



Published in final edited form as:

J Ethn Subst Abuse. 2021 ; 20(1): 135–150. doi:10.1080/15332640.2019.1598905.

Alcohol use and coping in a cross-sectional study of African American homicide survivors

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Abstract

The loss of a loved one to homicide is associated with considerable distress, often in the form of posttraumatic stress disorder (PTSD) and complicated grief (CG), and alcohol misuse. Yet alcohol-related problems and loss from a homicide are issues that disproportionately affect African Americans. The present study investigated alcohol use in a sample of 54 African American homicide survivors. Although there was a low prevalence of hazardous drinking, alcohol use was associated with higher levels of PTSD, complicated grief, and depression severity. In addition, scores on the Alcohol Use Disorders Identification Test (AUDIT) were correlated with active emotional coping and avoidant emotional coping. In analyses of PTSD symptom clusters, emotional numbing and hyperarousal symptoms were significantly correlated with AUDIT total score.

Keywords

Trauma; homicide; alcohol misuse; coping

Alcohol misuse is a major public health problem, contributing to 88,000 deaths and an estimated cost burden of \$250 billion dollars per year (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015). Rates of adverse alcohol-related consequences are greater among African Americans than among White Americans despite similar levels of consumption (Herd, 1994; Mulia, Ye, Greenfield, & Zemore, 2009). This disparity may be related to socioeconomic factors, such as limited access to quality health care among African Americans (Cook et al., 2014; Fiscella, Franks, Gold, & Clancy, 2000; Mayberry, Mili, & Ofili, 2000) and race-related stressors (Martin, Tuch, & Roman, 2003).

Psychological trauma may also play a role in this health disparity; a large body of literature has demonstrated an association between exposure to psychological trauma (and subsequent posttraumatic stress disorder [PTSD]) and alcohol misuse (McCauley, Killeen, Gros, Brady, & Back, 2012; McFarlane, 1998; Petrakis, Rosenheck, & Desai, 2011). Few studies, however, have reported on patterns of PTSD-alcohol misuse within specific racial or ethnic

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Disclosure statement

No potential conflict of interest was reported by the authors.

groups. This is a notable absence in the literature, given the comparatively high prevalence of trauma exposure and PTSD among African Americans (Alim et al., 2006; Breslau et al., 1998, Roberts, Gilman, Breslau, Breslau, & Koenen, 2011). Homicide loss, in particular, disproportionately affects members of racial minority groups, mirroring findings that homicide victims in the United States tend to be young African American men. In 2015, African Americans comprised 13% of the United States population but accounted for 52% of the nation's homicide victims (Federal Bureau of Investigation, 2015). Homicide deaths have ripple effects, exacting a burden of loss and trauma upon members of the community, particularly family and friends of the deceased, who are often referred to in the literature as "homicide survivors."

Relative to other traumatic events, experiences that involve the death of a loved one carry the additional burden of grief over the loss of the deceased (Shear & Smith-Caroff, 2002). Sudden and violent deaths, in particular, are associated with increased risk for complicated grief (CG) and PTSD (Kristensen, Weisaeth, & Heir, 2012). In one study, parents affected by the violent deaths of their children (including homicide, suicide, and accidents) showed higher rates of PTSD than the general population, with PTSD occurring twice as often among bereaved fathers (12.5% versus 6.3%) and three times as often among bereaved mothers (27.7% versus 9.5%; Murphy, Johnson, Chung, & Beaton, 2003) relative to epidemiological rates for men and women, respectively. The loss of a loved one to homicide can be overwhelming to a bereaved individual who, in addition to coping with the grief and trauma symptoms (McDevitt-Murphy, Neimeyer, Burke, Williams, & Lawson, 2012), may also be burdened with extensive legal proceedings and media attention related to the homicide.

The unique experiences of homicide survivors merit further exploration into survivor coping styles and subsequent health outcomes. Building on prior work and qualitative findings, Sharpe (2015) proposed a descriptive model of coping for African American homicide survivors, integrating past cultural trauma, the traumatic experience of homicide, the culture of homicide, and racial appraisals. The model further suggests that homicide loss leads to the use of specific coping strategies among African American survivors, including spiritual coping, meaning making, maintaining a connection to the deceased, and collective coping. Although the model addressed many of the ways that individuals may cope with homicide loss, it did not address substance misuse, likely reflecting the scarcity of research on substance misuse among individuals in the wake of a homicide loss. The omission of alcohol misuse in the model may also reflect the fact that African Americans are more likely to report abstinence from alcohol when compared to White Americans (Mulia et al., 2009). The disproportionately high rate of alcohol-related consequences among African Americans who do consume alcohol, however, highlights that this is an important issue warranting investigation (Witbrodt, Mulia, Zeng, & Kerr, 2014).

Substance misuse in the context of trauma and PTSD is most commonly understood as a form of self-medication (Khantzian, 1997), suggesting that alcohol misuse functions as an avoidant coping style to manage psychological symptoms. For example, McDevitt-Murphy, Fields, Monahan, and Bracken (2015) found that heavy-drinking veterans who met criteria for PTSD exhibited higher scores on drinking motive scales measuring anxiety-related and

depression-related coping when compared to veterans who did not meet PTSD criteria. However, the role of self-medication has not yet been explored in homicide survivors, many of whom may suffer from symptoms of PTSD and CG. The few studies that have addressed alcohol or drug misuse among homicide survivors have primarily focused on emerging adult samples. For example, Zinzow, Rheingold, Hawkins, Saunders, and Kilpatrick (2009) reported an increased risk of drug dependence among homicide survivors aged 18 to 24 while Smith and Patton (2016) found that 23% of their sample of African American young adult men reported using alcohol or drugs to avoid memories related to the homicide loss.

Research on coping suggests that attempts to suppress or avoid thoughts about a stressor or trauma are deleterious, leading to higher rates of PTSD (Littleton, Horsley, John, & Nelson, 2007). Furthermore, Schnider, Elhai, and Gray (2007) found that avoidant emotional coping was significantly predictive of CG and PTSD. Although there are different models for classifying coping strategies, Schnider and colleagues (2007) used a three-category model of coping (problem-focused, active emotional, and avoidant emotional) that fits into the widely used problem-focused versus emotion-focused framework within the coping literature (Carver, Scheier, & Weintraub, 1989; Folkman & Lazarus, 1985) while allowing for differentiation between the more adaptive and maladaptive emotional coping strategies. Their findings suggest that active emotional and avoidant emotional coping are distinct constructs that have relevance among bereaved individuals. Sharpe, Joe, and Taylor (2013) conducted an exploratory qualitative study to examine African American family members' experiences of homicide and suicide survivorship and found that survivors used four main coping strategies: group and individual support, spiritual resources, substance use, and avoidance and isolation. Notably, survivors reported using more alcohol and drugs since their loss and specifically described substance use as a way to avoid or numb painful emotions. Conversely, spirituality and social support were reported by participants to be helpful for reducing distress. These studies highlight important aspects of coping among survivors of homicide loss.

We undertook the present study to investigate the prevalence of hazardous drinking as well as the associations between alcohol use and symptoms of complicated grief, PTSD, and coping strategies in a sample of homicide survivors. This was an exploratory study with the goal of contributing to the clinical and scientific knowledge base aimed at understanding complex responses to homicide loss among African Americans. We previously published an article reporting on the rates of PTSD, CG, depression, and anxiety in this sample (McDevitt-Murphy et al., 2012). In this investigation, our aims were to (a) investigate the use of alcohol among a group of African American homicide survivors; (b) identify characteristics associated with use of alcohol, including symptoms of PTSD, depression, and complicated grief; and (c) explore how coping styles may differ between those who use and those who abstain from alcohol.

Materials and methods

Participants

Participants were 54 African American homicide survivors recruited from a victims' advocacy agency in a midsized southeastern city. To be included, participants had to have

experienced the loss of a loved one to homicide within the past 5 years. The majority of the sample was female ($n = 48$; 88.9%), with an age range of 19 to 71 years old ($M = 48.61$; $SD = 12.26$). Participants were mostly well educated, with 61.2% ($n = 33$) endorsing at least some college or beyond. Twenty-three participants (42.6%) reported a yearly income of \$30,000 or greater. Most of the participants were mothers ($n = 30$; 55.6%), sisters ($n = 7$; 13.0%), or spouses ($n = 5$; 9.3%) of an individual who was killed.

Potential participants were reached through a variety of avenues. The absolute number of people who received information about the project is impossible to estimate because we used several methods to advertise the project and attracted some participants via word of mouth. Recruitment methods included direct referral from agency staff, announcements by staff at the biweekly survivors' support group meeting, and a mass mailing to all agency clients who had been contacted by staff in the past 3 years. Of the 137 people with whom research project staff had one-on-one conversations, 15 declined to participate for the following reasons: not ready to talk about the loss ($n = 5$), too busy ($n = 5$), not interested in research ($n = 1$), too sick to participate ($n = 1$), too close to the holidays ($n = 1$), or did not speak English ($n = 1$). One person did not give a reason. Twenty people agreed to participate but repeatedly missed or canceled appointments. Many others expressed interest but did not schedule assessment appointments. For the present investigation, we included only participants who identified as African American ($N = 54$), excluding the four participants who identified as Caucasian.

Measures

Alcohol use disorders identification test—The Alcohol Use Disorders Identification Test (AUDIT; Babor, de la Fuente, Saunders, & Grant, 1992) is a widely used, 10-item self-report measure of hazardous drinking. Participants answer questions related to the frequency and typical quantity of their alcohol use, as well as frequency of alcohol-related impairments (e.g., “how often during the last year have you failed to do what was normally expected from you because of drinking?”). Items are rated on a 5-point scale (0 to 4), and items responses are summed for a total score ranging from 0 to 40. Scores of 8 or higher reflect harmful or hazardous alcohol use (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). The AUDIT has shown strong psychometric properties across diverse samples (see de Meneses-Gaya, Zuardi, Loureiro, & Crippa, 2009). In the present study, Cronbach's alpha for the AUDIT was adequate ($\alpha = .69$).

PTSD checklist—The PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993) is a 17-item self-report questionnaire in which participants indicate how much they have been bothered by PTSD symptoms over the past month on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). Items correspond to the diagnostic criteria for PTSD according to the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*) standards (American Psychiatric Association, 2000). Items can be summed for a total score or for symptom cluster scores. For this study, participants were asked to respond to PCL items with respect to the homicide event as the index trauma. The PCL is widely used and well validated in a variety of samples (Adkins, Weathers, McDevitt-Murphy, &

Daniels, 2008; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). Internal consistency of the PCL in the current study was excellent ($\alpha = .93$).

Beck depression inventory-II—The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) is a 21-item self-report measure of depressive symptoms. Participants select one of four statements to measure each symptom of depression. Scores range from 0 to 63, with higher scores indicating more severe depression. The BDI-II has demonstrated reliability and validity as a measure of depressive symptoms (Beck et al., 1996) and has been used with a variety of samples, including samples of bereaved individuals (Swanson, Kane, Pearsall-Jones, Swanson, & Croft, 2009). The BDI-II showed excellent internal consistency in the present sample ($\alpha = .91$).

Inventory of complicated grief-revised—The Inventory of Complicated Grief-Revised (ICG-R; Prigerson & Jacobs, 2001) is a 30-item measure of symptoms of complicated grief in which participants rate the frequency or severity of symptoms of complicated grief, such as “I feel that I have trouble accepting the death” and “I feel like the future holds no meaning or purpose without [my loved one].” Scores range from 30 to 150, with higher scores indicating more severe complicated grief symptoms. The ICG-R demonstrated strong psychometric properties in a large sample of bereaved college students (Laurie & Neimeyer, 2008). In the present study, the ICG-R demonstrated excellent reliability ($\alpha = .95$).

Brief coping orientation to problems experienced—The Brief Coping Orientation to Problems Experienced (BCOPE; Carver, 1997) is a 28-item self-report measure used to examine an individual’s strategies of coping in response to stressful situations. Participants are asked to rate the degree to which they have used a particular coping strategy on a scale from 1 (*I haven’t been doing this at all*) to 4 (*I’ve been doing this a lot*). The BCOPE has been utilized in a range of medical and clinical populations, including bereaved samples (Buckley et al., 2015; Schnider et al., 2007). The BCOPE exhibited strong internal consistency in the present sample ($\alpha = .87$).

We adopted Schnider and colleagues’ (2007) model, grouping the 28 items of the BCOPE into three categories: problem-focused coping, active emotional coping, and avoidant emotional coping. Problem-focused coping strategies are behavioral strategies that require individuals to acknowledge the stressor and initiate action toward resolving or mitigating it. Subscales include active coping (i.e., taking mental and/or physical action to manage a stressor), planning, religion, and accessing instrumental support. Emotion-focused strategies (i.e., active emotional coping and avoidant emotional coping) emphasize acknowledgment of emotions rather than acknowledgment of the stressor. The active emotional coping category as described by Schnider et al. (2007) includes the BCOPE subscales of venting, positive reframing, humor, emotional support, and acceptance. Conversely, avoidant emotional coping strategies—which include substance use, denial, self-distraction, behavioral disengagement, and self-blame—involve distancing oneself from the stressor and one’s emotions. All coping categories demonstrated adequate internal consistency (problem-focused coping, $\alpha = .82$; active emotional coping, $\alpha = .73$; avoidant emotional coping, $\alpha = .76$).

Brief RCOPE—The Brief Religious Coping Orientation to Problems Experienced (Brief RCOPE; Pargament, Smith, Koenig, & Perez, 1998) is a 14-item measure of religious coping, with subscales accounting for positive and negative religious coping methods. Participants are asked to rate items on a 4-point Likert-type scale from 0 (*not at all*) to 3 (*a great deal*). Sample items include “since the stressful event, I have sought help from God in letting go of my anger” (Positive Religious Coping; PRC) and “since the stressful event, I have wondered what I did for God to punish me” (Negative Religious Coping; NRC). Items are anchored to the traumatic loss. The Brief RCOPE is the most widely used measure of religious coping and has performed well on indices of validity and reliability (see Pargament, Feuille, & Burdzy, 2011). Past literature using this measure includes diverse American samples, including majority African American samples (Bradley, Schwartz, & Kaslow, 2005; Cotton et al., 2009) and homicide survivors, though less frequently (Tuck, Baliko, Schubert, & Anderson, 2012). In the present study, the PRC and NRC subscales demonstrated good reliability (PRC: $\alpha = .81$; NRC: $\alpha = .80$).

Procedure

Approval for this project was obtained from the university’s institutional review board. Participants were recruited from a community agency that assists survivors of violent crime. Participants who contacted the research team were scheduled for assessment appointments. After completing informed consent, participants met with a trained master’s- or doctoral-level graduate student for an assessment session (typically 60–120 minutes in length). The interaction began with a brief open-ended rapport-building interview that followed from a standard prompt: “I did not have the pleasure of knowing [loved one], would you please tell me something about [him/her]?” Following a brief discussion, participants were asked to complete self-report questionnaires. Although the study included two time-points for data collection, all data for the present investigation are drawn from the baseline assessment.

Data analysis plan

Data were screened for normality according to recommendations by Tabachnick and Fidell (2007). AUDIT total score was positively skewed and leptokurtic. To account for the nonnormality, the variable was square root transformed. Subsequent tests of normality indicated that the transformed variable was adequately normally distributed. As such, all analyses were conducted using square root transformed AUDIT scores. We conducted preliminary analyses to calculate the number of participants identified as hazardous drinkers on the AUDIT, as well as descriptive statistics on all measures. We then conducted a series of correlations to assess the strength of the relationships among the scales assessing coping (BCOPE, RCOPE), hazardous drinking (AUDIT), PTSD severity (PCL), and depression (BDI-II). Finally, we conducted an analysis of variance (ANOVA) to test differences on the dimensions of PTSD severity, depression, and coping between participants who drank alcohol and those who abstained. For all analyses, we employed a threshold of $p < .05$ for determining statistical significance.

Results

Preliminary analyses

Using the standard cut score of 8 on the AUDIT, four (7.4%) participants screened positive for hazardous drinking. The overall mean AUDIT score for the sample was 2.34 ($SD = 3.23$). Of the 54 participants, 31 (57.4%) indicated that they consume at least one alcoholic beverage monthly. All other participants endorsed never consuming alcohol and are therefore classified as abstainers (42.6%; $n = 23$). The average AUDIT score for those who consumed any alcohol (“drinkers”) was 4.10 ($SD = 3.32$). Descriptive statistics for scales assessing PTSD, CG, depression, and coping are listed in Table 1.

Primary analyses

Correlations assessing the relationships between the AUDIT and all other measures are listed in Table 1. AUDIT total score was significantly correlated with avoidant emotional coping, active emotional coping, depression symptom severity, complicated grief, and PTSD symptom severity. Because the avoidant emotional coping subscale includes two items assessing substance use (Schnider et al., 2007), we also calculated this correlation omitting those two items to obtain a correlation coefficient that was not influenced by this confound. Removing these items did not alter the reliability of this subscale ($\alpha = .75$). Avoidant emotional coping, both with and without the substance use items, was significantly correlated with AUDIT score. In addition, we examined correlations between AUDIT total score and the PTSD symptom cluster scores derived from the PCL. Results indicate that AUDIT score was significantly correlated with cluster “C” (avoidance and numbing) symptoms and with cluster “D” symptoms (hyperarousal). When cluster “C” symptoms were further divided into avoidance and numbing, only the numbing items were significantly correlated with AUDIT score.

We conducted a one-way ANOVA to evaluate differences between abstainers and drinkers regarding their coping strategies as measured by the three subscales of the BCOPE (Schnider et al., 2007) and two subscales of the RCOPE (Pargament et al., 1998). There were statistically significant differences between drinkers and abstainers at the $p < .05$ level for two BCOPE subscale categories, avoidant emotional coping and active emotional coping, with the drinkers showing a higher mean score than the abstainers. As mentioned, we also conducted analyses using the avoidant emotional subscale without the substance use items, and the difference was smaller but still significant. No significant differences were found in problem-focused coping or either of the religious coping subscales. Results of these analyses are included in Table 2.

Discussion

In this investigation, we explored alcohol use and hazardous drinking in a sample of African Americans who identified as survivors of a homicide loss. The sample was overwhelmingly composed of women, and most participants were bereaved mothers of adult children. All participants’ homicide losses had occurred within the 5 years prior to their assessment. This sample reported a low rate of hazardous drinking, but alcohol use was correlated with higher

levels of avoidant emotional coping, which has been implicated in adverse outcomes with trauma survivors in prior research (Krause, Kaltman, Goodman, & Dutton, 2008; Schnider et al., 2007; Silverstein et al., 2016). Alcohol use, however, was also correlated with active emotional coping, which has been associated with both positive and negative outcomes. For example, Schnider and colleagues (2007) found active emotional coping to be positively correlated with PTSD and complicated grief, whereas Wolfe and Ray (2015) found emotion-focused coping to be positively correlated with posttraumatic growth and resilience.

Schnider and colleagues (2007) conceptualized active and avoidant emotional coping as distinct processes, with active emotional coping often considered more adaptive than avoidant emotional coping. In the present sample, however, drinkers engaged more than abstainers in both active and avoidant emotional coping, and both emotional avoidance and emotional engagement were correlated with alcohol misuse. Some researchers have proposed that active emotional coping behaviors may point to a ruminative cognitive style, which is associated with a wide variety of mental health problems, including depression (Nolen-Hoeksema, 2000), PTSD (Spinhoven, Penninx, Krempeuiou, van Hemert, & Elzinga, 2015; Wild et al., 2016), complicated grief (Morina, 2011), and substance use (Johnson et al., 2016). Indeed, one study of grievors demonstrated that ruminations about the injustice of a loss were uniquely associated with complicated grief (Eisma et al., 2015). A ruminative cognitive style in the context of grieving suggests an inability to flexibly move between engaging with the pain of the loss and adaptively stepping away from these emotional processes. Ruminating excessively about the loss and remaining emotionally stalled in the grieving and coping process may be especially maladaptive among grievors (Davis, Wortman, Lehman, & Silver, 2000). Instead, being able to engage in the dual processes of integrating the reality of the loss and its associated emotional fallout while remaining engaged in environmental demands is theorized to be a more adaptive model of bereavement coping (Schut, 1999), which may be particularly challenging for more complex and traumatic losses such as homicide.

Despite high rates of symptoms of both PTSD and complicated grief, the level of hazardous drinking was lower than expected, with only 7% of the sample screening positive for hazardous drinking. Even so, hazardous drinking was correlated with measures of symptoms of PTSD symptom severity, complicated grief, and depression in this sample. Given the elevated rate of distress in this sample, the low rate of alcohol misuse was unexpected as prior research has demonstrated strong associations between PTSD and substance misuse (e.g., McDevitt-Murphy, Murphy, Monahan, Flood, & Weathers, 2010) and qualitative findings from homicide survivors have pointed to substance use specifically as a coping strategy (Sharpe et al., 2013; Sharpe & Boyas, 2011). Our findings suggest that even in low incidence samples, hazardous drinking is associated with psychological distress, demonstrated by significant correlations with measures of PTSD, complicated grief, and depression. Curiously, avoidance symptoms of PTSD in isolation showed a nonsignificant relationship to AUDIT score, which is inconsistent with the self-medication conceptualization of substance use in the wake of trauma. Literature on alcohol misuse and coping styles has suggested that certain coping styles (e.g., problem-focused coping) can result in behavioral strategies that are protective against hazardous drinking (Walker & Stephens, 2014). Surprisingly, though, no coping style appeared protective in the present

sample; that is, no identifiable aspect of coping was inversely correlated with hazardous drinking. Thus, it is clear that alcohol use may fit within a pattern of emotional coping, but it is not clear that any specific coping approach might steer a survivor away from alcohol misuse.

It is important to place these findings in a larger context. Sharpe's (2015) model of homicide loss within the African American community highlighted the complexity of coping with catastrophic loss in a subculture that is also carrying the burden of generations of historical trauma. Sharpe's model pointed to the shame, blame, and stigma that can surround a homicide-related loss, all factors that contribute to disenfranchised grief (Doka, 2002), or grief that is not acknowledged or validated by society. The model also frames concealment or suppression of negative emotion as a behavior that adapted from a pattern of ancestral survivorship in the wake of multigenerational institutional trauma. The present findings may complement Sharpe's (2015) work by suggesting that individuals who tend to cope with homicide loss through either avoidant emotional coping or active emotional coping may be at risk for alcohol use in addition to PTSD and complicated grief.

Although this study provides some understanding of the factors that may contribute to adverse outcomes following the traumatic loss of a loved one to homicide, these findings must be interpreted in light of some significant limitations. A primary limitation is the small sample size. Although we expect that this sample is likely representative of African American homicide survivors in southern U.S. cities, our analyses may not be adequately powered to detect relationships among variables. The sample was also overwhelmingly female, and we were unable to assess gender differences as a result. In addition, the data were collected cross-sectionally, thereby eliminating our ability to assess temporal or causal relationships among the variables. These limitations highlight important areas for future research.

Clinical implications

Prior work suggests that African American survivors of homicide loss may employ a range of coping behaviors, including both emotional suppression and social support seeking (Sharpe, 2015). The present research suggests that emotion-focused coping strategies are associated with a greater risk for alcohol misuse. Individuals presenting for help with problem drinking in the wake of having experienced a homicide loss may also benefit from help strengthening their adaptive coping skills. In addition, clinicians are advised to screen for alcohol use among individuals who have experienced homicide loss, given the high rate of distress, which can often lead to alcohol misuse.

Funding

This work was supported by a grant from the Tennessee Board of Regents. Noel Mazzulo is now at the Medical University of South Carolina.

References

- Adkins JW, Weathers FW, McDevitt-Murphy M, & Daniels JB (2008). Psychometric properties of seven self-report measures of posttraumatic stress disorder in college students with mixed civilian trauma exposure. *Journal of Anxiety Disorders*, 22(8), 1393–1402. [PubMed: 18436427]
- Alim TN, Graves E, Mellman TA, Aigbogun N, Gray E, Lawson W, & Charney DS (2006). Trauma exposure, posttraumatic stress disorder and depression in an African-American primary care population. *Journal of the National Medical Association*, 98(10), 1630–1636. [PubMed: 17052054]
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR*. Washington, DC: American Psychiatric Association.
- Babor TF, de la Fuente JR, Saunders J, & Grant M (1992). AUDIT: The alcohol use disorders identification test Presented at the World Health Organization Programme on Substance Abuse, Geneva, Switzerland.
- Babor TF, Higgins-Biddle JC, Saunders JB, & Monteiro MG (2001). *AUDIT: The alcohol use disorders identification test: Guidelines for use in primary health care* (2nd ed.). Geneva, Switzerland: WHO.
- Beck AT, Steer RA, & Brown GK (1996). *Beck depression inventory-II*. San Antonio, TX: Psychological Corporation.
- Blanchard EB, Jones-Alexander J, Buckley TC, & Forneris CA (1996). Psychometric properties of the PTSD Checklist (PCL). *Behaviour Research and Therapy*, 34(8), 669–673. [PubMed: 8870294]
- Bradley R, Schwartz AC, & Kaslow NJ (2005). Posttraumatic stress disorder symptoms among low-income, African American women with a history of intimate partner violence and suicidal behaviors: Self-esteem, social support, and religious coping. *Journal of Traumatic Stress*, 18(6), 685–696. [PubMed: 16382436]
- Breslau N, Kessler RC, Chilcoat HD, Schultz LR, Davis GC, & Andreski P (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*, 55(7), 626–632. [PubMed: 9672053]
- Buckley T, Spinaze M, Bartrop R, McKinley S, Whitfield V, Havyatt J, ... Tofler G (2015). The nature of death, coping response and intensity of bereavement following death in the critical care environment. *Australian Critical Care*, 28(2), 64–70. [PubMed: 25801350]
- Carver CS (1997). You want to measure coping but your protocol's too long: consider the brief COPE. *International Journal of Behavioral Medicine*, 4(1), 92. [PubMed: 16250744]
- Carver CS, Scheier MF, & Weintraub JK (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267. [PubMed: 2926629]
- Cook BL, Zuvekas SH, Carson N, Wayne GF, Vesper A, & McGuire TG (2014). Assessing racial/ethnic disparities in treatment across episodes of mental health care. *Health Services Research*, 49(1), 206–229. [PubMed: 23855750]
- Cotton S, Grosseohme D, Rosenthal SL, McGrady ME, Roberts YH, Hines J, ... Tsevat J (2009). Religious/spiritual coping in adolescents with sickle cell disease: A pilot study. *Journal of Pediatric Hematology/Oncology*, 31(5), 313.
- Davis GG, Wortman CB, Lehman DR, & Silver RC (2000). Searching for meaning in loss: Are clinical assumptions correct? *Death Studies*, 24(6), 497–540. [PubMed: 11503666]
- de Meneses-Gaya C, Zuardi AW, Loureiro SR, & Crippa JAS (2009). Alcohol Use Disorders Identification Test (AUDIT): An updated systematic review of psychometric properties. *Psychology & Neuroscience*, 2(1), 83.
- Doka K (Ed.). (2002). *Disenfranchised grief: Recognizing hidden sorrow*. Lexington, MA: Lexington Books.
- Eisma MC, Schut HA, Stroebe MS, Boelen PA, Bout J, & Stroebe W (2015). Adaptive and maladaptive rumination after loss: A three-wave longitudinal study. *British Journal of Clinical Psychology*, 54(2), 163–180.
- Federal Bureau of Investigation. (2015). *Murder victims by race, ethnicity, and sex* [Webpage]. Retrieved from https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/expanded_homicide_data_table_1_murder_victims_by_race_ethnicity_and_sex_2015.xls

- Fiscella K, Franks P, Gold MR, & Clancy CM (2000). Inequality in quality: Addressing socioeconomic, racial, and ethnic disparities in health care. *JAMA*, 283(19), 2579–2584. [PubMed: 10815125]
- Folkman S, & Lazarus RS (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48(1), 150–170. [PubMed: 2980281]
- Herd D (1994). Predicting drinking problems among Black and White men: Results from a national survey. *Journal of Studies on Alcohol*, 55(1), 61–71. [PubMed: 8189728]
- Johnson DP, Rhee SH, Friedman NP, Corley RP, Munn-Chernoff MA, Hewitt JK, & Whisman MA (2016). A twin study examining rumination as a transdiagnostic correlate of psychopathology. *Clinical Psychological Science*, 4(6), 971–987. [PubMed: 28111610]
- Khantzian EJ (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry*, 4(5), 231–244. [PubMed: 9385000]
- Krause ED, Kaltman S, Goodman LA, & Dutton MA (2008). Avoidant coping and PTSD symptoms related to domestic violence exposure: A longitudinal study. *Journal of Traumatic Stress*, 21(1), 83–90. [PubMed: 18302182]
- Kristensen P, Weisaeth L, & Heir T (2012). Bereavement and mental health after sudden and violent losses: A review. *Psychiatry: Interpersonal and Biological Processes*, 75(1), 76–97.
- Laurie A, & Neimeyer RA (2008). African Americans in bereavement: Grief as a function of ethnicity. *Omega*, 57(2), 173–193. [PubMed: 18680889]
- Littleton H, Horsley S, John S, & Nelson DV (2007). Trauma coping strategies and psychological distress: A meta-analysis. *Journal of Traumatic Stress*, 20(6), 977–988. [PubMed: 18157893]
- Martin JK, Tuch SA, & Roman PM (2003). Problem drinking patterns among African Americans: The impacts of reports of discrimination, perceptions of prejudice, and “risky” coping strategies. *Journal of Health and Social Behavior*, 44(3), 408–425. [PubMed: 14582316]
- Mayberry RM, Mili F, & Ofili E (2000). Racial and ethnic differences in access to medical care. *Medical Care Research and Review*, 57(1_suppl), 108–145. [PubMed: 11092160]
- McCauley JL, Killeen T, Gros DF, Brady KT, & Back SE (2012). Posttraumatic stress disorder and co-occurring substance use disorders: Advances in assessment and treatment. *Clinical Psychology: Science and Practice*, 19(3), 283–304.
- McDevitt-Murphy ME, Murphy JG, Monahan CJ, Flood AM, & Weathers FW (2010). Unique patterns of substance misuse associated with PTSD, depression, and social phobia. *Journal of Dual Diagnosis*, 6(2), 94–110. [PubMed: 20582229]
- McDevitt-Murphy ME, Neimeyer RA, Burke LA, Williams JL, & Lawson K (2012). The toll of traumatic loss in African Americans bereaved by homicide. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(3), 303–311.
- McDevitt-Murphy ME, Fields JA, Monahan CM, & Bracken KL (2015). Drinking motives among heavy drinking veterans with and without posttraumatic stress disorder. *Addiction Research and Theory*, 23, 148–155. doi:10.3109/16066359.2014.949696 [PubMed: 27812315]
- Mcfarlane AC (1998). Epidemiological evidence about the relationship between PTSD and alcohol abuse: The nature of the association. *Addictive Behaviors*, 23(6), 813–825. [PubMed: 9801718]
- Morina N (2011). Rumination and avoidance as predictors of prolonged grief, depression, and posttraumatic stress in female widowed survivors of war. *The Journal of Nervous and Mental Disease*, 199(12), 921–927. [PubMed: 22134449]
- Mulia N, Ye Y, Greenfield TK, & Zeng SE (2009). Disparities in alcohol-related problems among White, Black, and Hispanic Americans. *Alcoholism: Clinical and Experimental Research*, 33(4), 654–662.
- Murphy SA, Johnson LC, Chung I-J, & Beaton RD (2003). The prevalence of PTSD following the violent death of a child and predictors of change 5 years later. *Journal of Traumatic Stress*, 16(1), 17–25. [PubMed: 12602648]
- Nolen-Hoeksema S (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology*, 109(3), 504–511. [PubMed: 11016119]
- Pargament KI, Feuille M, & Burdzy D (2011). The Brief RCOPE: Current psychometric status of a short measure of religious coping. *Religions*, 2(1), 51–76.

- Pargament KI, Smith BW, Koenig HG, & Perez L (1998). Patterns of positive and negative religious coping with major life stressors. *Journal for the Scientific Study of Religion*, 37(4), 710–724.
- Petrakis IL, Rosenheck R, & Desai R (2011). Substance use comorbidity among veterans with posttraumatic stress disorder and other psychiatric illness. *The American Journal on Addictions*, 20(3), 185–189. [PubMed: 21477045]
- Prigerson HO, Jacobs SC (2001). Traumatic grief as a distinct disorder: A rationale, consensus criteria, and a preliminary empirical test In Stroebe MS, Hansson RO, Stroebe W, Schut H, Stroebe MS, Hansson RO, ... Schut H (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 613–645). Washington, DC, US: American Psychological Association.
- Roberts AL, Gilman SE, Breslau J, Breslau N, & Koenen KC (2011). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine*, 41(01), 71–83. [PubMed: 20346193]
- Sacks JJ, Gonzales KR, Bouchery EE, Tomedi LE, & Brewer RD (2015). 2010 national and state costs of excessive alcohol consumption. *American Journal of Preventive Medicine*, 49(5), e73–e79. [PubMed: 26477807]
- Schnider KR, Elhai JD, & Gray MJ (2007). Coping style use predicts posttraumatic stress and complicated grief symptom severity among college students reporting a traumatic loss. *Journal of Counseling Psychology*, 54(3), 344–350.
- Schut MSH (1999). The dual process model of coping with bereavement: Rationale and description. *Death Studies*, 23(3), 197–224. [PubMed: 10848151]
- Sharpe TL (2015). Understanding the sociocultural context of coping for African American family members of homicide victims: A conceptual model. *Trauma, Violence, & Abuse*, 16(1), 48–59.
- Sharpe TL, & Boyas J (2011). We fall down: The African American experience of coping with the homicide of a loved one. *Journal of Black Studies*, 42(6), 855–873. [PubMed: 22073426]
- Sharpe TL, Joe S, & Taylor KC (2013). Suicide and homicide bereavement among African Americans: Implications for survivor research and practice. *Omega - Journal of Death and Dying*, 66(2), 153–172.
- Shear MK, & Smith-Caroff K (2002). Traumatic loss and the syndrome of complicated grief. *PTSD Research Quarterly*, 13(1), 1–8.
- Silverstein M, Kistin C, Bair-Merritt M, Wiltsey-Stirman S, Feinberg E, Diaz-Linhart Y, ... Cabral H (2016). Avoidance as an obstacle to preventing depression among urban women at high risk for violent trauma. *Archives of Women's Mental Health*, 19(1), 63–70.
- Smith JR, & Patton DU (2016). Posttraumatic stress symptoms in context: Examining trauma responses to violent exposures and homicide death among Black males in urban neighborhoods. *American Journal of Orthopsychiatry*, 86(2), 212–223.
- Spinhoven P, Penninx BW, Krempeuiou A, van Hemert AM, & Elzinga B (2015). Trait rumination predicts onset of post-traumatic stress disorder through trauma-related cognitive appraisals: A 4-year longitudinal study. *Behaviour Research and Therapy*, 71, 101–109. [PubMed: 26093467]
- Swanson PB, Kane RT, Pearsall-Jones JG, Swanson CF, & Croft ML (2009). How couples cope with the death of a twin or higher order multiple. *Twin Research and Human Genetics: The Official Journal of the International Society for Twin Studies*, 12(4), 392–402.
- Tabachnick BG, & Fidell LS (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon/Pearson Education.
- Tuck I, Baliko B, Schubert CM, & Anderson L (2012). A pilot study of a weekend retreat intervention for family survivors of homicide. *Western Journal of Nursing Research*, 34(6), 766–794. [PubMed: 22566289]
- Walker R, & Stephens RS (2014). Protective behavioral strategies mediate problem-focused coping and alcohol use in college students. *Addictive Behaviors*, 39(6), 1033–1037. doi:10.1016/j.addbeh.2014.02.006 [PubMed: 24629479]
- Weathers F, Litz B, Herman D, Huska J, & Keane T (O. (1993). The PTSD checklist (PCL): Reliability, validity, and diagnostic utility Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies, San Antonio, TX.

- Wild J, Smith KV, Thompson E, Bear F, Lommen MJJ, & Ehlers A (2016). A prospective study of pre-trauma risk factors for post-traumatic stress disorder and depression. *Psychological Medicine*, 46(12), 2571–2582. [PubMed: 27348599]
- Witbrodt J, Mulia N, Zemore SE, & Kerr WC (2014). Racial/ethnic disparities in alcohol-related problems: Differences by gender and level of heavy drinking. *Alcoholism: Clinical and Experimental Research*, 38(6), 1662–1670.
- Wolfe T, & Ray S (2015). The role of event centrality, coping and social support in resilience and posttraumatic growth among women and men. *International Journal of Mental Health Promotion*, 17(2), 78–96.
- Zinzow HM, Rheingold AA, Hawkins AO, Saunders BE, & Kilpatrick DG (2009). Losing a loved one to homicide: Prevalence and mental health correlates in a national sample of young adults. *Journal of Traumatic Stress*, 22(1), 20–27. [PubMed: 19230006]

Table 1.

Descriptive Statistics for Primary Study Measures and Correlation with AUDIT.

Measure	<i>M</i>	<i>SD</i>	<i>r</i> with AUDIT
AUDIT	2.34	3.23	
RCOPE			
Positive Religious Coping	17.87	3.82	.11
Negative Religious Coping	5.07	4.98	.25
B-COPE			
Avoidant Emotional Coping	10.46	6.07	.48**
Avoidant Emotional Coping - No Substance Use Items	9.39	5.40	.31
Problem-Focused Coping	15.48	5.38	.20
Active Emotional Coping	13.69	5.46	.32*
BDI-II	15.72	11.17	.35*
ICG-R	137.00	79.61	.36**
PCL	36.59	15.33	.33*
PCL Cluster B	11.56	5.77	.23
PCL Cluster C	13.93	6.55	.32*
PCL-C Avoidance	4.59	2.47	.09
PCL-C Numbing	9.33	4.77	.39**
PCL Cluster D	11.11	4.89	.33*

Note. $n=54$ except for BDI-II, which had $n=53$. AUDIT = Alcohol Use Disorders Identification Test; RCOPE =Religious Coping; B-COPE = Brief Coping Orientation to Problems Experienced; BDI-II = Beck Depression Inventory, Revised; ICG-R = Inventory of Complicated Grief, Revised; PCL = PTSD Checklist.

* $p < .05$,

** $p < .01$.

Table 2.

Means, Standard Deviations, and ANOVAs Examining Differences in Coping Styles in Abstainers Versus Drinkers.

Variable	Abstainers (<i>n</i> = 23)		Drinkers (<i>n</i> = 31)		ANOVA <i>F</i> (1, 52)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
RCOPE					
Positive Religious Coping	17.44	4.83	18.19	2.92	0.51
Negative Religious Coping	3.65	4.84	6.13	4.89	3.42
Brief COPE					
Avoidant Emotional Coping	7.39	5.89	12.74	5.21	12.46**
Avoidant Emotional Coping - No Substance Use	7.39	5.89	10.87	4.54	6.01*
Problem-Focused Coping	14.04	5.66	16.55	4.99	2.97
Active Emotional Coping	11.61	5.51	15.23	4.96	6.39*

Note. RCOPE = Religious Coping; B-COPE = Brief Coping Orientation to Problems Experienced.

*
p < .05.

**
p < .01.

p < .001.