquent behavior score was calculated by summing the responses for all 10 items. Cronbach's alpha was a = .90. Given the prevalence of delinquent behaviors based on the median split of 0 (56.5% of all participants reported low delinquent behaviors; range 0 to 37).

Sexual Behaviors

Sexual activity and sexual risk behaviors were assessed. *Sexual activity* was defined as "ever having vaginal sex with the opposite sex" (no/yes) for those who identified as heterosexual or bisexual and "having sexual contact with the same sex" for those who identified as lesbian, gay, queer, or questioning (no/yes). Sexual risk behaviors were defined as having sex while high on alcohol or drugs, having sex without condoms, and survival sex (sex in exchange for something other than money or drugs; DiClemente et al., 2004). Response categories were no/yes. In addition, these sexual risk behaviors were assessed within the past 12 months. Response categories were number of times.

Exposure to Community Violence

Lifetime exposure to community violence was assessed using items from the Exposure to Violence Probe (Stein, Walker, Hazen, & Forde, 1997; Voisin, 2003). In particular, seven items measured the lifetime frequency of witnessing or personally experiencing violent acts. Examples of questions were as follows: "During your lifetime how often have you had a close friend or relative die violently?" "During your lifetime how often have you been a victim of violence?" Items were rated on a 7-point scale ("0 times" to "more than six times"), and a composite score for exposure to community violence was calculated by summing the seven items. Cronbach's alpha was a = .86. Given that the majority of respondents were exposed to community violence, the overall score was also dichotomized in high and low exposure to community violence, based on the median split of 7.0 (range 0 to 42).

Analyses

Univariate analyses (e.g., frequencies, percentages) were computed to describe the overall sample. Bivariate analyses were computed to examine the relationship among all major study variables. To examine the relationship between history of juvenile justice system involvement and youth behavioral and health problems (question one), separate logistic regression models, their 95% confidence intervals, and respective *p* values were calculated (Hosmer & Lemeshow, 1989), controlling for covariates such as age, gender, sexual

orientation, and a measure of poverty proxy (i.e., government assistance). To examine whether number of juvenile justice system contacts were related to multiple youth behavioral and health problems (question two), separate linear regression models were computed for continuous variables controlling for all covariates. Given the small subsample of youth with juvenile justice system contacts, significant relationships were set to p < .10. All analyses were performed using SPSS (version 22.0).

Results

The analytic sample was composed of 638 participants based on the number of persons who completed full questionnaires on major study variables. Among all participants, 46.1% were male and 53.8% were female, and the mean age was 15.8 years (SD = 1.4). Slightly over three fourths of the sample (76.5%) qualified for free or reduced school lunch, which was the poverty measure for this study. With regard to sexual orientation, 81.2% identified themselves as heterosexual, 10.1% bisexual, and 4.3% homosexual. Approximately 11.5% of the overall sample (n = 72) ever had juvenile justice system contact, and from these, 42% (n = 21) had been arrested once; 22% (n = 11) had been arrested twice; and 36% (n = 18) had been arrested three or more times. Table 1 displays descriptive statistics of the sample relative to major study variables.

The bivariate analyses indicated that juvenile justice system involvement was significantly correlated with all relevant study variables. Table 2 displays bivariate correlations for all study variables.

Mental Health

Controlling for age, gender, sexual orientation, and free or reduced school lunch, findings indicated that participants who had ever been involved in the juvenile justice system versus their counterparts who never had such involvement were 2.3 times as likely to report poorer mental health (AOR = 2.32; 95% CI = 1.29, 4.16). For those with juvenile justice system involvement, linear regression analyses controlling for covariates indicated that the number of system contacts was not significantly associated with mental health problems (β = 0.23, n/s).

Delinquent or Youth Offending Behaviors

Controlling for covariates, logistic regression analyses indicated that participants with juvenile justice system involvement versus their counterparts who never had such involvement were 2.4 times as likely to report delinquent behaviors (AOR = 2.36; 95% CI = 1.33, 4.20). Among those with juvenile justice system involvement, linear regression analyses controlling for covariates indicated that the frequency of system contacts was significantly and positively correlated with delinquent behaviors (β = 0.68, p < .001).

Substance Use

With regard to substance use, logistic regression analyses controlling for covariates indicated that participants who had histories of juvenile justice system involvement versus their counterparts with no involvement with the juvenile justice system were 4.1 times as likely to

report having smoked cigarettes (AOR = 4.09; 95% CI = 2.20, 7.60), 1.9 times as likely to have ever used alcohol (AOR = 1.86; 95% CI = 1.06, 3.26), 4.4 times as likely to have ever used ecstasy (AOR = 4.41; 95% CI = 1.75, 11.11), and 4.2 times as likely to have ever used marijuana (AOR = 4.23; 95% CI = 2.30, 7.80). Among participants with juvenile justice system involvement, linear regression analyses controlling for covariates indicated that the number of system contacts had significantly positive associations with alcohol use (β = 0.46, p < .01) and ecstasy use (β = 0.37, p < .05). =

STI Risk Behaviors

After controlling for covariates, logistic regression analyses revealed that participants who reported histories of juvenile justice system involvement versus their counterparts who had no such involvement were 2.3 times as likely to report having experienced early sexual début (AOR = 2.33; 95% CI = 1.10, 4.93). Among all sexually active adolescent participants, those who had ever been involved in the juvenile justice system compared to their peers with no such involvement were 3.1 times as likely to have reported being high on alcohol/drugs and then having sex (AOR = 3.10; 95% CI = 1.53, 6.30), 3.9 times as likely to have reported having had sex while high on alcohol/drugs without using condoms (AOR = 3.89; 95% CI = 1.78, 8.51), and 3.3 times as likely to have reported having sex with someone in exchange for something other than drugs in the past 12 months (AOR = 1.49; 95% CI = 1.11, 2.02). Among participants with juvenile justice system involvement, linear regression analyses controlling for covariates indicated that a higher number of system contacts predicted a higher proportion reporting having sex with someone in exchange for something other than drugs sex while high on alcohol/drugs (β = 0.49, p < .01), and a higher proportion reporting having sex with someone in exchange for something other than drugs in the past 12 months (β = 0.49, p < .01), and a higher proportion reporting having sex with someone in exchange for something other than drugs in the past 12 months (β = 0.49, p < .01), and a higher proportion reporting having sex with someone in exchange for something other than drugs in the past 12 months (β = 0.49, p < .01), and a higher proportion reporting having sex with someone in exchange for something other than drugs in the past 12 months (β = 0.58, p < .001).

Community Violence

Logistic regression analyses controlling for covariates indicated that adolescents who reported having ever been involved in the juvenile justice system versus their counterparts who never had such involvement were 3.7 times as likely to be exposed to community violence (AOR = 3.67; 95% CI = 1.92, 7.03). Among the participants with juvenile justice system involvement, linear regression analyses controlling for covariates indicated that the number of system contacts was not significantly associated with exposure to community violence ($\beta = -0.00$, n/s). Table 3 displays the results of the logistic regressions. Table 4 presents findings from the linear regression analyses.

Discussion

This study sought to determine whether juvenile justice system involvement and number of contacts were related to a broad range of youth behavioral and health problems such as substance use and other mental health problems, STI sexual risk behaviors, delinquency or youth offending, and higher levels of exposure to community violence across a sample of low-income African American youth in a Midwestern city. Prior studies among racially/ ethnically diverse samples have documented that among juvenile justice system involved youth, there are high rates of mental health problems, STI sexual risk behaviors, delinquency or youth offending, and exposure to community violence (Abram et al., 2004; DiClemente et

al., 1991; Teplin et al., 2002; Teplin et al., 2003; Tripodi et al., 2007). However, few studies have examined whether number of system contacts might correlate with these behavioral health problems, which this study also addressed.

Although findings were based on self-report data, which are always subject to measurement error, there are several strengths of this study. Unlike prior studies that were composed of racially diverse samples (Abram et al., 2004; Shufelt, & Cocozza, 2006; Teplin et al., 2003) or females only (Kataoka et al., 2001), this study focused exclusively on low-income African American youth. This provided an opportunity to study correlations of juvenile justice system involvement and contacts with youth behavioral health problems for African American male and female youth and adolescents. Overall findings showed that approximately 42% of the sample reported having contact with the juvenile justice system, with similar percentages reporting multiple contacts. These findings corroborate prior study findings documenting high vulnerability for juvenile justice system involvement among African American youth and especially those who reside within low-resource homes and communities (Hockenberry & Puzzanchera, 2015). These results generally indicated that participants who had any juvenile justice system involvement versus their counterparts who never had such involvement reported higher risks for a host of behavioral and health problems (i.e., delinquency, substance use, early sexual debut, risky sexual behaviors, and exposure to community violence) and that more system contacts was significantly associated with delinquency, more substance use, and greater risky sexual behaviors but not poorer mental health, cigarette and marijuana use, unprotected sex under the influence of drugs, and exposure to community violence. In summary, overall findings showed that juvenile justice system involvement ever for these African American adolescents was correlated with a broad range of youth behavioral health problems while more frequent system contact was correlated with specific behavioral risks.

There are several possible explanations for these findings. The lack of significant correlations between higher frequency of juvenile justice system contacts and poorer mental health, more cigarette and marijuana use, more sex while high on alcohol and other drugs, and more exposures to community violence might be related to the small overall subsample of youth who reported one or more system contacts and reported these specific behavioral health problems. Larger sample sizes of African American youth with multiple system contacts might allow more precise estimations of correlations between frequency of juvenile justice system contacts and the behavioral health problems included in this study. Without question, substance use, delinquency, and poor mental health often result in already vulnerable youth populations coming to the attention of juvenile justice system authorities (Hockenberry & Puzzanchera, 2015; Sickmund & Puzzanch, 2014). Moreover, once involved in these systems, such involvement might also exacerbate these underlying behavioral health problems. Another potential explanation for these findings pertains to underreporting due to assessment fatigue or prior negative experiences with providers that can arise from repeated involvement with the juvenile justice system. The youth in this sample with frequent contact with the justice system may have more experience being assessed for behavioral problems by service providers. Youth who repeatedly come into contact with juvenile justice providers may be distrustful and wary of sharing information

because of prior negative experiences with the criminal justice system, thus introducing the possibility of underreporting of certain behavioral problems.

These findings suggest an urgent need for more research on this relationship. What would be important to determine is whether there is a threshold in the number of contacts with the juvenile justice system that more precisely explained behavioral and health behaviors. Such analyses would allow greater personalization of intervention during initial contacts, post-release, and with recidivism. Further, longitudinal studies might also disentangle the relationship between juvenile justice system involvement (including data on number of days held, offense category, and facility characteristics) and subsequent behavioral health problems. In-depth interviews with youth who have been involved in these systems would help illuminate pathways linking such involvements and these youth behavioral health problems. In addition to individual characteristics, the social context would be important in future studies, especially the influence of juvenile justice involvement on social networks, as juvenile justice system involvement might connect youth to more risky peer networks that ascribe to more dangerous peer norms and behavioral risks. Multiple contacts with risky peer networks may contribute to negative social learning, the process of social inoculation, and further indoctrination to risky behaviors. Future studies should test this assumption.

Study Implications

Research indicates that any period of confinement in the juvenile justice system has significant negative psychological effects, resulting in metal deterioration, apathy, enduring personality changes, and psychiatric disorders (Haney, 2003). Adolescence is a period of heightened vulnerability and plasticity, and the experience of juvenile justice involvement can consequently have long-term negative and stigmatizing consequences on youth risky behavior (Steinberg, 2009). Although these findings are not conclusive, what they suggest is that for community-level practitioners working in health care settings, schools, or social service settings, frequency of juvenile justice system involvement should be included in overall intake assessments, as more involvement is related to greater vulnerability and exacerbation of specific behavioral problems. Given the high percentages of African American youth, especially those who reside in low-income communities that are highly vulnerable for becoming involved with juvenile justice systems (Hockenberry & Puzzanchera, 2015), screening forms should assess the frequency and type of juvenile justice system involvement and evaluate individuals for substance use, mental health functioning, delinquency or offending behaviors, risky sex, and exposures to community violence and refer for relevant prevention and intervention services when warranted. Youth who report multiple juvenile justice system contacts should be especially targeted and referred for substance use interventions for alcohol and ecstasy use and general sexual health education and STI prevention.

Youth correctional settings and agencies present one of the few opportunities with which to intervene for particularly marginalized youth populations who might not otherwise come into contact with supportive services. Given the high proportion of youth from this sample that reported juvenile justice system involvement (42%), detention offers an opportunity to provide comprehensive drug and sexual risk reduction education, and mental health

screening and treatment, with the understanding that these factors may represent both antecedents of and sequelae associated with juvenile justice system involvement. Furthermore, this study supports improvements to data and administrative systems to track the number of contacts within such systems. This could identify a subpopulation of youth at high risk of developing behavioral problems who would benefit greatly from targeted resources and social interventions.

This study also has policy implications. In several states, there is a push toward community alternatives to juvenile justice system involvement given some evidence suggesting superior youth behavioral health treatment outcomes (Chamberlain & Reid, 1998; Morral, McCaffrey, & Ridgeway, 2004). As stated at the beginning of this article, it was posited that the relationship between juvenile justice involvement and youth behavioral health problems is likely bidirectional. Therefore, alternatives to incarceration are in alignment with restorative justice approaches and present the opportunity to exert a positive influence and reduce further criminality and pipelines to adult incarceration. Such reform would be in alignment with the founding premise of the first juvenile court in Cook County, which asserts that youth should not be punished for the purpose of making them examples and that punishment does not necessarily result in reform (Tanenhaus, 2013). Such recommendations also align with recent scientific findings by the National Research Council of the National Academy of Science surrounding best practices for working with youth who come into contact with juvenile justice systems (Bonnie, Johnson, Chemers, & Schuck, 2013). These recommendations in part suggest that youth thrive when surrounded by peers who embrace positive behaviors and that sustainable behavior change is best achieved when opportunities exist to practice skills and cultivate healthy development in the community.

Conclusion

In summary, this study underscores that low-income African American youth are not a homogenous group and that those who come into contact with the juvenile justice system differ significantly from their counterparts with no such contact with regard to behavioral and health problems. These findings also highlight that those with multiple juvenile justice system contacts report higher behavioral and health problems on some factors but not all and future research with larger samples and more in-depth methods are needed to better understand why. Notwithstanding, these findings suggest that juvenile justice involved youth are a highly vulnerable population and that detention represents an opportunity to provide a wide range of comprehensive services addressing mental health, substance use, STI education, and violence prevention services.

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Table 1

Description of the overall sample of African American youth (N= 638).

Variable	% (Yes)
Mental Health	
Poor mental health	47.6
Delinquency History	
Delinquent behaviors	43.5
Substance Use	
Cigarettes use	13.1
Alcohol use	48.6
Ecstasy use	5.6
Marijuana use	40.2
Sexual Behaviors	
Sexual début	53.8
Sex while high on drugs/alcohol	26.1
Sex while high on drugs/alcohol without condoms	15.3
Survival sex	4.8
Community violence	
High exposure to community violence	49.8

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 Juvenile justice episodes 	1.00															
2. Mental health	0.13^{**}	1.00														
3. Delinquency	0.14^{**}	0.26^{**}	1.00													
4. Using cigarette	0.22^{**}	0.12^{**}	0.19^{**}	1.00												
5. Using alcohol	0.10^{*}	0.18^{**}	0.28^{**}	0.24**	1.00											
6. Using ecstasy	0.16^{**}	0.07	0.08	0.19^{**}	*60.0	1.00										
7. Using marijuana	0.21 **	0.07	0.23^{**}	0.31^{**}	0.49^{**}	0.00	1.00									
8. Sexual debut	+60.0	0.03	0.11	0.04	-0.01	0.07	-0.01	1.00								
9. High before sex	0.20^{**}	0.18^{**}	0.24^{**}	0.28^{**}	0.29^{**}	0.05	0.31 **	0.11	1.00							
10 High before sex no con.	0.22**	0.14^{*}	0.16**	0.23**	0.18^{**}	0.20**	0.19*	0.14^{*}	0.61 **	1.00						
11. Survival sex	0.14^{*}	0.07	0.07	0.14^{*}	0.05	0.09	0.04^{**}	0.05	0.14^{*}	0.19^{**}	1.00					
12. Violence exposure	0.19^{**}	0.23^{**}	0.20^{**}	0.18^{**}	0.19^{**}	0.10^{*}	0.26^{**}	0.11	0.14^{*}	0.13^{*}	0.05	1.00				
13. Age	0.11 **	0.04	0.00	0.19^{**}	0.15^{**}	0.00	0.22^{**}	-0.36**	0.18^{**}	0.20^{**}	0.11	0.15^{**}	1.00			
14. Gender	-0.07	0.14^{**}	-0.13^{**}	-0.14^{**}	-0.00	-0.07	-0.06	-0.35**	-0.11	-0.08	-0.06	-0.11^{**}	-0.14^{**}	1.00		
15. Sexual orientation	0.06	0.15**	0.08	0.05	0.05	-0.01	0.03	-0.10	0.07	0.04	-0.02	0.04	-0.05	0.21 **	1.00	
16. Socio economic proxy	-0.01	0.05	-0.05	0.03	0.02	0.02	0.10^{*}	0.02	0.01	-0.14*	0.01	0.09*	0.12^{**}	0.04	-0.05	1.00

Table 3

Logistic regressions for juvenile justice contacts and behavioral health problems among African American youth comparing noninvolved and involved juvenile justice youth (N = 638).

Outcome variables	AOR ¹	95% CI	р
Mental Health			
Poor mental health	2.32	1.29-4.16	.005 **
Delinquency History			
Delinquent behaviors	2.36	1.33-4.20	.003 **
Substance use			
Cigarettes use	4.09	2.20-7.60	.000***
Alcohol use	1.86	1.06-3.26	.031*
Ecstasy use	4.41	1.75–11.11	.002 **
Marijuana use	4.23	2.30-7.80	.000
Sexual Behaviors			
Sexual début	2.33	1.10-4.93	.026*
Sex while high on alcohol/drugs	3.10	1.53-6.30	.002 **
Sex while high on alcohol/drugs without condoms	3.89	1.78-8.51	.001 **
Survival sex	3.26	1.01-10.59	.049*
Community violence			
High exposure to community violence	3.67	1.92-7.03	.000 ***

Note. CI = confidence interval.

 $^{I}\mathrm{Adjusted}$ odds ratio, controlled for age, gender, sexual orientation, and socioeconomic status.

* p < .05 ** . p < .01

*** p < .001.

Table 4

Linear regressions for the number of juvenile justice episodes and behavioral health problems among African American youth (N = 50).

			-	
Outcome variables	b	SE	ß	t
Mental health				
Poor mental health	1.04	0.71	0.23	1.47
Delinquency history				
Delinquent behaviors	1.62	0.31	0.68	5.28***
Substance use				
Cigarettes use	-0.01	0.10	-0.01	-0.08
Alcohol use	0.19	0.06	0.46	3.29 **
Ecstasy use	0.09	0.04	0.37	2.46*
Marijuana use	-0.01	0.12	-0.01	-0.04
Sexual behaviors				
Sexual début	0.12	0.10	0.16	1.15
Sex while high on alcohol/drugs	0.97	0.33	0.49	2.99 **
Sex while high on alcohol/drugs w/o condoms	0.01	0.10	0.02	0.93
Survival sex	3.10	0.79	0.58	3.92 ***
Community violence				
Exposure to community violence	-0.009	0.50	-0.00	-0.017

Note. SE = standard error.

 $^{I}\mathrm{All}$ analyses controlled for age, gender, sexual orientation, and socioeconomic status.