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# Community Violence, Ethnicity, Psychological Distress, And Externalizing Behaviors In Emerging Adulthood: The Moderating Effects Of Social Support

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**COMMUNITY VIOLENCE, ETHNICITY, PSYCHOLOGICAL DISTRESS, AND EXTERNALIZING BEHAVIORS IN EMERGING ADULTHOOD: THE MODERATING EFFECTS OF SOCIAL SUPPORT**

by

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# COMMUNITY VIOLENCE, ETHNICITY, PSYCHOLOGICAL DISTRESS, AND EXTERNALIZING BEHAVIORS IN EMERGING ADULTHOOD: THE MODERATING EFFECTS OF SOCIAL SUPPORT

Many urban adolescents are exposed to various forms of neighborhood violence, often witnessing and being victim to this community violence multiple times throughout adolescence and early adulthood. Exposure to community violence predicts a number of adverse mental health outcomes, including higher rates of depression, anxiety, and externalizing behaviors, such as conduct problems and substance abuse (Mrug & Windle, 2009). It is important to identify factors that may buffer the relationship between exposure to community violence and psychological distress, as well as that between exposure to community violence and externalizing behaviors. One factor likely to have a substantial impact on the relationship between violence and negative mental health outcomes is social support, differentially characterized by perceived support, enacted support, and social integration (Barrera, 1986). Studies have indicated that social support has protective properties against adverse internalizing symptoms, such as anxiety and depression; however, few studies have evaluated the effects of various dimensions of social support on the relation between community violence and negative externalizing outcomes. Moreover, few studies have investigated these associations in the context of demographic variables such as housing status (homeless versus housed), and race/ethnicity.

## Homelessness and Mental Health

The issue of homelessness has become a chief social problem in the United States and other developed nations in recent years (Shinn, 2007; Minnery, 2007). Not only have rates of homelessness risen in the 1990s and 2000s, but a more diverse homeless population has also emerged, shifting from a predominantly migratory, male population to a population of young

adults, adolescents, old adults, families, women, and children (Anderson & Rayens, 2004; La Gory, Fitzpatrick, & Ritchey, 2001). In particular, the number of adolescents in homeless situations has continued to rise throughout the past decade (U.S. Department of Education, 2010; 2000). There a number of reasons for homelessness among adolescents, including tragedy (e.g., fires, tornados), being ejected from the home by guardians, loss of financial resources, and running away. Not only are adolescents and young adults at disproportionately greater risk for homelessness relative to other age groups, but adverse emotional and academic outcomes are also consistently documented among homeless school-aged adolescents (Obradovic, Long, Cutuli, Chan, Hinz, Heistad, & Masten, 2009; Toro, Dworsky, & Fowler, 2007).

Rates of psychopathology among homeless populations have steadily increased in the last decade (Whitbeck, 2009; North, Eyrich, Pollio, & Spitznagel, 2004). Up to 41% of homeless individuals suffer from major depression, compared to 9.2% of the normative population (Fazel et al., 2008; NESARC), and 12.7% of homeless individuals suffer from psychotic illness, compared to 3% of the normative population (Fazel et al., 2008.; Perala et al., 2007). In addition to an increase in rates of internalizing symptoms such as depression, anxiety, suicidal ideation, and post-traumatic stress disorder, rates of externalizing behaviors have been shown to be greater among at-risk adolescents relative to their peers, with homeless adolescents reporting more past suicide attempts, high-risk behaviors, and externalizing behavior problems (Whitbeck, 2009), particularly criminal activity, gang activity, violent victimization, delinquency, and high-risk sexual behaviors (Baron, 2009; Halcon & Lifson, 2004). Forty-three to 50 percent of homeless adolescents meet criteria for substance abuse disorders, with a positive correlation between substance consumption and time spent on the street (Whitbeck, 2009; Fazel, Khosla, Doll, &

Geddes, 2008). Alcohol, drug use, and other deviant behaviors should be regarded as a major factor in the social lives of homeless youth.

**Community Violence and Mental Health**

Homeless adolescents are exposed to higher rates of street and gang-related violence, physical and sexual assaults, stabbings, and shootings than are normative groups (Coker, 2009; Gorman-Smith, Henry, & Tolan, 2004). Twenty-four to 64% of at-risk adolescents reported witnessing a shooting, stabbing, or a murder, and 96% of at-risk children reported hearing gunfire in their neighborhoods (Campbell & Schwarz, 1995). High rates of high-risk adolescents also report being victims of violence in the form of being mugged, stabbed, or shot (Gorman-Smith et al.). Community violence literature consistently shows not only disproportionate levels of violence exposure in at-risk populations, but also particularly high rates of exposure among inner city and African-American youth (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). Forty-six percent of African-American and Latino youth reported witnessing a shooting or stabbing at least one time in the past year, compared to 20% of Caucasian youth (Schwab-Stone et al., 1995). Sixty-seven percent of urban youth knew someone who was a victim of violence, compared to 25% of their suburban counterparts (Gladstein, Rusonis, & Heald, 1992). Among high-risk urban adolescents, 32% have been directly victimized (Richters, & Martinez, 1993).

The adverse effect of community violence on psychological well-being, including both internalizing and externalizing symptoms of psychopathology, has been well documented. Literature on various forms of exposure to violence among adolescents show higher reports of anxiety, depression, and loneliness (Buckner, Beardslee, & Bassuk, 2004; Wilson & Rosenthal, 2003), in addition to increased acts of violent and aggressive behavior (Gorman-Smith et al.,

2004; Sams & Truscott, 2004). Studies consistently show that either witnessing or directly experiencing violence leads to a number of negative outcomes such as PTSD, low self-esteem, academic difficulties, aggression, and behavioral problems (Walling, Putman, Eriksson, & Foy, 2011; Fowler et al., 2009; Gorman-Smith et al., 2004).

A stress model would suggest that stress elicited from violence exposure serves as a mediator, by which stress associated with perceived/actual danger and physical threat leads to physiological and psychological symptoms of distress and pathology (Overstreet & Braun, 2000). By a stress process model, living in settings where community violence exposure is higher or more severe necessitates greater use of personal and coping resources; in using taxing amounts of personal resources to manage the stress associated with violence, these individuals' capacity to cope with other life stressors is significantly reduced (Clark, Ryan, Kawachi, Canner, Berkman, & Wright, 2007).

Very few studies investigate effects of violence exposure while also looking at relationships between housing status and negative internalizing and externalizing outcomes, as well as relationships between ethnicity and outcomes. Given the high rates of violence exposure in at-risk groups, and the association between exposure and psychopathology, it is necessary to further investigate not only the impact of community violence in homeless groups, but also the protective factors that may reduce the impact of violence exposure in these populations.

**Social Support and Mental Health**

Social support significantly impacts an individual's mental health and future adjustment (Maulik, Eaton, & Bradshaw, 2010; Bao, Whitbeck, & Hoyt, 2000), particularly by buffering the relationship between major life stressors and adverse mental health effects (Cohen & Wills, 1985), including depression (Thoits, 2011; 1995). According to the support buffering model,

social support positively influences appraisal of threat following stressful events, preventing a high-stress appraisal by bolstering perceived ability to adequately cope with stressors; alternatively, support can intervene after a stress appraisal has been made, buffering against negative outcomes, via positive reappraisal of the stressor, provision of a solution to the problem, or reduction of perceived importance of the problem (Cohen et al.).

**Social Support and Marginalized Groups**

The majority of research in the area of social support has traditionally focused on relatively high-functioning populations, such as college undergraduates or general community samples. Studies have only more recently begun to focus on the effect of social support on marginally functioning populations such as the severely mentally ill and the homeless (e.g., Bates & Toro, 1999; Whitbeck & Hoyt, 1999). The protective factor of social support against internalizing symptoms has been replicated in studies based on marginalized populations. Social support has been associated with reduced depressive symptoms and other adverse internalizing mental health effects produced by stressful situations among homeless and at-risk groups (Rice, Kurzban, & Ray, 2010; Rice, Stein, & Milburn, 2008; Bao et al., 2000). Perceived social support has been found to be directly associated with less distress and suicidal thoughts, and to buffer distress associated with traumatic events in homeless adults (Nordentoft, 2010).

**Varying Social Support Dimensions and Contexts**

Though social support has consistently been found to have a positive role in distress reduction, there remains a lack of consensus on the buffering effect of various components of social support on exposure to community violence in homeless and other at-risk populations across varying contexts. Some studies show a protective effect (Unger et al., 1998), while others find that family violence, but not community violence exposure, allows social support to act as a

buffer against psychopathology (Muller, Goebel-Fabbri, Diamond, & Dinklage, 2000). Other studies find that social support may only be related to fewer negative outcomes when homeless individuals are experiencing low levels of stress (which may be equivalent to a moderate-to-high level of stress in normative populations; Toro, Tulloch, & Ouellette, 2008).

Incongruity in the literature may be attributable to differences in measures of social support. Few studies in recent years have used subjective measures of social support, instead using alternate variables such as family size, and the presence of the mother in the home. It is consequently important to explore the comparative impact of various dimensions of social support, including tangible or enacted support and perceived support, as well as protective functions in different contexts and populations. As previously described, at-risk youth experience disproportionate rates of violence exposure, and high rates of internalizing and externalizing symptoms following exposure. It is thus necessary to examine different dimensions of support in the context of stress or violence exposure, and varying outcomes (internalizing versus externalizing) and ethnic groups.

**Social Support Cross-Ethnically**

There are reported differences in the social network characteristics of different ethnic groups. Studies suggest differences in network size, composition, and ethnic heterogeneity in African-American groups as compared to Caucasian groups; particularly, African-American groups reported lower rates of non-family relationships, while Caucasian groups reported more friends in their social networks, as opposed to parent, family member, significant other, and non-related adults (Johnson, Whitbeck, & Hoyt, 2005).

Just as there are inconsistencies in the research on the buffering capacity of social support against violence exposure across contexts, there is variation in the literature regarding the

buffering effect of support across ethnic populations. Although some studies involving ethnic minority samples have found a protective effect of social support (US Bureau of the Census, 2001; McFarlane, Bellissimo, & Norman, 1995), others have demonstrated no positive effect of social support on outcomes such as psychological distress in minority groups (Paxton, Robinson, Shah, & Schoeny, 2004). Paxton and colleagues (1999) failed to find support for the moderating effect of social support in the relationship between violence exposure and depressive and PTSD symptoms in a severely high-risk population of African-American males, hypothesizing that social support was insufficient to decrease distress in this high-stress group. It is suggested that social support has a different functional capacity to buffer against community violence exposure in minority groups because non-white groups tend to be more highly exposed to violence, and report significantly higher levels of distress than normative groups; in this context, social support alone is not enough to protect against the development of internalizing and externalizing behaviors. Given the disproportionately high levels of chronic violence exposure among African-American groups, it is particularly important to research potentially protective effects of support in the context of violence exposure and minority group status (Gorman-Smith, Henry, & Tolan, 2004; Overstreet & Braun, 2000).

**Social Support and Externalizing Behaviors**

Further exploration of the buffering effect of social support on the relationship between community violence exposure and externalizing behaviors, such as substance use and conduct disorder behaviors, is also needed. Much of the literature that composes the study of the influence of support on the linkage between violence and psychopathology centers on internalizing outcomes, such as depression and anxiety. Of the studies that have investigated the buffering effect of social support on externalizing behaviors, social support has not consistently

been found to protect against development of behavioral problems and substance use (e.g., Appleyard, Yang, & Runyan, 2010). It has been suggested that social support may not exert a positive effect against deviant or conduct disorder behaviors such as substance abuse among high-risk adolescents because those with substance use disorders may more frequently seek helping support and resources specifically related to their drug use, increasing their level of social support contact without decreasing their substance use symptoms (Bates & Toro, 1999).

It is also possible that, among a population that reports extremely high levels of externalizing behaviors (e.g., 50% of homeless adolescents suffering from a substance abuse disorder), having increased social contact with other deviant peers increases negative social influence. A study investigating the effect of social affiliation on exits from homelessness found that exits from homelessness were associated with social support only among homeless individuals who were not suffering from current substance-use disorders (Zlotnick, Tam, & Robertson, 2003).

However, family supports have been shown to act as a protective buffer between neighborhood violence and antisocial behavior during late childhood for at-risk African-American, Mexican Origin, and Latino families (Schoefield, Conger, Conger, Martin, Brody, Simons, & Cutrona, 2011; Gorman-Smith, Henry, & Tolan, 2004). As substance use and conduct disorder symptoms are experienced at an extremely high rate among homeless emerging adults, it would be useful to better understand whether social support is indeed similarly protective against externalizing behaviors, what forms of support are useful (e.g., family support versus tangible support), and the nature of the buffering effect. In the case of a negative relationship between support and externalizing outcomes, it will be equally important to gain information about the potentially negative impact of social support among at-risk emerging adults.

## Current Study

The present study examines the effect of social support on the relationship between exposure to community violence, and both mental health functioning and externalizing symptoms, in a sample of homeless and matched housed emerging adults. Racial/ethnic differences in the relationship between violence exposure and internalizing and externalizing outcomes are also explored. Specifically, the study investigates ethnic group differences in the protective function of multiple dimensions of social support in the relationship between community violence and psychological distress, substance use, and conduct disorder behaviors among at-risk emerging adults. Very few studies assess these questions in at-risk populations, in the context of demographic variables such as housing status and race/ethnicity, and assess externalizing as well as internalizing symptoms. This study is additionally strengthened by its multidimensional conceptualization of social support, assessing moderating effects of social support based on two different measures used in prior research on homeless samples (Bates & Toro, 1999; Toro et al., 2008).

Exposure to community violence represents emerging adults' appraisals of violence in neighborhoods; exposure to community violence was measured using the Things I Have Seen and Heard (TSH) scale. The Interpersonal Support Evaluation List (ISEL) was used to assess appraisal of support from friends and family, belonging, tangible support, and self-esteem support. The Help Index of the Social Network Interview (SNI) was used to assess social integration and connectedness; particularly, the Help Index measured the number of people in the network who provide tangible help and advice support. Psychological distress was measured using the General Severity Index (GSI) of the Brief Symptom Inventory (BSI), which assessed severity of symptom distress. Externalizing behaviors were measured using the Diagnostic

Interview Schedule (DISC), which assessed total substance use symptoms, as well as symptoms of conduct disorder.

The present study used cross-sectional data (4.5-year follow-up point) and Hierarchical Multiple Regressions to test a number of hypotheses. It is hypothesized that exposure to community violence will relate to increased psychological distress; this will be demonstrated through bivariate relations after controlling for demographic and other stressful experiences. Second, a significant inverse relationship will exist between social support and psychological distress for both groups, with individuals who report higher levels of social support reporting lower levels of psychological distress. Third, social support will moderate the effects of community violence on psychological distress, such that individuals exposed to higher levels of community violence will report less psychological distress when reporting higher levels of social support. In an exploratory fashion, the study will assess the moderating effects of community violence on externalizing behaviors, and the effects of ethnicity as a moderator in the relationship between violence exposure and distress, substance abuse, and conduct disorder behaviors.

## Methods

### Participants

Participants were 342 at-risk 17.5 to 23 year olds (m = 20 years). Individuals who identified as African-American ($n = 150$; 44% of the sample) were compared to a Non-Hispanic Caucasian/European American group ($n = 163$; 48% of the sample). The Asian/Pacific Islander, Latina/Latino/Hispanic, and multiethnic ethnic groups were dropped from the present analysis due to small sample sizes (total n = 29; 8% of the sample). Women comprised two-thirds of the sample ($n = 225$). Forty-four percent of the sample ($n = 149$) completed at least 12 years of

education. Data were collected as part of a larger study on homeless, runaway, and at-risk youth in the Detroit metropolitan area that began with adolescents aged 13-17.

Homelessness status among adolescents was characterized as spending one night alone during the past month, unaccompanied by a legal guardian. Adolescents were recruited from a variety of service organizations for homeless youth, including shelters, soup kitchens, outpatient and inpatient substance abuse treatment programs, psychiatric facilities, and street settings; however, the predominant recruitment setting was shelters. The number of homeless adolescents recruited from a particular service agency was based on the proportion of 13-17 year olds who utilized services from the agency the previous year. This probability sampling method has been used in previous studies of homeless populations (Koegel, Burnam, & Morton, 1996; McCaskill et al., 1998; Toro et al., 1999). The total number of initially homeless youth included in study's analyses was 206 (60%).

Housed adolescents were obtained through peer nomination and sampling at various neighborhood sites where teens congregated. The homeless adolescents provided names, addresses, and phone numbers of housed adolescents from the neighborhood they last resided in with their guardian(s). Homeless adolescents were encouraged to provide peer nominations of acquaintances rather than friends in order to avoid sampling housed youth who were close friends. The housed and homeless groups were matched on age, gender, ethnicity, and neighborhood income ($p > .20$ for two chi-square tests and two ANOVAs). The total number of initially housed youth included in the study's analyses was 136 (40%).

**Procedure**

Interviews were conducted by paid, full-time staff, trained graduate students, and advanced undergraduates. Interviewers were given instruction and practice with the measures

before conducting interviews in order to maintain reliability, as well as guidance in establishing and maintaining rapport with participants. An experienced interviewer reviewed completed interviews and constructive feedback was provided when necessary.

Interviews were conducted primarily at shelters, as well as at homes, agencies, and public places, all of which were chosen to ensure adequate safety and confidentiality. Consent was obtained from the youth, the youth's parents, and the shelter staff when necessary. All measures were administered orally with responses being recorded on standardized scoring sheets or a notebook computer. The present study used data mainly from the 4.5-year follow-up interview, with some background characteristics taken from the baseline interview (e.g., age, gender, ethnicity, initial housing status). Participants were paid $20 at both the baseline interview and the first three follow-up interviews, and $50 at the 4.5-year follow-up interview.

**Measures**

**Brief Symptom Inventory (BSI)**. The BSI (Derogatis, 1977) is a 53-item form of the Symptom Checklist-90-Revised (SCL-90-R). The BSI is widely used in studies of homeless adults and adolescents (e.g., Cauce et al., 1994; McCaskill et al., 1998; Toro et al., 1999). Participants are asked to rate severity of symptom distress ranging from "not at all" to"extremely" (0-4). In addition to nine subscale scores, this measure yields an index of global distress, the global severity index (GSI). For the purposes of the current study, the GSI alone was examined. The BSI has shown evidence of internal consistency (GSI alpha = 0.90) as well as concurrent and discriminant validity (Derogatis, 1977; Derogatis & Melisaratos, 1983).

**Social Network Interview (SNI).** The SNI is a self-report questionnaire adapted from the Network Interview (Rappaport et al., 1985) that assesses social integration and

connectedness. Specifically, the SNI Help Index, which measures availability of members who provide help and advice support, was used (test-retest reliability = .95; Bates & Toro, 1999).

**Interpersonal Support Evaluation List (ISEL).** The ISEL (Cohen & Hoberman, 1983) is a 40-item scale that provides an index of overall social support, assessing appraisal, belonging, available help, and self-esteem support. Response options range from definitely false (0) to definitely true (3), with high scores indicating greater overall social support. The ISEL total score, as used here and in prior studies on homeless adults (e.g., Toro et al., 1999, 2008), demonstrates good reliability in a variety of samples (Cronbach's alpha = .88-.90; Cohen & Hoberman, 1983) as well as among the homeless (test-retest reliability = .81; Bates & Toro, 1999.

**Things I Have Seen and Heard (TSH).** A modified version of the TSH (Richters & Martinez, 1990) was used to assess exposure to community violence. The TSH asks youths to self-report their lifetime exposure to specific violent events on a 5-point scale ranging from "never" to "always." A modified version of the measure included 11 items that tapped witnessing and victimization by violence in the community. Average scores were computed to capture the range of types of neighborhood violence. Items that tap in-home and school violence and perceptions of safety were excluded. The TSH demonstrates good internal consistency (Cronbach's alpha = .76-.80; Richters & Martinez).

**Diagnostic Interview Schedule for Children (DISC, version 3A).** The DISC is a structured diagnostic interview used to obtain information for common forms of psychopathology (Fischer, Wicks, Schaffer, Piacentini, & Lapkin, 1992). Administered were sections pertaining to conduct problems and alcohol and other substance abuse disorders, including alcohol abuse/dependence, marijuana abuse/dependence, and other substance

abuse/dependence. Symptom counts were tallied to provide continuous measures of problems. The DISC has exhibited good reliability and validity in previous studies (Fischer, Shapiro, Breakey, Anthony, & Kramer, 1986) and has also been used with homeless adolescents (McCaskill et al., 1998).

## Results

**Preliminary Analyses**

Statistical Package for the Social Sciences (SPSS) was used for all analyses. Data were screened for accuracy of input, univariate and multivariate outliers, amount and distribution of missing data, and normality (see descriptive statistics in Table 1). Variables were additionally screened for multicollinearity and singularity. Bivariate correlations were calculated for all study variables (see Table 2).

Differences on exposure to community violence, ISEL perceived social support, and SNI helping support, as well as differences on the outcome variables of distress, substance abuse, and conduct disorder behaviors, were examined by demographic variables (i.e., age, ethnicity, gender, and initial housing status at baseline), to determine if there are significant group differences based on baseline demographic characteristics. Comparisons were conducted using analysis of variance (ANOVA). There were no significant differences in the predictor or outcome variables based on age. The only significant difference based on gender was community violence exposure ($F(1, 312) = 14.86$, $p < .001$), with men experiencing higher amounts of violence exposure. Based on housing status, there were significant differences in community violence ($F(1, 312) = 44.58$, $p < .001$), psychological distress ($F(1, 310) = 21.46$, $p < .001$), and ISEL social support ($F(1, 311) = 16.99$, $p < .001$), with homeless individuals experiencing higher levels of violence exposure and psychological distress, and lower levels of ISEL social support.

Based on ethnicity, there was a significant difference in substance abuse behaviors ($F(1, 305) =$ 35.13, $p < .001$), with European Americans reporting more substance abuse symptoms.

**Primary Analyses**

Hierarchical multiple regression analyses were used to assess the moderating effects of both ethnicity and social support (as measured by the SNI social help and advice, and the ISEL overall perceived availability of social support). These analyses allowed for evaluation of differences in rates of community violence exposure, psychological distress, substance abuse, and conduct disorder behaviors between the two ethnic groups, as well as evaluation of both the independent and interactive effects of social support, community violence, and ethnicity on psychological distress, substance use, and conduct disorder behaviors, after controlling for differences explained by demographic variables.

Variables were entered into the regression equation in hierarchical blocks. In the first block, demographic variables, including age, gender, ethnicity, and previous housing status (i.e., homeless versus housed at baseline) were entered. In the second block, social support and community violence were added. The third step added two-way interaction terms between exposure to community violence and social support. Finally, the fourth step included a three-way interaction between exposure to community violence, social support, and ethnicity. These regressions were run separately for each outcome variable (psychological distress, substance abuse symptoms, and conduct disorder symptoms) for each mode of social support (ISEL total support, and SNI helping support). In total, six regressions were run.

To determine if the interactions entered on the third and fourth blocks significantly added to the variance in the given outcome variable, significant change in the F statistic was examined. If significant change was observed when the two-way interactions were added, the three

predictor variables significantly interacted to predict the outcome variable. If the fourth model yielded significant change, community violence, social support, and ethnicity significantly interacted to predict the outcome variable. Squared semi-partial correlations and beta weights were also examined to determine the unique effects of each predictor (including interaction terms).

**ISEL Total Social Support, Community Violence, and Ethnicity Related to**

**Psychological Distress.** Results are presented in Tables 3. The F change statistic for the fourth block of the moderation model (three-way interaction between community violence, social support, and ethnicity) indicated no moderating effect of ethnicity on the effect of social support on the relationship between community violence and psychological distress ($\Delta F = .11$, $p = .74$). However, there was a significant interaction effect between community violence exposure and social support ($\Delta F = 3.70$, $p = .01$). Both community violence and ISEL social support were significant predictors of psychological distress ($\beta = .31$, $p < .001$; $\beta = -.30$, $p < .001$), with community violence being related to increased distress, and ISEL related to lower distress. The results of these analyses suggest that ethnicity does not moderate the relationship between community violence and distress because social support is equally related to decreased psychological distress for both ethnic groups.

**SNI Helping Social Support, Community Violence, and Ethnicity Related to**

**Psychological Distress.** Results are presented in Table 4. The F change statistic for the fourth block of the moderation model (three-way interaction between community violence, social support, and ethnicity) indicated no moderating effect of ethnicity on the effect of social support on the relationship between community violence and psychological distress ($\Delta F = 3.45$, $p = .06$). Community violence and housing status were significant predictors of psychological distress ($\beta =$

.37, $p < .001$; $\beta = .25$, $p < .001$), with community violence and homelessness being related to increased distress.

**ISEL Total Support, Community Violence, and Ethnicity Related to Substance Abuse.** The final $R^2$ for this analysis was not statistically significant; therefore, block and independent effects were not interpreted.

**SNI Helping Social Support, Community Violence, and Ethnicity Related to Substance Abuse.** Results are presented in Table 5. The F change statistic for the fourth block of the moderation model (three-way interaction between community violence, social support, and ethnicity) indicated no moderating effect of ethnicity on the effect of social support on the relationship between community violence and substance abuse ($\Delta F = .38$, $p = .54$). However, there was a significant interaction between community violence and ethnicity ($\Delta F = 8.02$, $p = .01$). Community violence, housing status, and gender were significant predictors of substance abuse ($\beta = .47$, $p < .001$; $\beta = .13$, $p = .01$; $\beta = -.25$, $p < .001$), with community violence, homelessness, and male gender being positively correlated with increased substance abuse behaviors.

**ISEL Total Social Support, Community Violence, and Ethnicity Related to Conduct Disorder Behaviors.** This model was not significant, and is not tabled.

**SNI Helping Social Support, Community Violence, and Ethnicity Related to Conduct Disorder Behaviors.** Results are presented in Table 6. The F change statistic for the fourth block of the moderation model (three-way interaction between community violence, social support, and ethnicity) indicated no moderating effect of ethnicity on the effect of social support on the relationship between community violence and conduct disorder behaviors ($\Delta F = 1.09$, $p = .30$). However, there was a significant interaction between helping support and community

violence ($\Delta F = 6.17$, $p = .01$). Community violence was a significant predictor of increased conduct disorder behaviors ($\beta = .52$, $p < .001$).

**Follow-Up Analyses**

Three significant two-way interactions were found: (1) ISEL total support and community violence, in relation to psychological distress, (2) ethnicity and community violence, in relation to substance abuse in the SNI helping support model, and (3) community violence and SNI support, in relation to conduct disorder behaviors. The three interactions were graphed to visually determine the nature of these interactive effects.

**Interaction between ISEL Support and Community Violence in Predicting Distress.** This relationship can be seen in Figure 1. With increased exposure to community violence, high levels of ISEL total support were related to decreased psychological distress, whereas high community violence combined with low reports of total social support were related to higher levels of distress. This indicated a positive effect of ISEL social support on the relationship between community violence and distress for both ethnic groups.

**Interaction between Ethnicity and Community Violence in Predicting Substance Abuse.** This relationship can be seen in Figure 2. Within an SNI helping support model, increased exposure to community violence was more related to increased substance abuse behaviors in the European American group than in the African-American ethnic group.

**Interaction between SNI Support and Community Violence in Predicting Conduct Disorder Behaviors.** This relationship can be seen in Figure 3. Increased exposure to community violence was more highly related to increased conduct disorder behaviors when high social helping support was reported. This indicated a negative effect of helping network member

contact on the relationship between exposure to community violence and conduct disorder behaviors.

## Discussion

Results showed that ethnicity did not moderate the buffering effect of ISEL total social support on the relationship between exposure to community violence and psychological distress, but that the ISEL measure moderated the relationship between community violence and distress equally for both ethnic groups (see Figure 1). This suggested that for both African-Americans and European Americans, ISEL total support was related to lower emotional distress, especially under the high-stress condition of community violence exposure. This affirmed the concept that perceived social support, which includes appraisals of overall support, belonging, and self-esteem, exerts a positive force that protects emerging at-risk adults from the adverse effects of community violence exposure. These findings provide support for programs that emphasize social support as an intervention component, such as community and school-based programs that offer mentoring by older peers. These findings further suggest that such programs may be especially beneficial in communities where high levels of community violence are common.

In contrast with the ISEL total support measure, SNI helping support was not significantly related to decreased distress. This evidence may indicate that a broad sense of belonging, worth to others, and perceived available support through relationships is more effectively protective than specific access to network members who provide tangible help and advice support. This is not to say that enacted or helping support is entirely unprotective against violence exposure, as available help is measured in the total perceived support measure (ISEL) in conjunction with appraisals of belongingness and esteem; however, a key distinction may be that the ISEL measures a sense or perception of helping support being available, while the SNI

measures actual quantity of helping network members, an arguably separate construct. In this way, number of helping members and contact therewith, as measured by the SNI, is structurally different than a general feeling of available help via network relationships, as measured by the ISEL. The association between increased number of and contact with network members, and experiences of stress, may be particularly important to assess in a high-risk sample.

The ISEL additionally assesses the degree of satisfaction with different elements of networks and interactions, while the SNI measure used places less emphasis on the quality of the reported networks. In a sample at higher risk of pathology and potentially higher interpersonally based distress, this accounting for favorability of relationships as opposed to mere involvement in relationships may play an important differentiating role in outcomes related to ISEL versus SNI support. The finding that different dimensions of social support exert different effects on distress reduction verifies the need for continued assessment of not only the protective role of support, but also the role of different facets of support.

Neither ISEL perceived nor SNI helping social support moderated the relationship between community violence and the outcomes of substance abuse and conduct disorder behaviors across ethnic groups. In addition, neither ISEL nor SNI support was related to lower rates of either externalizing behavior. This supported literature that suggests that social support is more highly related to reduced experience of internalizing symptoms, such as psychological distress, than externalizing behaviors. In many cases, externalizing behaviors such as expression of illegal behaviors are a means of surviving on the streets (Kipke et al., 1997); in this way, social support is not protective against development of deviant behaviors because support does not definitively increase access to shelter, food, and money, whereas support can definitively reduce experiences of depression and anxiety. It is also likely that, as previously hypothesized,

people suffering from substance abuse have greater levels of stressful events associated with their drug use (Toro et al., 2008); these individuals are more likely to seek help from family and friends, thus increasing their level of reported social support, while failing to decrease substance use symptoms.

Results which showed a relationship between SNI helping support and increased externalizing outcomes provided further dimension to this conceptualization, suggesting that increased contact with network members is actually potentially harmful in the context of deviant behaviors, specifically when individuals are in high-stress environments, as measured by increased community violence experiences (see Figure 3). Additionally, because family and friend relationships are likely more strained as a result of externalizing pathologies such as antisocial or disruptive behavior, increased social interaction among family and friend network members may be related to increased stress. As previously described, peer influence in high-risk groups that report severely high levels of externalizing pathology is related to increased externalizing symptoms. In this case, in the future, it will be important to assess social support that challenges negative behaviors (i.e., networks that include pro-social peers) versus support that is congruent with negative behaviors (Appleyard, Yang, & Runyan, 2010).

Results also showed that, within an SNI helping support model, ethnicity moderated the relationship between exposure to community violence and substance abuse symptoms, such that European Americans were more likely to report increased substance abuse symptoms when also reporting more violence exposure (see Figure 2). Given previously discussed literature which shows significantly more violence exposure experiences among African-American populations (e.g., Fowler et al., 2009; Stein et al., 2003), it is possible that when quantitatively similar levels of violence exposure are reported, it is normatively different for European Americans, and elicits

a greater stress appraisal; in this way, increased substance use could be conceptualized as a stress reduction mechanism in response to this high-threat appraisal. This hypothesis is supported by the significant correlation between European American status and increased substance abuse symptoms in this sample ($r = -.31$, $p < .001$).

One limitation of the current study was the use of cross-sectional data for analyses. Though the hypotheses tested whether social support is protective against community violence, results do not allow inference of a causal relationship between social support and reports of psychological distress, substance abuse, and conduct disorder behaviors, as all data was collected at the same point in time. For this reason, it is necessary to expand these questions with longitudinal data collected at separate time points, which would allow us to make conclusions that are theoretically and temporally congruent. Another limitation, as with all cross-sectional research that examines the effects of community violence, is the assumption that effects are unidirectional, with negative outcomes being predicted by violence exposure. The relationship between violence and negative outcomes could well be bidirectional in nature, with presence of psychological distress, substance abuse, and conduct disorder behaviors possibly increasing an individual's chances of experiencing community violence, or being placed in violent situations (Mrug & Windle, 2009).

Another limitation of the present study is its inability to compare effects across multiple racial/ethnic groups due to the small sample sizes in the ethnic groups of Latina/Latino/Hispanic, and multiethnic (these small groups were dropped from the present analysis), and the lack of participants who identified as Asian American or Pacific Islander. In the future, it will be important to look at all ethnic groups rather than singularly examining European American versus African-American individuals, as these two groups do not comprise a representative

United States sample. There are differences in social network compositions across a number of cultural groups; in particular, Latinos and Mexican Americans show the highest amounts of support (Almeida, Molnar, Kawachi, & Subramanian, 2009). There may be important differences in various cultural groups' responses to social support that may inform our understanding of these groups' mental health trajectories. This knowledge would also be clinically useful when therapeutically treating individuals of different ethnic/cultural backgrounds.

Table 1

*Descriptive Statistics*

| Study Variables | Mean (SD) | Percentage | Sample Size |
|---|---|---|---|
| *Demographic Variables* | | | |
| Age | 19.99 (1.34) | | 313 |
| Gender | | | 313 |
|     Male | | 33 | |
|     Female | | 67 | |
| Ethnicity | | | 313 |
|     European American | | 48 | 163 |
|     African-American | | 44 | 150 |
| *Predictor Variables* | | | |
| Community Violence | 2.35 (.77) | | 313 |
| ISEL Support | 13.34 (1.51) | | 312 |
| SNI Support | 5.23 (3.13) | | 313 |
| *Outcome Variables* | | | |
| Psychological Distress | 1.53 (.53) | | 311 |
| Substance Abuse | 6.84 (8.83) | | 306 |
| Conduct Disorder Behs | 2.46 (2.45) | | 313 |

Table 2

*Significant Bivariate Correlations Among Predictor and Outcome Variables*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1 Gender | 1 | .07 | -.21*** | -.01 | .09 | -.00 | -.26*** | -.22*** | .05 |
| 2 Housing Status | | 1 | .25*** | -.22*** | -.12* | .25*** | .13* | .08 | -.05 |
| 3 CV | | | 1 | -.12* | -.04 | .39*** | .46*** | .50*** | .05 |
| 4 ISEL Support | | | | 1 | .17** | -.31*** | .00 | -.03 | -.08 |
| 5 SNI Help Support | | | | | 1 | .07 | .05 | .07 | .01 |
| 6 Distress | | | | | | 1 | .43*** | .46*** | .02 |
| 7 Substance Abuse | | | | | | | 1 | .64*** | -.31*** |
| 8 CD Behs | | | | | | | | 1 | -.06 |
| 9 Ethnicity | | | | | | | | | 1 |

*Note: *p<.05, ** p<.01, *** p<.001*

Table 3

*ISEL Total Support Hierarchical Regression Analysis for Psychological Distress*

| Predictors | β | SE B | t |
|---|---|---|---|
| Demographic Variables | | | |
| Age | .04 | .02 | .69 |
| Gender (0=male, 1=female) | -.02 | .06 | -.45 |
| Housing Status | .25 | .05 | 4.63 |
| Ethnicity | .06 | .05 | 1.20 |
| | | | |
| Main Effects | | | |
| SNI Helping Support | -.30 | .02 | -6.05** |
| Community Violence | .31 | .04 | 5.90** |
| | | | |
| Interactions | | | |
| SNI x CV | -1.22 | .02 | -2.71** |
| SNI x Ethnicity | -.64 | .03 | -1.48 |
| CV x Ethnicity | .10 | .07 | .60 |
| SNI x CV x Ethnicity | -.50 | .04 | -.33 |
| | | | |
| Final $R^2$ & F for $R^2$ | .26 | | 11.57** |

*$p<.05$, **$p< .01$

Table 4

*SNI Helping Support Hierarchical Regression Analysis for Psychological Distress*

| Predictors | β | SE B | t |
|---|---|---|---|
| Demographic Variables | | | |
| Age | .05 | .02 | .89 |
| Gender (0=male, 1=female) | -.02 | .06 | -.33 |
| Housing Status | .25 | .06 | 4.60** |
| Ethnicity | .03 | .06 | .53 |
| Main Effects | | | |
| SNI Helping Support | .10 | .01 | 1.92 |
| Community Violence | .37 | .04 | 6.64** |
| Interactions | | | |
| SNI x CV | .47 | .01 | 2.65 |
| SNI x Ethnicity | -.01 | .02 | -.10 |
| CV x Ethnicity | -.12 | .07 | -.72 |
| SNI x CV x Ethnicity | -.67 | .02 | -1.86 |
| Final $R^2$ & F for $R^2$ | .21 | | 8.63** |

*$p<.05$, **$p< .01$

Table 5

*SNI Helping Support Hierarchical Regression Analysis for Substance Abuse*

| Predictors | β | SE B | t |
|---|---|---|---|
| Demographic Variables | | | |
| Age | -.06 | .33 | -1.21 |
| Gender (0=male, 1=female) | -.25 | .94 | -4.89** |
| Housing Status | .13 | .90 | 2.61* |
| Ethnicity | -.31 | .92 | -5.93** |
| | | | |
| Main Effects | | | |
| SNI Helping Support | .07 | .13 | 1.45 |
| Community Violence | .47 | .56 | 9.54** |
| | | | |
| Interactions | | | |
| SNI x CV | .29 | .17 | 1.76 |
| SNI x Ethnicity | -.11 | .25 | -1.08 |
| CV x Ethnicity | -.43 | 1.02 | -2.83* |
| SNI x CV x Ethnicity | -.21 | .35 | -.62 |
| | | | |
| Final $R^2$ & F for $R^2$ | .38 | | 20.16** |

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

Table 6

*SNI Helping Support Hierarchical Regression Analysis for Conduct Disorder Behaviors*

| Predictors | β | SE B | t |
|---|---|---|---|
| Demographic Variables | | | |
| Age | -.09 | .10 | -1.72 |
| Gender (0=male, 1=female) | -.22 | .27 | -4.19** |
| Housing Status | .10 | .26 | 1.84 |
| Ethnicity | -.04 | .26 | -.74 |
| Main Effects | | | |
| SNI Helping Support | .08 | .04 | 1.75 |
| Community Violence | .52 | .16 | 10.26** |
| Interactions | | | |
| SNI x CV | .41 | .05 | 2.49** |
| SNI x Ethnicity | -.03 | .07 | -.29 |
| CV x Ethnicity | .47 | .05 | 1.60 |
| SNI x CV x Ethnicity | -.19 | .05 | -1.05 |
| Final $R^2$ & F for $R^2$ | .31 | | 16.73** |

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

**Figure 1. Interaction between Community Violence and ISEL Support in Psychological Distress.**
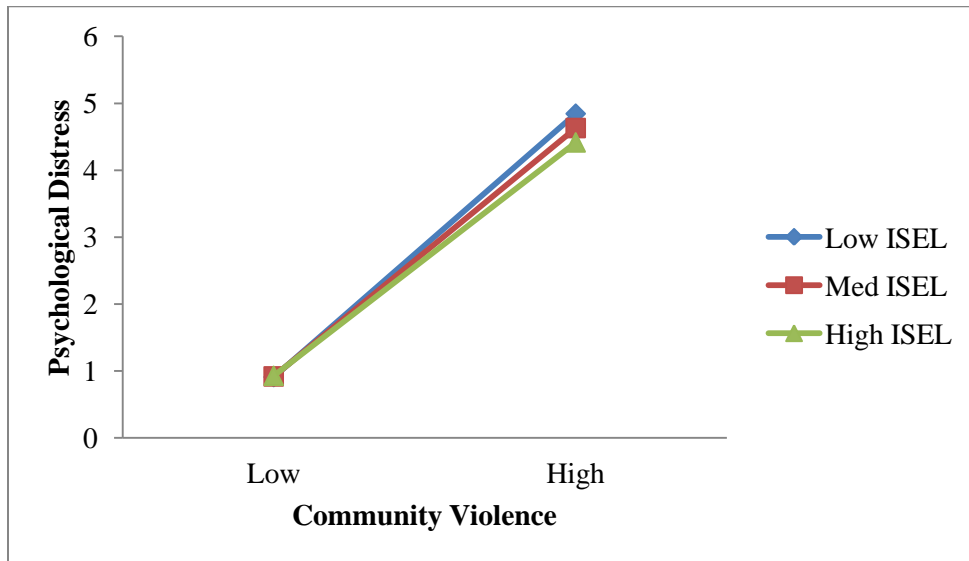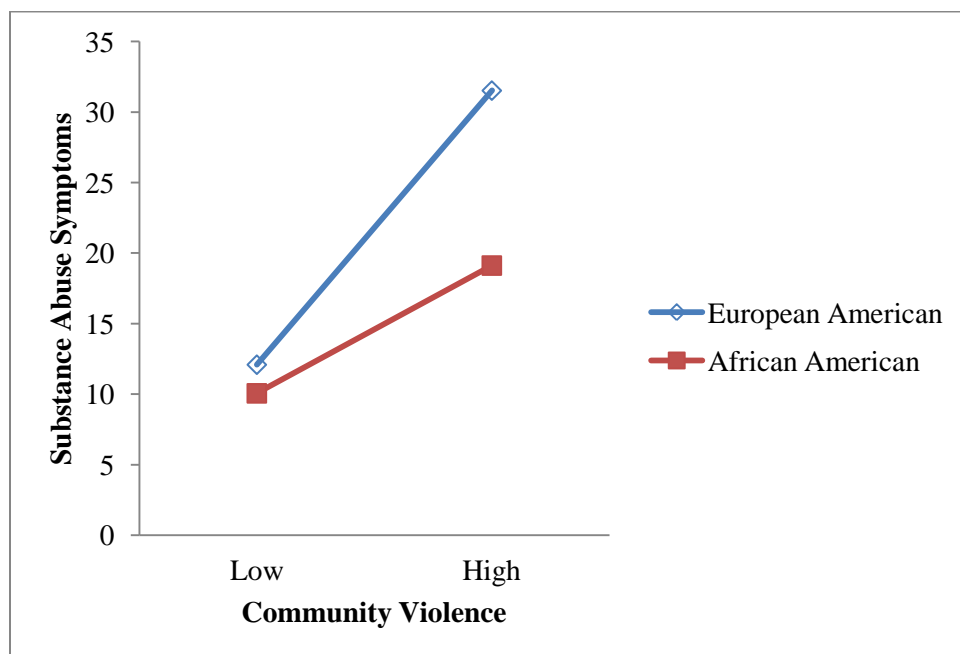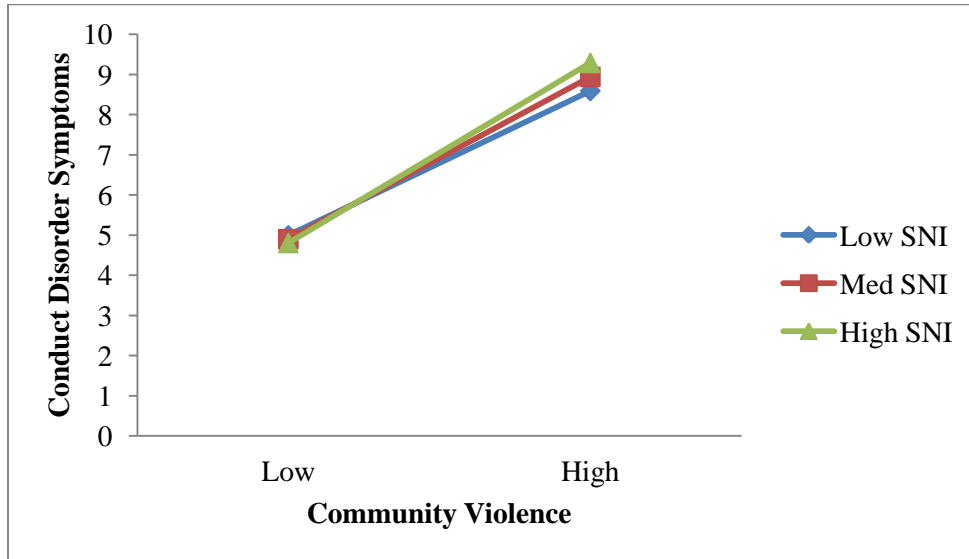
**Figure 2. Interaction between Ethnicity and Community Violence in Substance Abuse.**

**Figure 3. Interaction between SNI Helping Support and Community Violence in Conduct Disorder Behaviors.**

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**ABSTRACT**

**COMMUNITY VIOLENCE, PSYCHOLOGICAL DISTRESS, AND EXTERNALIZING BEHAVIORS IN EMERGING ADULTHOOD: MODERATING EFFECTS OF ETHNICITY AND SOCIAL SUPPORT**

by

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**May 2013**

**Advisor:** Paul A. Toro, Ph.D.

**Major:** Clinical Psychology

**Degree:** Master of Arts

Using hierarchical multiple regression, overall social support was found to moderate the relationship between exposure to community violence and psychological distress for European American and African-American at-risk emerging adults. For both ethnic groups, neither ISEL total nor SNI helping social support moderated the relation between community violence and the outcomes of substance abuse and conduct disorder/deviant behaviors. Ethnicity moderated the relationship between exposure to community violence and substance abuse behaviors within an SNI helping support regression, such that European Americans who reported greater violence exposure reported more substance abuse symptoms. SNI helping support moderated the relationship between exposure to community violence and conduct disorder behaviors, such that individuals who reported greater SNI support and increased violence exposure reported greater conduct disorder behaviors. These findings support the theory that among at-risk emerging adults, social support buffers between community violence and psychological distress, but is not protective against the adverse effects of violence on the development of externalizing behaviors, and, further, may be harmful.

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