

NOTICE CONCERNING COPYRIGHT RESTRICTIONS

The copyright law of the United States [Title 17, United States Code] governs the making of photocopies or other reproductions of copyrighted material.

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use" that use may be liable for copyright infringement.

The institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of copyright law. No further reproduction and distribution of this copy is permitted by transmission or any other means.

2 Rapid #: -2053290

Ariel

IP: 141.211.175.21



Status	Rapid Code	Branch Name	Start Date
Pending	AUM	Main Library	10/3/2008 1:17:14 PM

CALL #: HV5800.J6 per
LOCATION: AUM :: Main Library :: UM DUBOIS
 TYPE: Article CC:CCG
 JOURNAL TITLE: Journal of psychoactive drugs
 USER JOURNAL TITLE: Journal of psychoactive drugs
 AUM CATALOG TITLE: Journal of psychoactive drugs.
 ARTICLE TITLE: Victimization among African-American adolescents in substance abuse treatment.
 ARTICLE AUTHOR: Perron, BE, Brian E,
 VOLUME: 40
 ISSUE: 1
 MONTH:
 YEAR: 2008
 PAGES: 67-75
 ISSN: 0279-1072
 OCLC #:
 CROSS REFERENCE ID: 803222
 VERIFIED:

BORROWER: EYM :: Main Library
PATRON: Vitale, Vanessa Leigh
 PATRON ID:
 PATRON ADDRESS:
 PATRON PHONE:
 PATRON FAX:
 PATRON E-MAIL: vitalev@umich.edu
 PATRON DEPT: 000951 - Social Work (MSW)
 PATRON STATUS: Graduate
 PATRON NOTES:



This material may be protected by copyright law (Title 17 U.S. Code)
 System Date/Time: 10/7/2008 2:53:04 PM MST

Victimization Among African-American Adolescents in Substance Abuse Treatment†

Brian E. Perron, Ph.D.*; Heather J. Gotham, Ph.D.** & Dong Cho, Ph.D.***

Abstract—Victimization is regarded as a significant public health issue, especially among adolescents in urban areas. Although victimization is linked to substance use, the research on victimization among adolescents in treatment is underdeveloped. Given the high rate of victimization among African-American adolescents, further research on the prevalence and correlates of victimization for this population is needed. This knowledge can guide the development of effective treatment and prevention strategies. This study contributed to the research by examining the rate and different types of victimization among a sample of African-American adolescents in an urban substance abuse treatment program, testing whether victimization is associated with increased levels of psychopathology and high-risk behaviors; and comparing the rates and associations with existing studies of adolescent victimization. It reports on a sample of 259 African-American adolescents receiving substance abuse treatment in an inner-city program. Fifty-four percent of the subjects reported lifetime victimization. Severity of victimization was associated with depression, generalized anxiety disorder, traumatic stress disorder, and conduct disorder, although the effect sizes were relatively small. Lifetime victimization exhibited a relationship of small to moderate strength with high-risk behaviors (i.e., illegal activity, gang membership, multiple sex partners and unprotected sex). Service implications and recommendations for future research are provided.

Keywords—adolescent substance abuse treatment, adolescent victimization, adolescent violence

Victimization is the experience of direct or threatened harm, including physical violence, sexual violence, psychological or emotional abuse, and neglect (CDC 2007). Victimization among adolescents is a recognized public health concern, which motivated an in-depth report by the Office of the US Surgeon General (US DHHS 1999). A

†Financial assistance for this study was provided by SAMHSA's Center for Substance Abuse Treatment (CSAT) Grant No. T113305.

*Assistant Professor, University of Michigan School of Social Work, Ann Arbor, MI.

**Senior Manager of Evaluation, Mid-America Addiction Technology Transfer Center, University of Missouri-Kansas City, Kansas City, Missouri.

***Associate Professor, Department of Psychiatry at Missouri Institute of Mental Health, School of Medicine, University of Missouri at Columbia.

Please address correspondence and reprint requests to Brian E. Perron, Ph.D., University of Michigan, School of Social Work, 1080 S. University Avenue, Ann Arbor MI 48109; email: beperron@umich.edu.

national survey found that approximately 17% of adolescents have been physically assaulted and 39% have witnessed violence (NIJ 2003). Adolescents are twice as likely as adults to be victims of serious violent crimes (OJJDP 2000). Younger adolescents are also more likely to be both violently and nonviolently victimized than older adolescents (Van Dorn 2004).

Victimization occurs at a high rate among all adolescents, but the rate among African-American adolescents is especially alarming. For example, homicide is the third leading cause of death among White adolescents 15 to 19 years old, but it ranks first among their African-American counterparts (Anderson 2002). When compared to Latino and White adolescents, African-American adolescents are more likely to be involved in fights, to report knowing someone who has been a victim of violence, and to witness violent

crimes (Paxton et al. 2004). Howard and colleagues (2002) reported that as many as 75% of urban African-American adolescents have witnessed at least one violent event in the past six months.

The rate of victimization among African-American adolescents can be explained, in part, by their broader social and environmental conditions. Approximately one-third of African-American adolescents live in economically depressed and socially marginalized neighborhoods, resulting in regular exposure to high rates of violence (Paxton et al. 2004). These are key factors that contribute to violence perpetration and victimization (McCart et al. 2005; Howard et al. 2002). Such conditions also give rise to using violence as a response to the ongoing pressures and threat of violence (Feigelman et al. 2000), which further complicates the problem of responding to and preventing victimization.

ASSOCIATIONS WITH VICTIMIZATION

The significance of victimization as a public health issue is further supported by its consistent relationships with various psychological and psychosocial problems. It is widely established that victimization can be a traumatic life event, challenging an individual's resources and negatively impacting developmental processes (Kaukinen 2002). A large body of research shows that victimization among adolescents is associated with higher degrees of depressive symptoms, substance use, PTSD symptoms, suicidality, physical aggression, and delinquent behavior (Goldstein et al. 2007; Sullivan, Farrell & Klierer 2006; Champion et al. 2004; Moran, Vuchinich & Hall 2004; Funk et al. 2003; Grella & Joshi 2003; NIJ 2003; Liebschutz et al. 2002; Caviola & Schiff 2000; Cleary 2000; Fitzpatrick & Bolidizar 1993).

Factors related to severity, frequency and context of victimization, commonly referred to as *traumagenic factors*, can play an important role in how detrimental these experiences are to adolescent development. Traumagenic factors in victimized adolescents have been associated with more comorbid problems, including violence, internal mental distress, and substance problems (Titus et al. 2003; NIJ 1997). Long-term consequences of victimization have also been described in the literature (Kaukinen 2002). For example, childhood physical abuse and exposure to parental violence is associated with the development of alcohol-related problems in adulthood (Caetano, Field & Nelson 2003).

The causal influences of victimization on mental health functioning and social development are further complicated by various gender differences. For example, early victimization among girls strongly influences the likelihood of delinquency, adult criminality, and violent criminal behavior, as well as entry into the juvenile justice system (Osofsky 2001). Victimization among adolescent males has been associated with increased involvement in violent lifestyles (Hawke, Jainchill & De Leon 2003).

High-risk behaviors, such as multiple sexual partners, substance use, fighting, and other types of violence perpetration, are also associated with victimization. However, the causal associations among these behaviors, especially substance use, are unclear. For example, while substance use may be a mechanism to cope with experiences of victimization (Hawke, Jainchill & De Leon 2000), substance use can also significantly reduce physical competence and decision-making in threatening or violent situations, thereby increasing the risk of victimization (Shepherd, Sutherland & Newcombe 2006). It is plausible that victimization is situated within a complex set of feedback relationships, whereby it influences and is influenced by substance use, mental health functioning, and other high-risk behaviors.

VICTIMIZATION AND SUBSTANCE ABUSE TREATMENT

Given the link between substance use and victimization, it is not surprising that rates of victimization are higher among adolescents in substance abuse treatment than those in the general population (Grella & Joshi 2003; Hawke, Jainchill & De Leon 2003; Titus et al. 2003). Accounting for victimization among adolescents in substance abuse treatment is important for numerous reasons. The existing evidence suggests that adolescents in drug treatment with a history of victimization have higher rates of psychological distress (Caviola & Schiff 2000), which may negatively impact treatment engagement (Grella & Joshi 2003; Grella et al. 2001). Titus and colleagues (2003) found that high levels of victimization interact with treatment outcomes and subsequent violence. Consequently, victimization is taking a more prominent role in treatment planning, especially level of care decisions (Funk et al. 2003).

RESEARCH OBJECTIVES

To date, the majority of knowledge on victimization among adolescents is based on school and community samples (Youngstrom, Weist & Albus 2003). Few studies of victimization have been conducted among adolescents in substance abuse treatment (Grella & Joshi 2003). As previously discussed, African-American adolescents tend to experience the highest rates of victimization. However, very little is known about the prevalence and associations of victimization among African-Americans in substance abuse treatment. Additional research in this area is needed to develop effective interventions to address the consequences of victimization (McCart et al. 2005) and prevent future occurrences among this population.

The purpose of this study is to help fill these gaps by pursuing three research objectives: (1) to examine the rate and different types of victimization among a sample of African-American adolescents in an urban substance

abuse treatment program; (2) to test whether victimization is associated with increased levels of psychopathology and high-risk behaviors; and (3) to compare the rates and associations with those of existing studies of adolescent victimization.

METHODS

Participants

Data for this study were derived from a larger treatment outcome study of 288 adolescents admitted to outpatient or residential substance abuse treatment in a large Mid-western inner city between 2003 and 2006. This initiative was part of the Center for Substance Abuse Treatment Cooperative Agreement for Strengthening Communities for Youth (SCY; TI13305). Adolescents completed at least two days of treatment. Following admission, treatment staff introduced the study to the adolescents and invited them to participate. Research staff obtained written informed consent from parents and written assent from interested participants. Adolescents who participated in the study were compensated \$20. This study included 259 participants who self-identified as African-American, 90% of the total sample. A university Institutional Review Board approved this study.

Measures

All data were collected by treatment staff at intake using a standardized clinical assessment called the Global Appraisal of Individual Needs (GAIN; Dennis et al. 2006). The GAIN contains scales and survey items related to eight domains: demographics, substance use, physical health, risk behaviors, mental health, environment, legal, and vocational issues. Prior research on the psychometric properties of the GAIN revealed that it has good reliability and validity for both adolescents and adults (Dennis, Chan & Funk 2006; Dennis et al. 2004; Godley et al. 2002).

Victimization. Victimization was measured using the GAIN's General Victimization Scale (GVS). The GVS is comprised of 15 dichotomously scored items. Four items ask whether respondents ever experienced four different types of victimization, including being physically abused, being attacked with a weapon, being forced to participate in sexual acts, and being emotionally abused. Four items reflect concern about future victimization—one item for each type of victimization. Seven items ask about traumagenic factors, which are the circumstances surrounding victimization (e.g., whether victimization occurred before the age of 18, whether victimization was perpetrated by a family member).

Items of the GVS are summed to produce an overall victimization score, ranging from 0 to 15 (Titus et al. 2003). The observed reliability of the GVS for this sample ($\alpha = .65$) was consistent with prior research (Funk et al. 2003; Titus et al. 2003). Following the work of Titus and colleagues (2003), a cutoff score of four was used to dichotomize this

variable. Specifically, a score of three or less represented "low victimization," and a score of four or more represented "high victimization."

Participants were queried about their last episode of victimization using the following time frames: past two days, past week, one to four weeks ago, one to three months ago, four to 12 months ago, more than one year ago, or never. These responses were used to create lifetime and past 90-day measures of victimization. Participants were also queried about the age of their first victimization.

Mental health disorders. The GAIN includes items to measure DSM-IV mental health disorders. In this study, participants were classified as having major depressive disorder (past year) if they reported depressed mood, irritability, or loss of interest, and reported at least five of 13 symptoms of depression. Participants were classified as having generalized anxiety disorder (past year) if they reported significant problems with anxiety, worry or panic, and problems controlling their worries, and also responded positively to at least two of seven other anxiety symptoms. They were classified as having traumatic stress disorder (including post-traumatic stress disorder, acute stress disorder and disorder of extreme stress not otherwise specified; past year) if they reported at least five of 13 symptoms. They were classified as having conduct disorder (past 90 days) if they reported engaging in at least three of 15 negative behaviors at least two or more times and had problems due to breaking rules in the past 90 days. Prior research shows GAIN-based mental health diagnoses to match independent staff diagnoses for mood disorders ($\kappa = .85$) and conduct disorder/oppositional defiant disorder ($\kappa = .82$) (Shane, Jasiukaitis & Green 2003). Confirmatory factor analysis of the measure of traumatic stress indicated acceptable factorial validity (Dennis, Chan & Funk 2006).

High-risk behaviors. High-risk behaviors in this study included general community behaviors and sex practices. High-risk community behaviors included past 90-day illegal activity and past-year gang involvement. High-risk sex practices included past 90-day unprotected sex and past 90-day multiple partners (i.e., two or more sex partners).

Analytic Strategy

Data were summarized using descriptive statistics. Bivariate associations were tested using chi-square (χ^2) tests and t-tests. To discern the magnitude of the associations, effect sizes were also computed. These included phi-coefficients (Φ) and Pearson product-moment correlations (r), derived from the chi-square and t-tests, respectively. Following the rules of thumb proposed by Cohen (1988), .20 was regarded as a small effect size, .50 a moderate effect size, and .80 a strong effect size. Associations greater than or equal to .20 were considered to have clinical significance.

Very few missing values were observed in the sample data. Eight variables had one missing value, and two variables

TABLE 1
Summary of Rate and Type of Victimization among Overall Study Sample

Study Variables	N (Range)	% or Mean (SD)
Lifetime Victimization	139	53.7
Past 90 Days Victimization	60	23.2
Days Victimized (if Any) in Past 90 Days	(1-90)	6.88 (17.25)
Age of First Victimization	(4-17)	12.3 (2.48)
Received Needed Help for Victimization (if Victimized)*	55	39.6
Currently Worried About Being Victimized	56	21.6
Type of Victimization		
Attacked with Weapon	118	45.6
Hurt by Striking/Beating	51	19.7
Forced into Sexual Acts	11	4.2
Abused Emotionally	40	15.4
Traumagenic Factors		
Victimized Several Times or for a Long Time	85	32.8
With More Than One Person Involved	92	35.5
Was Person Family Member/Trusted One	43	16.6
Where You Afraid for Life or Injury	36	14.0
Result in Oral, Vaginal, or Anal Sex	11	4.2
People You Told did not Believe or Help You	28	10.8
High Victimization**	108	41.7

*Among subjects who reported a history of victimization (N = 139).
 **Score of 4 or greater on GVS.

had two missing values. Pair-wise deletion was used in the bivariate analyses.

RESULTS

Sample Description

Eighty-four percent (n = 218) of the sample was male, ranging in age from 12 to 17 years (Mean = 14.96, SD = 1.16). Sixty-three percent (n = 163) were admitted to outpatient treatment, and 37% were admitted to residential treatment. The majority of subjects had a marijuana use disorder (83.0%, n = 215) and 27% (n = 69) had an alcohol use disorder.

Approximately half the subjects met criteria for at least one mental health disorder (n = 129), and 30% (n = 77) of the sample met criteria for two or more mental health disorders. Conduct disorder was most prevalent (32%, n = 84), followed by major depressive disorder (20%, n = 56), traumatic stress disorder, 14%, n = 36), and generalized anxiety disorder (5%, n = 12).

About half the sample reported being involved in illegal activity during the past 90 days (n = 142). Twenty percent (n = 53) reported gang membership in the past year. One-fifth of the sample reported having unprotected sex in the past 90 days (n = 56), and approximately half of the sample reported having two or more sexual partners in the past 90 days (n = 126).

Rate and Types of Victimization

Table 1 provides a summary of the rate and types of victimization. Half the subjects reported lifetime victimization,

and one-quarter reported victimization during the past 90 days. The age of first victimization ranged from four to 17 years (Mean = 12.3, SD = 2.48). The most common type of victimization was being attacked with a weapon (46%, n = 118). Twenty percent reported being struck or beaten, 15% reported emotional abuse, and 4% reported being forced into sexual acts. Twenty-seven percent (n = 70) reported at least one type of victimization, 20% (n = 51) reported two types, 5% reported three types (n = 12), and 1% (n=3) reported all four types. One percent (n = 3) of respondents did not provide a response to the survey question regarding type of victimization experienced.

Scores on the GVS ranged from 0 to 15 (Mean = 2.90, SD = 3.6). Among participants with a lifetime history of victimization, 77.6% (n = 108) met the criteria for high victimization (GVS score ≥ 4). About a third of participants reported being victimized several times or over a long period of time, and about the same percent reported being victimized by more than one person.

Almost one-fifth reported victimization by a family member or trusted person. Of the total sample, about one-fifth reported they were currently worried about being victimized in the future. Among subjects who reported victimization, only 40% reported receiving help related to the experience of victimization.

Associations with Victimization

Table 2 presents cross-tabulations of victimization and the other study variables. The percentages reported in this table are column percentages. For example, the table shows that 84.9% (n = 118) of persons with lifetime victimization

TABLE 2
Summary of Associations Among Victimization and Study Variables

Study Variable	Lifetime Victimization			Past 90-day Victimization			High Severity Victimization			
	Yes (n = 139)	No (n = 120)	χ^2	Yes (n = 60)	No (n = 199)	χ^2	Yes (n = 108)	No (n = 151)	χ^2	Φ
Male	84.9%	83.3%	.12	85.0	83.9	.04	81.5	86.1	1.00	.06
Clinical Disorders	29.5%	12.5%	10.98***	33.3%	18.1%	6.32	34.3%	12.6%	17.46***	.26
Major Depressive	7.9%	0.8%	7.31**	6.7%	4.0%	.48†	10.2%	0.7%	12.92***	.22
Generalized Anxiety	18.0%	9.2%	4.18*	15.0%	13.6%	.08	23.1%	7.3%	13.24***	.23
Traumatic Stress	46.8%	15.8%	28.11***	50.0%	27.1%	11.00***	52.8%	17.9%	35.00***	.37
Conduct										
High-Risk Behaviors										
Illegal Activity	68.3%	39.2%	22.14***	80.0%	47.2%	19.98***	69.4%	44.4%	15.98***	.25
Gang Membership	32.4%	6.7%	26.15***	35.0%	16.1%	10.14***	33.3%	11.3%	18.85***	.27
Unprotected Sex	31.9%	10.1%	17.82***	33.3%	18.3%	6.12*	31.8%	14.7%	10.73***	.20
Multiple Sex Partners	58.3%	37.8%	10.74***	58.3%	46.9%	2.82	54.6%	44.7%	2.94	.10

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Phi-coefficients (Φ) $\geq .20$ are in bold, indicating a clinically significant association.
†Cross-tabulation did not meet assumption of chi-square (χ^2) test due to low cell counts; thus, Fisher's exact test was used and reported.

were male, and 83.3% ($n = 100$) of persons without lifetime victimization were male. To obtain percentages for females, each value is subtracted from 100. Thus, the cell percentages for females would be 15.1% ($n = 21$) and 16.7% ($n = 20$), respectively. As previously discussed, chi-square (χ^2) tests were used to determine whether the observed differences were statistically significant, and phi-coefficients (Φ) were used to determine clinical significance ($> .20$). Thus, in the foregoing example, lifetime victimization did not exhibit either statistically or clinically significant associations with gender. It should also be noted that all clinically significant associations were also statistically significant.

Lifetime victimization. Lifetime victimization exhibited a small but clinically significant association with major depressive disorder ($\Phi = .21$) and conduct disorder ($\Phi = .33$). Generalized anxiety disorder and traumatic stress disorder were statistically associated with lifetime victimization. However, contrary to prior research, these relationships were not clinically significant ($\Phi = .13$).

Lifetime victimization was also associated with past 90-day high-risk sex practices, although the effect sizes were small: unprotected sex ($\Phi = .26$) and multiple sex partners ($\Phi = .20$). Illegal activity (past 90-days) and gang involvement (past-year) exhibited larger effects sizes with respect to lifetime victimization ($\Phi = .29$ and $.32$, respectively).

Past 90-day victimization. Recency of victimization, as indicated by a past 90-day episode, had clinically significant associations with three study variables: conduct disorder ($\Phi = .21$), past 90-day illegal activity ($\Phi = .28$), and past-year gang involvement ($\Phi = .20$). Although some of the other study variables exhibited a statistically significant association with past 90-day victimization, these associations were not clinically significant.

Victimization severity. Victimization severity was associated with having a mental health disorder. Of these disorders, conduct disorder exhibited the strongest association ($\Phi = .37$), followed by major depressive disorder ($\Phi = .26$), traumatic stress disorder ($\Phi = .23$), and generalized anxiety disorder ($\Phi = .22$). Past 90-day illegal activity and past year gang involvement exhibited clinically significant associations with victimization severity ($\Phi = .25$ and $.27$, respectively). Past 90-day unprotected sex also reached the threshold of clinical significance ($\Phi = .20$).

DISCUSSION

This study presents findings on victimization prevalence and its association with mental health disorders and high-risk behaviors. The African-American adolescent sample provided an opportunity to report on an underrepresented population in the service research literature. The rate of victimization for this substance abuse treatment sample (54%) was significantly higher than the national average, consistent with prior research showing a link between substance use and victimization (Shepherd, Sutherland & Newcombe

2006; Weiner et al. 2005). Approximately 43% of the overall sample and 85% of persons who reported victimization indicated a history of assault with a weapon. This suggests that the environment in which these adolescents live contains a high level of violence, and the use of substances creates further risks for being victimized.

Victimization and Mental Health

This study also revealed a high rate of comorbid mental health disorders. Severity of victimization was associated with having a psychiatric disorder, but associations with 90-day and lifetime victimization were inconsistent. These differential associations may be due to the time-based measures accounting for only the occurrence of victimization, whereas the measure of severity was based on traumagenic factors. Again, this is consistent with prior research suggesting that the severity and context of victimization have important consequences on mental health functioning (Titus et al. 2003). Treatment providers need to pay closer attention to traumagenic factors rather than recency of victimization. However, further research is needed regarding the stability of the effects of traumagenic factors over time.

While a link was observed between victimization and mental health functioning, all statistically significant relationships exhibited either small or small-to-moderate effect sizes. Generally speaking, prior research has not characterized the associations in terms of effect sizes, but the description of the associations suggests they are moderate to large. For example, Brown and colleagues (1999: 94) stated that exposure to trauma has been linked with "deleterious mental health outcomes," and Paxton and colleagues (2004: 283) stated that "exposure to violence makes *significant* contributions to the presence of post-traumatic stress symptomatology" [italics in both quotes added for emphasis]. In light of these examples and others (Lambert et al. 2005), the effect sizes observed in this study were smaller than expected. Three possible explanations for this unexpected finding are offered. First, victimization and mental health functioning are associated, but the strength of the association has not been clear as prior studies only focused on tests of statistical significance and p-values.

A second explanation is that the association between victimization and mental health functioning was attenuated in this sample by an unmeasured mediating factor. Several studies examining the effects of exposure to crime or community violence on children and adolescents have found that protective factors inhibit the development of psychological difficulties, including post-traumatic stress disorder (e.g., Jones 2007; Youngstrom, Weist & Albus 2003; White et al. 1998). Moreover, it appears that protective factors interact with risk factors in their effects on adolescent well-being (Li, Nussbaum & Richards 2007; Ostaszewski & Zimmerman 2007). Even more specific to this study, unmeasured protective factors specific to African Americans including

formal and extended kinship, spirituality, and collective coping may have been at play (e.g., Jones 2007; Utsey et al. 2007; Taylor, Casten & Flickinger 1993).

A third explanation may be bias in the sample due to service pathways. This was a substance abuse treatment sample, and adolescents with more severe co-occurring psychiatric disorders may have been diverted through the psychiatric or foster care systems. In the community from which this sample was drawn, adolescents with serious emotional disturbance are not necessarily referred to community substance abuse treatment. Depending on the history of victimization among these adolescents, the effect size between mental health and victimization may be larger than was observed in this study.

The foregoing interpretations on the association between victimization and mental health should be considered in the context of the study design. That is, because this was a cross-sectional study, the temporal relationship of victimization and mental health is unclear. Additional research is needed to determine how victimization and the onset or exacerbation of mental health problems are related. In addition to longitudinal studies that can help untangle the causal associations (e.g., Koenen et al. 2007; Giaconia et al. 2000), carefully designed retrospective accounts may also be important. Retrospective studies might involve a qualitative analysis to document the experiences of victimization, which could facilitate an understanding of how victims see their experiences to be related to mental health functioning. These results can generate new hypotheses, including other possible mediating factors.

Victimization and High-Risk Behaviors

Unlike associations with mental health disorders, victimization exhibited consistent relations with the lifetime measure of victimization. Gang membership and illegal activity exhibited the strongest associations. This is consistent with prior research that shows a high degree of overlap between victimization and violence perpetration (Hawke, Janichill & De Leon 2003; Howard et al. 2002; Feigelman et al. 2000). The effect size among victimization and high-risk sex behaviors reached the threshold of clinical significance. Engagement in these high-risk behaviors is most likely due to the lack of meaningful opportunities afforded to these adolescents.

The temporal ordering of victimization and high-risk behaviors is unclear; however, gaining knowledge on the temporal ordering of these relationships may not be as important as improving the conditions in which these adolescents live. That is, their decisions must be considered within the context of an environment with severely restricted social and economic opportunities, as well as a failing educational system. An effective treatment and prevention strategy will require a multifaceted effort that targets individuals and their broader social conditions.

Treatment and Prevention

Overall, this study documents a need for services related to treatment and prevention of victimization among African-American adolescents in substance abuse treatment. Sixty percent of subjects who were victimized reported that they had not received help for their experience of victimization, and 20% of the overall sample worried about future victimization.

A necessary step is improved access to and integration with the mental health service system. This can allow adolescents to be treated for the distress of mental disorders that may be due, in part, to victimization. Prior research has suggested that supportive relationships can help buffer against the effects of victimization (Youngstrom, Weist & Albus 2003). Treatment providers can explore the social network of the individuals and help identify ways of enhancing existing relationships.

Lambert and colleagues (2005: 44) stated that prevention efforts targeting urban adolescents "should attempt to increase youth vigilance of surroundings or awareness of danger as a means of reducing their risk for exposure to community violence by helping them avoid violent situations and involvement in violent activity." Nadel (1995) considered the modification of beliefs, attitudes and norms as fundamental to developing behaviors that can help prevent violence and victimization. Such prevention efforts can be included in substance abuse treatment through psychoeducation and cognitive behavioral groups. Service providers should assist adolescents in seeking out opportunities in the community that provide safe environments for structured activities and role models that discourage the use of substances.

Finally, it is unlikely that the problem of violence and victimization can be effectively addressed without improving the social and economic conditions of African-American adolescents living in urban settings. Thus, it is necessary to heighten the awareness of policy makers to promote meaningful social change.

Limitations and Future Directions

This study contributes to a developing area of research, focusing on an underrepresented group in services research. The contributions must be considered in the context of study limitations. First, as previously discussed, the cross-sectional design prevented any inferences regarding the temporal ordering of variables.

Second, the psychometrics of the GAIN have not been thoroughly examined with African-American adolescents. African-American adolescents, especially those in urban environments, may have different conceptualizations of victimization due to their chronic exposure. Additional research is needed to understand how victimization can be effectively measured across different populations. Qualitative approaches can be an important method of research to help clarify these differences.

Third, the measure of victimization is based on assumptions that need to be validated. A summary score is derived by adding different experiences of victimization. This assumes that the items are additive and contribute equally to the final score. Future research should consider whether there are multiplicative effects of victimization and possible nonlinear associations with other variables.

Finally, the GAIN was administered at intake to substance abuse treatment. Clinical staff may not have had enough time to develop rapport with clients, which is a necessary condition for discussing sensitive topics such as victimization. It is possible that the true rate of victimization may be underestimated.

Summary

This study revealed a high rate of victimization in a sample of African-American adolescents in substance abuse treatment. The results contribute to existing evidence on the link between substance use and victimization. Severity of victimization was associated with having a mental disorder (i.e., depression, generalized anxiety disorder, traumatic stress disorder, and conduct disorder). Lifetime victimization was associated with various high-risk behaviors (i.e., multiple sex partners, unprotected sex, gang membership, and illegal activity). Treatment and prevention of victimization will require strategies that address problems of the individual in addition to targeting broader social and economic conditions.

REFERENCES

- Anderson, R.N. 2002. *Deaths: Leading Causes for 2000. National Vital Statistics Report, Volume 50, No. 16.* Hyattville, MD: National Center for Health Statistics.
- Brown, T.L.; Henggeler, S.W.; Brondino, M.J. & Pickrel, S.G. 1999. Trauma exposure, protective factors, and mental health functioning of substance-abusing and dependent juvenile offenders. *Journal of Emotional and Behavioral Disorders* 7 (2): 94-102.
- Caetano, R.; Field, C.A. & Nelson, S. 2003. Association between childhood physical abuse, exposure to parental violence, and alcohol problems in adulthood. *Journal of Interpersonal Violence* 18 (3): 240-57.
- Caviola, A.A. & Schiff, M.M. 2000. Psychological distress in abused, chemically dependent adolescents. *Journal of Child and Adolescent Substance Abuse* 10 (2): 81-92.
- Center for Disease Control (CDC). 2007. *Victimization of Persons with Traumatic Brain Injury or Other Disabilities: A Fact Sheet for Professionals.* Available at www.cdc.gov/ncipc/tbi/FactSheets/VictimizationTBI_FactSheet4Professionals.htm
- Champion, H.L.O.; Foley, K.L.; DuRant, R.H.; Hensberry, R.; Altman, D. & Wolfson, M. 2004. Adolescent sexual victimization, use of alcohol and other substances, and other health risk behaviors. *Journal of Adolescent Health* 35 (4): 321-28.
- Cleary, S.D. 2000. Adolescent victimization and associated suicidal and violent behaviors. *Adolescence* 35 (Winter): 671-82.
- Cohen, J. 1988. *Statistical Power Analysis for the Behavioral Sciences. Second Ed.* Hillsdale: Lawrence Erlbaum.
- Dennis, M.L.; Chan, Y.-F. & Funk, R.R. 2006. Development and validation of the GAIN Short Screener (GSS) for internalizing, externalizing and substance use disorders and crime/violence problems among adolescents and adults. *American Journal on Addictions* 15 (Suppl 1): 80-91.
- Dennis, M.L.; White, M.; Titus, J.C & Unsicker, J. 2006. *Global Appraisal of Individual Needs: Administration Guide for the GAIN and Related Measures.* Bloomington: Chestnut Health System.
- Dennis, M.L.; Funk, R.; Godley, S.H.; Godley, M.D. & Waldron, H. 2004. Cross-validation of the alcohol and cannabis use measures in the Global Appraisal of Individual Needs (GAIN) and Timeline Followback (TLFB; Form 90) among adolescents in substance abuse treatment. *Addiction* 99 (Suppl 2): 120-28.
- Feigelman, S.; Howard, D.E.; Li, X. & Cross, S.I. 2000. Psychosocial and environmental correlates of violence perpetration among African-American urban youth. *Journal of Adolescent Health* 27 (3): 202-09.
- Fitzpatrick, K.M. & Bolidizar, J.P. 1993. The prevalence and consequences of exposure to violence among African-American youth. *Journal of the American Academy of Child and Adolescent Psychiatry* 32 (2): 424-30.
- Funk, R.R.; McDermeit, M.; Godley, S.H. & Adams, L. 2003. Maltreatment issues by level of adolescent substance abuse treatment: The extent of the problem at intake and relationship to early outcomes. *Child Maltreatment* 8 (1): 36-45.
- Giaconia, R.M.; Reinherz, H.Z.; Hauf, A.C.; Paradis, A.D.; Wasserman, M.S. & Langhammer, D.M. 2000. Comorbidity of substance use and post-traumatic stress disorders in a community sample of adolescents. *American Journal of Orthopsychiatry* 70 (2): 253-62.
- Godley, M.D.; Godley, S.H.; Dennis, M.L.; Funk, R. & Passetti, L.L. 2002. Preliminary outcomes from the assertive continuing care experiment for adolescents discharged from residential treatment. *Journal of Substance Abuse Treatment* 23 (1): 21-32.
- Goldstein, A.L.; Walton, R.M.; Cunningham, M.A.; Trowbridge, M.J. & Maio, R.F. 2007. Violence and substance use as risk factors for depressive symptoms among adolescents in an urban emergency department. *Journal of Adolescent Health* 40 (3): 276-79.
- Grella, C.E. & Joshi, J. 2003. Treatment processes and outcomes among adolescents with a history of abuse who are in drug treatment. *Child Maltreatment* 8 (1): 7-18.
- Grella, C.E.; Hser, Y.; Joshi, V. & Rounds-Bryant, J. 2001. Drug treatment outcomes for adolescents with comorbid mental and substance use disorders. *Journal of Nervous and Mental Disease* 189 (6): 384-92.
- Hawke, J.M.; Jainchill, N. & De Leon, G. 2003. Posttreatment victimization and violence among adolescents following residential drug treatment. *Child Maltreatment* 8 (1): 58-71.
- Hawke, J.M.; Jainchill, N. & De Leon, G. 2000. The prevalence of sexual abuse and its impact on the onset of drug use among adolescent is the therapeutic community drug treatment. *Journal of Child & Adolescent Substance Abuse* 9 (3): 35-49.
- Howard, D.E.; Feigelman, S.; Li, X.; Cross, S. & Rachuba, L. 2002. The relationship among violence victimization, witnessing violence, and youth distress. *Journal of Adolescent Health* 31 (6): 455-62.
- Jones, J.M. 2007. Exposure to chronic community violence: Resilience in African American children. *Journal of Black Psychology* 33 (2): 125-49.
- Kaukinen, C. 2002. Adolescent victimization and problem drinking. *Violence and Victims* 17 (6): 669-89.
- Koenen, K.C.; Moffitt, T.E.; Poulton, R.; Martin, J. & Caspi, A. 2007. Early childhood factors associated with the development of post-traumatic stress disorder: Results from a longitudinal birth cohort. *Psychological Medicine* 37 (2): 181-92.
- Lambert, S.F.; Ialongo, N.S.; Boyd, R.C. & Cooley, M.R. 2005. Risk factors for community violence exposure in adolescence. *American Journal of Community Psychology* 36 (1-2): 29-48.
- Li, S.T.; Nussbaum, K.M. & Richards, M.H. 2007. Risk and protective factors for urban African American youth. *American Journal of Community Psychology* 39 (1-2): 21-35.
- Liebschutz, J.; Savetsky, J.B.; Saitz, N.J.; Horton, R.; Lloyd-Travaglini, C. & Samet, J.H. 2002. The relationship between sexual and physical

- abuse and substance abuse consequences. *Journal of Substance Abuse Treatment* 22 (3): 121-28.
- McCart, M.R.; Davies, W.H.; Harris, R.; Wincek, J.; Calhoun, A.D. & Melzer-Lange, M. 2005. Assessment of trauma symptoms among adolescent assault victims. *Journal of Adolescent Health* 36 (1): 70.e7-70.e13.
- Moran, P.B.; Vuchinich, S. & Hall, N.K. 2004. Associations between types of maltreatment and substance use during adolescence. *Child Abuse & Neglect* 28 (5): 565-74.
- Nadel, H.; Spellman, M.; Alvarez-Canino, T.; Lausell-Bryant, L. & Landsberg, G. 1995. The cycle of violence and victimization: A study of the school-based intervention of a multidisciplinary youth violence prevention program. *American Journal of Preventive Medicine* 12 (Suppl 5): 109-19.
- National Institute of Justice (NIJ). 2003. *Youth Victimization: Prevalence and Implications*. Washington, DC: Department of Justice, Office of Justice Programs.
- National Institute of Justice (NIJ). 1997. *Research on Delinquency and Adult Criminality*. Washington, DC: NIJ.
- Office of Juvenile Justice and Delinquency Prevention (OJJDP). 2000. *Children as Victims*. Washington, DC: OJJDP.
- Osofsky, J.D. 2001. *Addressing Youth Victimization. Coordinating Council on Juvenile Justice and Delinquency Prevention: Action Plan Update*. Washington, DC: Department of Justice, Office of Justice Programs.
- Ostaszewski, K. & Zimmerman, M.A. 2006. The effects of cumulative risks and promotive factors on urban adolescent alcohol and other drug use: A longitudinal study of resiliency. *American Journal of Community Psychology* 38 (3-4): 237-49.
- Paxton, K.C.; Robinson, W.L.; Shah, S. & Schoeny, M.E. 2004. Psychological distress for African-American adolescent males: Exposure to community violence and social support as factors. *Child Psychiatry and Human Development* 34 (4): 281-95.
- Shane, P.A.; Jasiukaitis, P. & Green, R. 2003. Treatment outcomes among adolescents with substance abuse problems: The relationship between comorbidities and post-treatment substance involvement. *Evaluation and Program Planning* 26 (4): 393-402.
- Shepherd, J.P.; Sutherland, I. & Newcombe, R.G. 2006. Relations between alcohol, violence and victimization in adolescence. *Journal of Adolescence* 29 (4): 539-53.
- Sullivan, T.N.; Farrell, A.D. & Klierer, W. 2006. Peer victimization in early adolescence: Association between physical and relational victimization and drug use, aggression, and delinquent behaviors among urban middle school students. *Developmental Psychopathology* 18 (1): 119-37.
- Taylor, R.D.; Casten, R. & Flickinger, S.M. 1993. The influence of kinship social support on the parenting experiences and psychosocial adjustment of African American adolescents. *Developmental Psychology* 29 (2): 382-88.
- Titus, J.C.; Dennis, M.L.; Scott, C.K. & Funk, R.R. 2003. Gender differences in victimization severity and outcomes among adolescent treated for substance abuse. *Child Maltreatment* 8 (1): 19-35.
- US Department of Health and Human Services (US DHHS). 1999. *Youth Violence: A Report of the Surgeon General*. Washington, DC: USDHHS.
- Utsey, S.O.; Bolden, M.A.; Lanier, Y. & Williams, O. 2007. Examining the role of culture-specific coping as a predictor of resilient outcomes in African Americans from high-risk urban communities. *Journal of Black Psychology* 33 (1): 75-93.
- Van Dorn, R.A. 2004. Correlates of violent and nonviolent victimization in a sample of public high school students. *Violence and Victims* 19 (3): 303-20.
- Weiner, M.D.; Sussman, S.; Sun, P. & Dent, C. 2005. Explaining the link between violence perpetration, victimization and drug use. *Addictive Behaviors* 30 (6): 1261-66.
- White, K.S.; Bruce, S.E.; Farrell, A.D. & Klierer, W. 1998. Impact of exposure to community violence on anxiety: A longitudinal study of family social support as a protective factor for urban children. *Journal of Child and Family Studies* 7 (2): 187-203.
- Youngstrom, E.; Weist, M.D. & Albus, K.E. 2003. Exploring violence exposure, stress, protective factors and behavioral problems among inner-city youth. *American Journal of Community Psychology* 32 (1-2): 115-29.