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Gender Differences and the Impact of Exposure to Violence on Depressive Symptoms and Sleep Habits among Young African American Adults

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Millions of children and adolescents are exposed to violence (ETV) and trauma every year. Research on violence and trauma experienced before age 18 has established that exposures are linked to adverse physical and mental health outcomes, which include depression, anxiety, post-traumatic stress disorder (PTSD), and sleep disturbances (Buka, Stichick, Birdthistle, & Earls, 2001; Gorman-Smith & Tolan, 1998; Lambert, Jalongo, Boyd, & Cooley, 2005; Seedat, Nyamai, Njenga, Vythilingum, & Stein, 2004). These problems in turn may affect the individual's development, impair social functioning and relationships, diminish the ability to learn, lead to behavioral problems, and reduce the individual's quality of life. However, neither human development, nor exposure to violence, stops at age 18. In recognition of this, young adults, generally defined as ages 18 to 25, are increasingly recognized as a separate subpopulation worthy of study. These years are critical in terms of maturation, change, and establishment of trajectories that can have lifelong repercussions (IOM & NRC, 2015). Compared to literature on exposure to violence among children and adolescents, less is known about the impacts of exposure to violence and to childhood violence on young adults. Among young adults who are marginalized or disadvantaged, inequality can become sharper during the transition from childhood to adulthood. For example, people age out of foster care at age 18 or may no longer be eligible for free breakfast and lunch programs they depended upon for their public school meals (IOM & NRD, 2015). In addition, young adults who live in urban areas are exposed to a substantial amount of community violence (McDonald & Richmond, 2008).

This paper explored gender differences in the effects of exposure to violence before and after age 18 on sleep habits and depressive symptoms. Specifically, the study identified the forms of violence that had the greatest impact on depressive symptoms and sleep habits of men, women, and the total population. Comparing exposures to violence in childhood with exposures to community violence as adults allows for a better understanding of how context impacts these associations.

Research by McDonald and Richmond (2008) indicates that urban adolescents have high rates of community violence exposure (CVE): more than 85% witness some form of violence in their lifetime, and as many as 69% report direct victimization. McDonald and Richmond's findings indicate that CVE has effects on mental health symptoms, especially post-traumatic stress and aggression. A study by McGill et al. (2014) of 121 junior high and high school students in a high-crime neighborhood concluded that community violence and family violence were associated with post-traumatic stress (PTS) symptoms and school functioning

problems and that community and family violence were indirectly related to school functioning problems through PTS symptoms.

Gender Differences and Violence

In examining the gender differences in exposure to violence among middle and high school students, McGee et al. (2001) found that exposure to violence among males was strongly associated with externalizing problem behaviors such as delinquency, while females exposed to violence were more likely to exhibit internalizing symptoms indicative of post-traumatic stress disorder. Females exposed to violence were also more likely than males to use problem-focused coping (for example, social support) as an adaptive strategy. Another study on the effects of exposure to violence on adolescent substance use also looked at gender differences and found that females who had been directly victimized engaged in more frequent binge drinking than males (Pinchevsky, Wright, & Fagan, 2013). Gender differences in trauma-related symptoms and exposure to community violence was studied by Zona and Milan (2011). Their research confirmed a higher prevalence of exposure to violence among adolescent boys when compared to adolescent girls living in an urban environment. The data also suggested that the effects of exposure to violence may be more detrimental for girls in regard to the trauma-related outcome of dissociation, which has clinical implications for gender-sensitive treatment (Zona & Milan, 2011). Research by Foster, Kuperminc, and Price (2004) has shown that gender differences in PTSD exist among inner-city African American youth who are exposed to community violence. They found a stronger positive association of anxiety and depression symptoms with extent of community violence exposure among girls than boys. Furthermore, while girls did not appear to differ in their responses to witnessing violence versus being a victim, boys appeared to be more distressed by being a victim of violence than by witnessing violence.

Stress Process Model of Exposure to Violence

One of the theoretical frameworks to explain the impact of children's and young adults' exposure to family and community violence on their mental health is the stress process model (Foster & Brooks-Gunn, 2009). According to Mohammad, Shapiro, Wainwright, and Carter (2015), "the model recognizes multiple sources of stress across ecological domains (e.g., racism, socioeconomic disadvantage, housing instability, family structure and adversity), mediators and moderators of stress (e.g., resources for social support and coping), as well as outcomes of stress

(e.g., mental health symptoms), which are viewed as interconnected elements in understanding children's ETV" (p. 204).

Exposure to Violence: Sleep and Depression

Difficulties with sleep and symptoms of depression in adults over the age 18 have been associated with exposure to community violence as adults, as well as with childhood exposure to violence and trauma. Many studies (Aneshensel & Sucoff, 1996; Foster, Kuperminc, & Price, 2004; Umlauf, Bolland, Bolland, Tomek, & Bolland, 2015) have shown how exposure to community violence and childhood exposure to violence affect children and adolescents. Research is beginning to advance our understanding on how exposures to violence experienced in childhood and adolescence affect adult life, of which sleep is an important component.

Mellman, Kobayashi, Lavela, Wilson, and Hall Brown (2014) conducted a study on young, urban, African American adults in Washington, DC, to assess the relationship between PTSD and rapid eye movement (REM) sleep. Twenty-seven percent of the participants showed evidence of PTSD. The most common traumatic experiences were physical abuse and assault, sexual assault, witnessing of community violence, sudden unexpected deaths of loved ones, and transportation accidents. A study of 252 adolescents with an average age of 16 years found that community violence predicted lower sleep efficiency, more long-wake episodes, and more sleep/wake problems and sleepiness (Bagley, Tu, Buckhalt, & El-Sheikh, 2016). Findings also revealed that girls in the sample were more vulnerable to the effects of violence on sleep quality (Bagley et al., 2016). Greenfield, Lee, Friedman, and Springer (2011) explored childhood abuse as a risk factor for sleep problems in adulthood. Findings showed that frequent physical and emotional abuse (excluding sexual abuse) were associated with poor sleep quality in adult life, more than 200 percent higher than respondents who reported no abuse. A meta-analysis uncovered five studies that directly examined the mediating effects of sleep on the relationship between traumatic stress and health or behavioral outcomes in adults, with each study providing evidence for sleep's mediating role (Spilsbury, 2009). A different systematic review found that 28 of the 30 studies that used the Adverse Childhood Experiences (ACEs) scale to examine sleep disorders and disturbances in adulthood showed statistically significant associations between sleep disorders with a history of childhood adversities (Kajeepta, Gelaye, Jackson, & Williams, 2015). In a third review article about sleep problems, Grandner, Williams, Knutson,

Roberts, & Jean-Louis (2016) found that a number of studies have discovered differing sleep patterns among social groups, with racial/ethnic minorities and socioeconomically disadvantaged people tending to get less sleep and experiencing a higher risk of sleep problems.

In a longitudinal study of sleep disorder symptoms among African American adolescents living in impoverished neighborhoods, Umlauf, Bolland, Bolland, Tomek, and Bolland (2015) indicated that symptoms of insomnia and restless legs syndrome or periodic limb movement disorder (RLS/PLMD) were greater under conditions of combined hopelessness and exposure to violence than for either condition alone; and symptoms of RLS/PLMD were worse for females who had been exposed to violence and experienced hopelessness. Another longitudinal research study examined the relationship between trauma exposure, sleep problems, PTSD, depression symptom severity, and intrapersonal resource loss among trauma-exposed Palestinian adults between August and November 2008 (Gerhart, Hall, Russ, Canetti, & Hobfoll, 2014). Results showed that sleep problems may confer vulnerability to longer-term distress in the presence of ongoing political violence. Initial sleep problems were associated with increased PTSD, depression, and intrapersonal resource loss at follow-up six months later. In a study of childhood exposure to community violence (CECV) in South Africa, Martin, Revington, and Seedat (2013) found very high levels of exposure to community violence and family violence and a high and positive association between exposure to CECV and PTSD.

Victimization has been positively related to depressive symptomatology, and those who reported greater victimization also reported more symptoms of depression, but similar linkages were not found with regard to witnessing violence (Banerjee, Rowley, & Johnson, 2014). Victims of direct violence tend to have more psychological consequences than indirect victims. In the study of the relationship between exposure to violence and depression in predominantly African American high schools in a Washington, DC, suburb, findings by Matlin (2008) indicated that exposure to community violence and exposure to school violence were associated with increased depressive symptoms.

Method

The data presented here are primary data based on preliminary findings of a baseline, longitudinal study. One component of the study collected survey data on childhood violence and community violence.

Sample Inclusion Criteria

The study was designed to capture the experiences of economically and socially disadvantaged young adults. To qualify for inclusion, respondents had to be between the ages of 18 and 25 as of their most recent birthday, self-identify as African American/Black, tested HIV negative, and currently live in predominantly disadvantaged wards in Washington, DC.

Recruitment Process and Incentives

Only selected survey data from the study are presented here. The full study entailed a comprehensive survey about participants' exposure to violence, adverse life experiences and discrimination, socioeconomic characteristics, health problems and symptoms, drug use, and HIV risk behaviors. Because the targeted population is hard to reach, community-based and venue-based sampling in addition to snowball sample techniques were utilized. Venue-based sampling techniques have been successfully used in several research studies to obtain large and diverse random samples of young, minority participants. We used a venue-based sampling technique (MacKellar et al., 2007) developed by the Centers for Disease Control and Prevention to generate a random sample of African American young adults aged 18 to 25 in our target wards. Potential participants were recruited from community-based venues that attract or serve the target participants in the target areas. Recruitment was done by a street team of researchers, led by an experienced community-based researcher. The recruitment director and street team members all had established ties to the communities and were familiar with the population. Existing networks and a multipronged approach were utilized. Flyers were posted in locations that served the population (e.g., recreation centers, metro stations, barbershops, and hair salons). Recruiters also made direct phone calls to agencies that served the population and made in-person outreach visits to various locations around Washington, DC, to encourage enrollment. Once an appointment for research participation was made, the recruiter would follow up with text and phone call reminders. Word of mouth also became a popular way of recruiting participants, particularly because of the incentive offered. In some cases, a respondent would have another person with them who met the criteria and wanted to participate. When this occurred, all efforts were made to accommodate the request or reschedule the person for a different day.

Study Location and Data Collection Procedure

The study was approved by Howard University's Office of Regulatory Research Compliance. Written informed consent was obtained from the participants before they took part in this study. Data collection took place at the Howard University Hospital in Washington, DC. A street team member would meet the arriving participants outside the hospital to escort them through the study process. Consenting participants were given a \$50 pre-paid Visa card upon completion of the study.

Measurement of Variables

The survey included questions on exposure to childhood violence, exposure to community violence as adults, depressive symptoms, and sleep habits, among other questions.

The Childhood Exposure to Violence (CEV) scale contained 34 questions that asked participants to respond to things that might have happened during their childhood from when they were born through age 18. The response options were one time, two times, three times, four times, five times or more, no times, and prefer not to answer, (Hamby & Finkelhor, 2000; Hamby, Finkelhor, Ormrod, & Turner, 2004) (test-retest reliability coefficient of 0.90, Cronbach's $\alpha = 0.85$)

Exposure to Community Violence (CV) as adults was measured by 35 items. Participants were asked to describe the violence that they might have experienced, seen, or heard about as an adult, that is, since they turned 18. The responses were never, once or twice, a few times, many times, or prefer not to answer (Richters & Saltzman, 1990) (internal consistency 0.85, test-retest reliability 0.90, Cronbach's $\alpha = 0.61, 0.79, \text{ and } 0.86$).

Ten items measured depressive symptoms. These questions were from the Depressive Symptoms Measures (CES-D-10) and assessed the frequency with which participants were bothered by things that usually don't bother them, were having trouble keeping their mind on what they were doing, felt depressed, felt everything they did was an effort, felt hopeful about future, felt fearful, sleep was restless, felt happy, felt lonely, and felt they could not "get going." Response options ranged from rarely or none of the time to all of the times (0) to very often (3) and no answer (Miller, Anton, & Townson, 2008) (test-retest reliability 0.85, Cronbach's $\alpha = 0.86$).

Thirteen items measured sleep habits by asking participants about their sleep habits during the past 30 days. Questions included usual times going to bed, minutes taken to fall asleep, time gotten up in the morning, hours of sleep at night, how often had problem sleeping because of bad dreams, not breathing comfortably, and having pain. Responses included: not during the past month (1), less than once a week, once or twice a week, three or more times a week (4), no answer. There was also a quality of sleep question with an answer range of very good (1) to very poor (4) (Buysse & Reynolds, 1989) (T-Test reliability 0.8, Cronbach's $\alpha=0.77$).

Data Analysis

All analyses were undertaken using SPSS v. 22. The preliminary analysis included 440 African American men and women and began with factor analyses of the independent and dependent variables. In our analyses, we did not calculate means for the items included in the 34-item CEV and 35-item CV scales. Doing so assumes that all the items in each scale fall on a single dimension, which is statistically implausible for so large a number of items. The factor analyses instead assume that each scale is measuring several dimensions or types of exposure to violence in childhood and exposures to community violence in adulthood. Identifying the several dimensions of violence that these items suggest contributes to understanding the effects that exposure to different forms of violence have on sleep and depression. Next, the resulting factors that represented childhood exposure to violence and community violence as adults were regressed in a stepwise procedure upon dependent variable factors representing sleep habits, and depression. Separate regressions were run for males and for females. The additional variance for each exposure to violence (ETV) factor that entered the stepwise regression for a given dependent variable was calculated and also the percentage that this represented of the total variance explained (adjusted R^2) by the regression. Regressions where the adjusted R^2 was less than 0.075 (7.5%) were dropped from further analysis. The mean percentage of the variance that each ETV factor explained across the regressions with R^2 s greater than 0.075 was then calculated and used as an indicator of the relative strength or importance of each ETV factor in explaining a range of outcomes. The factor analyses suggested that the Childhood Exposure to Violence scale measured six distinct factors or types of violence, and the Community Violence Scale measured seven factors. Factor analyses of the dependent variables found three factors in the sleep habits items and

two factors in the depressive symptoms items (see Table 1). For details of factor loading, see Appendices 1, 2, and 3.

Table 1

Factors Produced by Factor Analyses on Exposure to Childhood Violence and Community Violence Scales and for Sleep Habits and Depressive Symptoms Scales

Exposure to Childhood Violence	Community Violence	Sleep Habits	Depressive Symptoms
Witnessed violence	Direct personal violence	Effects on sleep	Depressive mood
Childhood sexual abuse	Experienced gun use or witnessed violent deaths	Difficulties sleeping	Depression
Personal attacks	Involvement in drug sales or physical violence	Times for sleeping and waking	
Witnessed violence among adults	Feeling unsafe in different settings (e.g., home, school)		
Direct violence from peers and adults	Witnessed or considered suicide		
Witnessed a murder	Carried a weapon		
	Witnessed a murder or suicide		

Results/Findings

Descriptive Statistics

Findings suggests that majorities of the recruits were female (52.3%) and between 18 and 21 years of age (52.0%). Only about 5% of the recruits (n=21) were Hispanic. Most lived in an apartment (26.1%) or a house (33.2%) that someone else rented or owned. Another 28.6% rented their own apartments, and 5.7% indicated that they were homeless. Almost all of the recruits lived either in Ward 7 (32.5%), Ward 8 (37%), or Ward 5 (23.6%); only 7% live in other wards. Six in 10 recruits (60%) completed high school or had a GED, 11.8% had attended or completed college, and 8.2% had attended vocational or trade schools. One in five (20%) did not finish high school. Over 90% of recruits (92.5%) had an income under \$30,000 last year; nearly four in five (77.5%) had an income under \$15,000.

Substantial proportions of the respondents witnessed violence as children: 32.7% saw a parent get hit by another parent or by a boyfriend or girlfriend; 41.6% saw someone close to them murdered; 31% indicated that grown-ups in their lives hit, beat, kicked, or physically hurt them; 30% said a group of kids or a gang hit or attacked them; 29% said boyfriends/girlfriends or a date slapped or hit them; and 20% indicated that grown-ups they knew touched their private parts or forced them to have sex. Our data showed that as adults, half (50%) of the participants heard the sound of gunfire outside or near their home. About 4 in 10 reported not being happy during the past week (42%), 44% had seen someone else being threatened with serious physical harm in real life, and 41% had had trouble sleeping.

Regression Findings for the Total Population

Table 2 shows regressions of factors for exposure to community violence and to violence in childhood on the factors for sleep habits and for depressive symptoms. The strongest factors for explaining variance in the sleep habit and depressive symptom factors included exposure to: experiencing gun use or seeing violent deaths (explaining a mean of 43.3% of the total variance explained in the sleep and depression factors); direct personal violence (explaining 38.6% of the total variance); drug sales or physical violence (25.0%); witnessing or consideration of suicide (23.2%); feeling unsafe in different milieus (14.6%); and having carried a weapon (13.8%).. Experiencing gun use or seeing a violent death explained 90% of the total variance explained in mood depression. Exposure to personal attacks explained 57.2 % of the total variance in sleep effects.

Table 2

Regressions of Factors for Exposure to Community and Interpersonal Childhood Violence* on Sleep Problems and Depressive Issues, Total Population

Total Population	Mean Percent of Total Variance Explained	Depressive Mood R ² = .225	Sleep Effects R ² = .204	Depression R ² = .145	Trouble Sleeping R ² = .170
F Statistic for Regression		31.31	21.69	11.64	17.02
Significance of F		.000	.000	.000	.000
Community Violence: Experienced Gun Use or Saw Violent Deaths	43.5	90.0		16.1	24.3
Community Violence: Direct Personal Violence	38.6		57.2	20.0	
Community Violence: Drug Sales or Physical Violence	25.0	5.1	8.9	31.0	55.1
Community Violence: Has Seen Murder or Suicide	23.2		23.2		
Community Violence: Feels Unsafe in Different Milieus	14.6			14.6	
Community Violence: Has Carried Weapon	13.8		12.1		15.5
Community Violence: Witnessed or Considered Suicide	11.7			18.3	5.1
*Personal Violence: Violence Among Adults	4.9	4.9			

Regression Findings by Gender

The regressions in Table 3 show that experiencing gun use or seeing violent death explained a mean of 62.9% of the total variance in sleep habits and depressive symptoms among men and 33.6 % among women. More specifically, it also explained 100% of the variance in depressive mood among men and 62.3% among women. Direct personal violence explained all (100%) of the total variance in sleep habits and depressive symptoms among women and 57.8% among men. This can be directly attributed to direct personal violence explaining 100% of the total variance in sleep effects among women but only 15.6% of these effects among men. Direct personal violence explained all (100%) of the total variance explained in depression among men, however.

Exposure to personal attacks in childhood was much more important to explaining the sleep habits and depressive symptoms of women, where it explained a mean of 45.7 % of the variance in the equations in which it appeared as compared to men, where it only explained a mean of 11.1% of the total variance explained. Violence among adults was the strongest factor among women, explaining a mean of 15.9% of the total variance in the regression equations in which it appeared, but it did not enter the regression for men. Exposure to childhood sexual abuse was also a stronger factor in the regressions for women (accounting for a mean of 22.0 % of the total variance explained). The only dependent variable that childhood sexual abuse influenced among women was a depressed mood. Exposure to violence from peers and adults was weak in the regressions for women, with a mean of 9.0% but did not meet the criterion needed to report statistics on the factor among men and the total population.

Table 3

Regressions of Factors for Exposure to Community and Childhood Interpersonal Violence on Sleep Problems and Depressive Issues by Gender

Males and Females	Mean Percent of Total Variance Explained		Effects on Sleep		Depressive Mood		Difficulties Sleeping		Depression	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Variance Explained			.351	.121	.258	.227	.177	.202	.158	.177
F Statistic for Regression			22.07	22.38	55.23	26.68	12.19	10.89	30.32	7.72
Significance of F			.000	.000	.000	.000	.000	.000	.000	.000
Community Violence: Experienced Gun Use or Saw Violent Deaths	62.9	33.6			100.0	62.3	25.8	14.4		24.3
Community Violence: Direct Personal Violence	57.8	100.0	15.6	100.0					100.0	
Community Violence: Drug Sales or Physical Violence	53.3	28.9	43.3				63.2	27.7		30.2
Community Violence: Has Seen Murder or Suicide	44.7	0.0	44.7							
Community Violence: Feels Unsafe in Different Milieus	0.0	18.6								18.6
Community Violence: Has Carried Weapon	14.5	15.2	14.5					12.4		18.1
Community Violence: Witnessed or Considered Suicide	0.0	0.0								
Personal Violence: Violence among Adults	0.0	15.9				15.9				
Personal Violence: Personal Attacks	11.1	45.7					11.1	45.7		
Personal Violence: Childhood Sexual Abuse	0.0	22.0				22.0				
Personal Violence: Violence from Peers and Adults		9.0								9.0

Discussion

This paper explored gender differences in the effects of exposure to violence before and after age 18 on sleep habits and depressive symptoms. Specifically, the study identified the forms of violence that had the greatest impact on depressive symptoms and sleep habits of men, women, and the total population. Comparing exposures to violence in childhood with exposures to community violence as adults allows for a better understanding of how context impacts these associations.

Previous research has established that exposure to community violence can predict poor sleep habits and depressive symptoms (Aneshensel & Sucoff, 1996; Bagley et al., 2016; Snedker & Herting, 2016; Umlauf et al., 2015). Consistent with existing research, this study found that exposure to violence is significantly associated with depressive symptoms and sleep habits. Findings reflect the stress process model and suggest that the setting in which children and young adults are exposed to violence may present health challenges, such as depression and sleep problems (Foster & Brooks-Gunn, 2009).

Regarding gender differences, we found a significant difference in the levels and effects of exposures to community violence by gender. Compared to males, females reported significantly higher effects on sleep from direct personal violence. This suggests that women may respond differently to violence that is interpersonal. In contrast, exposure to direct types of personal violence, experiences of gun use, or seeing a violent death had considerably greater effects upon depression and depressive mood for men than for women. These findings suggest that sleep habits and sleep difficulties are important reflections of exposure to violence in one's community, or as McEwen (2012) put it, "how the social environment gets under the skin." In addition, our findings highlight the importance of examining gender differences in the exposure to violence, depressive symptoms, and sleep habits and point to the need for trauma-informed programs that are tailored to gender. These findings contribute to the literature on how exposure to childhood violence and exposure to community violence as adults affect sleep habits and depressive mood. We have identified the specific kinds of violence that are most likely to impact sleep and depression and how these differ between women and men.

Limitations

This study produced a rich dataset on exposure to violence in a high-risk sample of African American young adults. However, there are limitations to the data, and the findings of this study should be understood in the

context of this study and must be interpreted cautiously. The results from this study are not generalizable, and the sampling method employed non-probability techniques. Recruitment was a challenge, in part because respondents did not want to take an HIV screening test and because of the limited hours in which data could be collected. Data quality challenges that are routinely associated with measuring sensitive topics were also encountered, and recall bias involving exposures to violence in childhood could also have influenced the reporting of some items.

Future Research

Despite limitations, the current study serves as a guide to develop future research that considers gender differences in health outcomes related to violence exposure. It provides support for the continued exploration of how exposure to violence impacts women and men differently. Next steps in this research could include an examination of how different types of exposure affect an individual's drug and alcohol use. One could also identify gender differences in coping strategies related to violence exposure, and explore the impact of childhood violence on the likelihood of exposure to violence as an adult. Such findings can be used to design trauma-informed social and support services for adolescents and young adults, establish the need for violence prevention programs in urban settings, and increase our awareness of the long-term effects of childhood exposure to violence.

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Appendix 1: Factor Loading Community Violence Scale

Community Violence Scale Items	Factors			
	ChildSexAbuse	PersonalViol	AdultViolPeer	AdultViol
<i>Community Violence Scale</i>				
Did anyone use force to take something away from you that you were carrying or wearing?	.172	.484	.291	.065
Did anyone steal something from you and never give it back?	.074	.569	.005	.111
Did anyone ever break or ruin any of your things on purpose?	.112	.585	.112	.064
Did anyone hit or attack you on purpose WITH an object or weapon?	.121	.629	.187	.098
Did anyone hit or attack you WITHOUT using an object or weapon?	.121	.566	.050	.229
Did someone start to attack you, but for some reason, it didn't happen?	.138	.485	.242	.245
Did anyone try to kidnap you?	.322	.196	.572	.094
Were you hit or attacked because of skin color, religion, physical problem, where family comes from, gay?	.316	.192	.465	.221
Did a grown-up in your life hit, beat, kick, or physically hurt you in any way?	.333	.286	.252	.383
Did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you?	.255	.225	.343	.503
Did you get neglected?	.297	.147	.601	.319
Did a parent ever take, keep, or hide you to stop you from being with another person?	.194	.213	.422	.255
Did a group of kids or a gang hit, jump, or attack you?	.199	.261	.139	.396
Did any kid, even a brother or sister, hit you?	.169	.250	.117	.340
Did any kids try to hurt your private parts on purpose by hitting or kicking you there?	.316	.285	.359	.287
Did any kids, even a brother or sister, pick on you by chasing you or grabbing your hair or clothes or by making you do something you didn't want to do?	.339	.214	.327	.487
When you were a child, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn't want you around?	.311	.208	.247	.485
Did a boyfriend or girlfriend or a date ever slap or hit you?	.366	.163	.110	.522

Did a grown-up YOU KNOW touch your private parts when you didn't want it or make you touch their private parts? Or did a grown-up YOU KNOW force you to have sex?	.688	.146	.064	.443
Did a grown-up you did NOT KNOW touch your private parts when you didn't want it, make you touch their private parts or force you to have sex?	.666	.122	.078	.340
Did another child or teen make you do sexual things that you did not want to do?	.693	.165	.291	.142
Did anyone TRY to force you to have sexual intercourse, but it didn't happen?	.704	.176	.247	.116
Did anyone make you look at their private parts by using force or surprise or by "flashing" you?	.580	.114	.317	.119
Did anyone hurt your feelings by saying or writing something sexual about you or your body?	.592	.104	.433	.182
Did you do sexual things with anyone 18 or older, even things you both wanted?	.478	.194	.206	.228
Did you SEE one of your parents get hit by another parent or their boyfriend or girlfriend? How about slapped, punched, or beat up?	.213	.235	.142	.095
Did you SEE your parent hit, beat, kick, or physically hurt your brothers or sisters, not including a spanking on the bottom?	.316	.163	.299	.031
Did you SEE anyone get attacked on purpose WITH a stick, rock, gun, knife, or other thing that would hurt?	.082	.116	.105	.185
Did you SEE anyone get attacked or hit on purpose WITHOUT using a stick, rock, gun, knife, or something that would hurt?	.174	.128	.043	.123
Did anyone steal something from your house that belonged to your family or someone you live with? Things like a TV, stereo or a car?	.122	.180	.066	.075
Was anyone close to you murdered, like a friend, neighbor, or relative?	.112	.075	.085	.141
Did you see someone murdered in real life, regardless of whether or not you knew them?	.157	.124	.109	.062
Were you ever some place in real life where you could SEE or HEAR people being shot, bombs going off, or street riots?	.118	.156	.052	.126
Were you ever in the middle of a war where you could hear real fighting with guns or bombs?	.212	.125	.113	.096

Appendix 2: Factor Loading Personal Violence Scale

Personal Violence Scale Items	Factor				
	Guns or Death	Drugs and Physical Violence	Unsafety	Suicide	Seen Murder/Suicide
How many times have you seen other people using or selling drugs in real life?	.501	.532	.002	.058	.121
How many times have you yourself actually been asked to get involved in any aspect of selling or distributing illegal drugs?	.240	.503	.037	.028	.208
How many times have you yourself actually been in a serious accident where you thought that you or someone else would get hurt very badly or die?	.210	.487	.000	.026	.151
How many times have you yourself actually been at home when someone has broken into or tried to force their way into your home?	-.048	.373	.071	.004	.127
How many times have you yourself actually been picked up, arrested, or taken away by the police?	.168	.430	-.021	.043	.003
How many times have you yourself actually been threatened with serious physical harm by someone?	.259	.680	-.013	.061	-.043
How many times have you seen someone else being threatened with serious physical harm in real life?	.536	.601	.027	.082	.017
How many times have you yourself been slapped, punched, or hit by someone?	.319	.603	.066	.120	-.049
How many times have you yourself actually been robbed or mugged?	.057	.472	.036	-.012	-.007
How many times have you seen someone else getting beaten up or mugged in real life?	.404	.437	.010	.069	-.047
How many times have you seen someone else being sexually assaulted, molested, or raped in real life?	.064	.263	.013	.073	.058
How many times have you yourself actually been sexually assaulted, molested, or raped?	.085	.261	.029	.321	.126
How many times have you actually seen someone carrying or holding a gun or knife in real life?	.701	.319	-.009	.162	.021
How many times have you yourself heard the sound of gunfire outside when you were in or near your home?	.750	.282	-.001	.153	-.061
How many times have you yourself heard the sound of gunfire outside when you were in or near your workplace?	.493	.150	.013	.079	-.033
How many times have you seen or heard a gun fired in your home?	.289	.083	-.014	-.039	-.082
How many times have you actually seen a seriously wounded person after an incident of violence in real life?	.639	.139	-.037	-.045	-.050
How many times have you yourself actually been attacked or stabbed with a knife?	.222	.148	.082	-.007	.038
How many times have you yourself actually been shot with a gun?	.124	.072	.055	.005	.055
How often have you seen someone else get shot with a gun in real life?	.476	.135	.051	.023	.049
How many times have you seen a dead person somewhere in the community?	.487	.094	.120	-.021	.323
How many times have you seen someone commit suicide in real life?	.120	.047	.110	.071	.495

How many times have you only heard about someone committing suicide in real life?	.505	.263	.042	.135	.373
How many times have you seen someone being killed by another person in real life?	.257	.006	.100	.161	.352
How many times have you heard about someone you knew being killed by another person?	.623	.171	.042	.081	.224
How many times have you yourself been chased by gangs or individuals?	.301	.179	.120	.028	.110
Have you ever carried any kind of weapon such as a gun, knife, or club?	.279	.378	.058	.146	-.009
Have you ever attacked someone with a weapon with the idea of seriously hurting or killing them?	.003	.139	.091	.078	.018
Are you currently a member of a gang or crew?	-.001	-.062	.036	.171	.067
Have you ever seriously thought about or considered suicide?	.140	.129	.020	.746	-.011
Have you ever attempted suicide or tried to kill yourself?	.136	.034	.023	.777	.079
Current home or place where you sleep	-.004	-.015	.626	.056	-.083
Current church or place of worship	-.076	-.056	.683	-.001	.092
Current work or place of employment	-.046	.086	.573	-.046	.097

Appendix 3: Factor Loading for Depression and Sleep Scales

Depression Factors	Sleep Factors		Factor		
	MentalDepress	MoodDepress		SleepEffects	TroubleSleeping
During the past week, I was bothered by things that usually don't bother me.	.650	.137	During the past month, what time have you usually gone to bed?	-0.018	-0.039
During the past week, I had trouble keeping my mind on what I was doing.	.747	.196	During the past month, how long (in minutes) has it usually taken you to fall asleep each night?	.131	.217
During the past week, I felt depressed.	.809	.131	During the past month, what time have you usually gotten up in the morning?	-0.002	.125
During the past week, I felt that everything I did was an effort.	.435	.649	During the past month, how many hours of actual sleep did you get at night?	-0.079	-0.158
During the past week, I was not hopeful	-.233	-.849	How often have you had trouble sleeping because you cannot get to sleep within 30 minutes?	.310	.790
During the past week, I felt	.567	.261	How often have you had trouble sleeping because you wake up in the middle of the night or early morning?	.278	.851
During the past week, my sleep was restless.	.610	.330	How often have you had trouble sleeping because you cannot breathe comfortably?	.543	.550
During the past week, I was not happy.	-.080	-.620	How often have you had trouble sleeping because you had bad dreams?	.546	.577

During the past week, I felt lonely.	.602	.232	How often have you had trouble sleeping because you have pain?	.614	.494
During the past week, I could not "get going."	.701	.149	How would you rate your sleep quality overall?	.472	.551
			How often have you taken medicine to help you sleep (prescribed or "over the counter")?	.743	.289
			How often have you had trouble staying awake while driving, eating meals, or engaging in social activity?	.822	.259
			How much of a problem has it been for you to keep up enough enthusiasm to get things done?	.822	.308
