Compassion-Based Meditation in African Americans: Self-Criticism Mediates Changes in Depression

Suzanne B. Johnson, MA, Bradley L. Goodnight, PhD, Huaiyu Zhang, PhD, Irene Daboin, MA, Bobbi Patterson, PhD, and Nadine J. Kaslow, PhD

This study examines self-criticism as a mechanism through which compassion meditation reduces depressive symptoms in low-income African American men and women (N = 59) who had recently attempted suicide. After completing several measures, including the Levels of Self-Criticism Scale and Beck Depression Inventory-II, participants were randomly assigned to receive either a six-session compassion meditation (CM) group (Grady Compassion and Meditation Program) or a six-session support group. As predicted, path analysis results showed that treatment condition led to changes in self-criticism from pre- to posttreatment, with those receiving CM showing greater reductions in levels of self-criticism than those randomized to the support group. Path analyses also revealed that changes in self-criticism fully mediated the link between condition and changes in depressive symptoms. These findings highlight the importance and value of targeting levels of self-criticism in compassion-based interventions to reduce the depressive symptoms of suicidal African Americans.

Suicide is a major public health problem in the United States (Goldsmith, Pellmar, Kleinman, & Bunney, 2002); in 2013, it was the tenth leading cause of death (Centers for Disease Control & Prevention, see Kochanek, Murphy, Xu, & Arias, 2014). Approximately one million adults attempt suicide annually (Crosby, Han, Ortega, Parks, & Gfroerer, 2011), and attempts are a key risk factor for suicide completions (Moscicki, 2001). Although rates of death by suicide in African Americans are lower than for European Americans, the rates of suicidal behavior in the African American community have been rising (Joe & Kaplan, 2002; Willis, Coombs, Drentea, & Cochr- ham, 2003); however, few interventions have targeted improving the mental health of African Americans who attempt suicide (Kaslow et al., 2010).

Mindfulness-based interventions may prove valuable for reducing suicidal behavior in African Americans. This research was supported by grants from the Emory University Research Council (Group interventions for suicidal African American men and women) awarded to the last author.

Address correspondence to Nadine J. Kaslow, Department of Psychiatry and Behavioral Sciences, Emory School of Medicine, Grady Hospital, 80 Jesse Hill Jr. Drive, Atlanta, GA 30303; E-mail: nkaslow@emory.edu
behavior (Williams, Duggan, Crane, & Fen- nell, 2008; Williams & Swales, 2004) in this population. One mindfulness-based treatment particularly worthy of attention is compassion meditation (CM), which incorporates mindfulness—knowing when we suffer, fail, or feel inadequate—and self-compassion (i.e., responding to our own emotional pain with sympathy; Germer, 2009). Self-compassion is related to better psychological well-being, including lower levels of depressive and anxious symptoms, and higher levels of adaptive functioning and life satisfaction (Neff, 2003, 2004; Neff, Kirkpatrick, & Rude, 2007).

Among people with high levels of shame and self-criticism, a compassionate mind training program (Gilbert, 2005) was associated with reductions in levels of depression, anxiety, shame, self-criticism, inferiority, and submissive behaviors and increases in the ability to self-soothe and focus on feelings of warmth and reassurance (Gilbert & Procter, 2006). Despite these favorable results, few studies have evaluated these interventions for treating patients with clinically significant distress, such as suicide attempters with high levels of depressive symptoms (Bagge, Lamis, Nadorff, & Osman, 2014; Carr et al., 2013; Trivedi et al., 2013). Likewise, attention only recently has been paid to self-criticism or self-compassion among African Americans (Dempsey, 2002; Pace et al., 2013; Reddy et al., 2013). This is concerning given African Americans’ disproportionate exposure to discrimination and other stressful life experiences (Matthews, Hammond, Nuru-Jeter, Cole-Lewis, & Melvin, 2013; Perry, Harp, & Oser, 2013) and the association between discrimination and depression in this population (Carr, Szymanski, Taha, West, & Kaslow, 2014). A growing body of evidence suggests that CM and other mindfulness-based interventions may be appealing to African Americans. For example, mindfulness-based stress reduction (Kabat-Zinn, 1994) has been found to be feasible and acceptable to low-income African American women with posttraumatic stress disorder and intimate partner violence (Dutton, Bermudez, Matás, Majid, & Myers, 2013). Similarly, for low-income African American pregnant women, a mindfulness-based intervention was shown to increase mindfulness and reduce reactive cortisol response, pregnancy-related stress, and depressive symptoms (Zhang & Emory, 2013). Mind-body interventions may be well suited to reducing health disparities related to stress and fostering resilience. Using loving-kindness meditation to cultivate compassion and forgiveness may lead to increased self-awareness, self-care, and a redefinition of inner strengths among African American women (Woods-Giscombe & Black, 2010).

Although a mounting literature examines the effectiveness of compassion-based interventions, few studies have investigated mechanisms of change. Multiple facets of CM may target depressive symptoms, such as self-criticism. Negative thoughts about the self are a central feature of depression, and self-judgment predicts depression (Cox, Enns, & Clara, 2004; Fazaa & Page, 2003; Lerman, Shahar, & Rudich, 2012; Soysa & Wilcomb, 2013). Self-criticism is closely and inversely linked to self-compassion (Barnard & Curry, 2011). The aforementioned compassion-based intervention studies reveal that interventions that foster self-compassion result in reductions in self-criticism and improved self-kindness (Gilbert & Procter, 2006; Leary, Tate, Adams, Allen, & Hancock, 2007; Lucre & Corten, 2013). Therefore, reducing self-criticism may be essential for treatment change. By enhancing self- and other-compassion, CM may reduce the self-criticism common among depressed patients.

This study investigated the effectiveness of a CM group versus a support group for low-income African Americans suicide attempters and self-criticism as a mechanism of treatment change associated with CM. Given that many suicidal persons experience high levels of shame (Dutra, Callahan, Forman, Mendelsohn, & Hermann, 2008; Hastings, Northman, & Tangney, 2000) and self-criticism (Cox et al., 2004; Fazaa & Page, 2003), self-criticism
may be a mechanism of change in this population. Therefore, it was hypothesized that (1) treatment condition would predict changes in self-criticism, with greater improvements for the group receiving CM versus the support group and (2) changes in depressive symptoms would be mediated by the effect of CM on self-criticism. If findings emerge as predicted, they will enrich our understanding of effective treatments for suicidal African Americans and underscore the value of targeting self-criticism to improve treatment outcomes.

METHOD

Participants

Participants were 59 African American adults from a public hospital that provides treatment to low-income individuals. Individuals were recruited from emergency rooms, inpatient units, and outpatient clinics. Those who self-identified as African American and had attempted suicide in the previous year were invited to participate. Demographic information is provided in Table 1.

Procedure

This study was part of a large, longitudinal investigation that was approved by the university’s institutional review board and the hospital’s research oversight committee. The parent study included three interviews with each participant: pre-intervention, postintervention, and 6 weeks after the second interview. Participants were excluded if they were actively psychotic or did not have adequate cognitive functioning for the interview (i.e., < 23 on the Mini-Mental State Exam; Folstein, Folstein, McHugh, & Fanjiang, 2001). If individuals were imminently suicidal, homicidal, severely depressed, or had other acute difficulties during the assessments, they were referred for appropriate services in addition to remaining in the project.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Demographic Characteristics of the Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>n</td>
<td>24</td>
</tr>
<tr>
<td>Mean age (SD)</td>
<td>44.4 (10.1)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>100%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
</tr>
<tr>
<td>Relationship status</td>
<td></td>
</tr>
<tr>
<td>In relationship</td>
<td>77.3%</td>
</tr>
<tr>
<td>Not in relationship</td>
<td>22.7%</td>
</tr>
<tr>
<td>Have children</td>
<td>68.2%</td>
</tr>
<tr>
<td>Homeless</td>
<td>59.1%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>85.7%</td>
</tr>
<tr>
<td>Individual monthly income</td>
<td></td>
</tr>
<tr>
<td>$0–$249</td>
<td>50%</td>
</tr>
<tr>
<td>$250–$499</td>
<td>9.1%</td>
</tr>
<tr>
<td>$500–$999</td>
<td>22.7%</td>
</tr>
<tr>
<td>&gt;$999</td>
<td>10%</td>
</tr>
</tbody>
</table>

After completing the first interview, participants were randomized to the Grady Compassion and Meditation Program (Grady CAMP), a CM intervention, or a support group, each of which were six sessions in duration. They were paid $5 per session to cover transportation costs and $20 for each assessment interview.

Measures

Background Information. The demographics questionnaire gathered basic demographic data.

Self-Criticism. The 22-item Levels of Self-Criticism Scale (Thompson & Zuroff, 2004) assessed self-criticism. A sample item is: “Failure is a very painful experience for me.” Participants reported how well each statement described them according to a 7-point Likert scale (1 = not at all, 7 = very well). Evidence of good convergent validity has been established in relation to measures of depressive symptoms, self-esteem, psychological distress, and perfectionism (Thompson
In the current study, Cronbach’s reliability coefficient was .82, suggesting moderate internal consistency.

**Depressive Symptoms.** The Beck Depression Inventory-II (BDI-II) measured severity of depressive symptoms (Beck, Steer, & Brown, 1996). Participants rated 21 items on a scale of 0 to 3 based on their symptoms for the prior 2 weeks. A final score, ranging from 0 to 63, was calculated according to the sum of all items. Studies support the use of the BDI-II for African American, low-income, and suicidal populations (Carr et al., 2013; Grothe et al., 2005; Joe, Woolley, Brown, Ghahramanlou-Holloway, & Beck, 2008). In this study, Cronbach’s \( \alpha \) was .92, suggesting good internal consistency.

**Suicidality.** All participants attempted suicide in the prior year of inclusion in the study. Each weekly group session included a check-in about participants’ levels of suicidal ideation, intent to commit suicide or engage in self-injury, and acute stressors. Those deemed imminently suicidal during a session were referred for further risk assessment and safety planning. Although the BDI-II includes a suicidal ideation item, the full-scale BDI-II was included in the primary analysis to address the hypotheses regarding treating depression in a suicidal sample. Therefore, suicidal ideation was treated as a symptom of depression, measured by the BDI-II, rather than as a distinct variable. Tables 2 and 3 provide descriptive results of monitoring item 9 of the BDI-II.

**Intervention**

The therapists who conducted the CM intervention, Grady CAMP, participated in the Cognitively-Based Compassion Training through the Emory-Tibet Partnership based in Atlanta, which has a strong connection with His Holiness, the Dalai Lama. The CM Grady CAMP protocol is secular in content and provided in six stages. Each weekly session included a check-in, discussion of current life stress and weekly meditation practice, a didactic portion introducing the meditative technique and incorporating content shared during check-in, and a guided meditation (Ozawa-de Silva, Dodson-Lavelle, Raison, & Negi, 2012). Participants were encouraged to meditate daily and complete practice assignments after each session. The following is a brief description of the six-session training.

**Session 1 (Attention and Mindfulness)** focused on developing attention and mindfulness; cultivating insight into the nature of mental experience; and learning basic meditation techniques for focusing attention and using the breath for longer periods of time.

**Session 2 (Self-compassion)** addressed cultivating compassion for oneself through mindfulness of one’s sensations, feelings, and emotions and recognizing how choices influence emotions and how self-care can increase well-being.

**Session 3 (Equanimity)** focused on developing gratitude for others and recognizing the limitations and instabilities of categories or labels (e.g., friends, enemies, strangers) in a manner that highlights our shared humanity.

**Session 4 (Appreciation)** targeted connecting to and becoming empathic toward others by identifying with their happiness and suffering alike.

**Session 5 (Empathy)** helped individuals progress from wishing that all beings might be happy and free of suffering to aspiring that all beings might be happy and free from suffering—the latter is associated with a more spontaneous, profound, and urgent sense of desiring happiness and freedom from suffering in others.

**Session 6 (Compassion)** emphasized showing active
compassion for others through actions and an active commitment to assisting others.

Support Group. The support group sessions were also 90 minutes in length. They were unstructured and did not include any elements of CM.

Data Analysis Plan

To test the hypotheses that intervention condition will predict change in level of self-criticism between Time 1 (pre-intervention) and Time 2 (postintervention), and indirectly influence change in levels of depressive symptoms from Time 1 to Time 2 through change in self-criticism, we conducted a series of path analyses in Mplus 6.1 (Muthén & Muthén, 1998–2012) using maximum-likelihood estimation. Path analysis allows for the performance of multiple simultaneous regression models, permitting tests of complex models while controlling type-I error rate inflation (Kline, 2011). Standard errors and confidence intervals necessary for normal-theory testing cannot be obtained for this product term using path analysis, and so, these intervals were obtained via bootstrapping (Preacher & Hayes, 2008). Difference scores were used to represent change in study variables between T1 and T2. For the final model, change in depressive symptom scores were regressed on scores for change in self-criticism and condition (CM or support group), and change in self-criticism scores were also regressed on condition. In other words, condition was used as a predictor of change in self-criticism and both condition and change in self-criticism were used as predictors of change in depressive symptoms. Descriptive results are shown in Table 4.

RESULTS

Path results showed a significant direct effect of condition on change in self-criticism ($b = -17.9, SE = 5.45, p < .01$). Participants in the CM group showed a greater reduction in self-criticism postintervention compared to participants in the support group (on average 17.9 points lower), thereby confirming

<table>
<thead>
<tr>
<th>Condition</th>
<th>Level of Self-Criticism Scale $M$ (SD)</th>
<th>Beck Depression Inventory-II $M$ (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time one (SD)</td>
<td>Time two (SD)</td>
</tr>
<tr>
<td>Control</td>
<td>94.3 (23.68)</td>
<td>95.21 (20.02)</td>
</tr>
<tr>
<td>Intervention</td>
<td>108.91 (20.29)</td>
<td>93.31 (20.63)</td>
</tr>
</tbody>
</table>

### Table 3

Frequency of Study Responses on Suicidality Item Across Study Condition and Time

<table>
<thead>
<tr>
<th>Condition</th>
<th>Time one (%)</th>
<th>Time two (%)</th>
<th>Time one (%)</th>
<th>Time two (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t have any thoughts of</td>
<td>11.4</td>
<td>61.1</td>
<td>36.4</td>
<td>56.5</td>
</tr>
<tr>
<td>killing myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have thoughts of killing</td>
<td>51.4</td>
<td>30.6</td>
<td>31.8</td>
<td>26.1</td>
</tr>
<tr>
<td>myself, but I would not carry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>them out</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to kill myself</td>
<td>22.9</td>
<td>2.8</td>
<td>4.5</td>
<td>13.0</td>
</tr>
<tr>
<td>I would kill myself if I had</td>
<td>14.3</td>
<td>5.6</td>
<td>27.3</td>
<td>4.3</td>
</tr>
<tr>
<td>the chance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Path results also demonstrated a significant effect of change in self-criticism on change in depressive symptoms \( (b = 0.24, SE = 0.11, p = .03) \). Therefore, the reduction in self-criticism in turn predicted a decrease in symptoms of depression.

Tests of indirect effects and 95% confidence intervals were obtained using Mplus 6.1 (Muthén & Muthén, 1998-2012) and 5,000 bootstrapped samples. The 95% confidence interval for the estimated indirect effect did not include zero, indicating a statistically significant indirect effect \( (b = -4.24, SE = 2.01, 95\% \ CI = -9.98, -0.08) \). As hypothesized, condition had a significant indirect effect on change in levels of depressive symptoms via change in self-criticism (see Figure 1). Participants in the CM group reported a 4.24 point greater reduction in depressive symptoms resulting from their change in self-criticism compared to participants in the support group, on average.

DISCUSSION

This is the first study to our knowledge to examine how compassion-based treatment impacts depressive symptoms among low-income African Americans. Relative to participating in a traditional support group, participating in CM was associated with more significant and meaningful reductions in self-criticism, which in turn reduced depressive symptoms among African American suicide attempters. Thus, the CM group intervention impacted depressive symptoms through its effects on self-criticism. The findings suggest that CM can be a powerful tool for ameliorating self-criticism in this population, and ultimately for alleviating depressive symptoms. These results are compelling given that all of the participants recently attempted suicide and as such were presenting a high severity of symptoms.

Our results demonstrate that CM reduces depressive symptoms in African Americans who recently attempted suicide and, importantly, that self-criticism is a mechanism of treatment change. Self-judging habits are often components of enduring self-schema and may make sense or feel natural to the individual (Barnard & Curry, 2011). Therefore, explicitly targeting this self-critical thinking process by bringing awareness to one’s self-critical thoughts and practicing more compassionate reactions may disrupt the habitual self-critical response. A module of our CM focuses on fostering self-compassion as opposed to eliminating self-judgment, which provides an alternative internal script.

Reductions in self-criticism may improve depressive symptoms by affecting interpersonal behaviors. Individuals who are depressed socially withdraw and report less positive feelings after social interactions, leading to isolation rather than supportive behaviors (Hawthorne, 2008). Practicing compassion for self and others may increase people’s social engagement and the positive reinforcement they receive from others for pro-social behaviors. Future studies may address these potential effects by including social behaviors as outcome variables when providing CM.

![Figure 1. Path analysis results show the effect of treatment on depressive symptoms mediated by change in self-criticism. Note. Coefficients are standardized. Dashed lines indicate nonsignificant relationships. Confidence interval for indirect effect was obtained using bootstrapping with 5,000 samples.](image-url)
Self-compassion meditation may provide an alternative behavior to replace these automatic self-critical thoughts—responding to emotional distress with self-compassion may become a habit that is strengthened with continued practice and substitute the self-critical response. It may be that increasing self-compassionate responses reduces the frequency of self-critical thoughts or increase one’s ability to challenge or accept those thoughts. In treating individuals with elevated levels of depressive symptoms, it may prove critical to bring self-criticism to one’s awareness while practicing self- and other-compassion.

The present study results are consistent with recent data that compassion-based interventions are promising in terms of alleviating depressive symptoms by boosting one’s kindness, connectedness with common humanity, and mindfulness and reducing one’s vulnerability to self-criticism (Shahar et al., 2012). The findings extend the literature on the effectiveness of compassion-based interventions by evaluating its impact with a clinical sample of low-income African Americans. In addition, the results enhance our understanding of the mechanisms of compassion-based interventions and suggest that targeting self-criticism through compassion-based meditation can facilitate the treatment of depression.

Despite the promise of the results, this study is not without limitations. First, the sample was comprised entirely of African American men and women who were encountering socioeconomic barriers (i.e., high poverty, homelessness, and joblessness). Thus, care should be taken in generalizing the findings to other samples. Replication of the results with more diverse samples of African Americans and with other cultural and ethnic groups and with individuals from varying socioeconomic backgrounds would allow for cross-validation of our findings. Second, future research should examine the associations between self-criticism and depressive symptoms among other ethnic and racial groups; these links may depend on the degree to which one’s culture is individualistic or collectivistic (Yamaguchi & Kim, 2013). Thus, it remains an empirical question whether enhancing self-compassion is associated with reductions in self-criticism and ultimately in depressive symptoms in individuals across multiple ethnic and racial backgrounds. Third, future research should examine the different dimensions of self-criticism and each of their effects, rather than looking at self-criticism as just a unitary construct, and should include important predictors and correlates of depression, such as suicidal ideation. In the present study, we lacked a sufficient sample size and the statistical power necessary to examine this issue. Future research might benefit from elaborating on the present findings by addressing this limitation. Finally, the present study examined self-criticism as one possible mechanism of change. Future models would benefit from addressing additional potential mediators such as self-care behaviors, emotion-regulation strategies, and efforts to seek social support.

Limitations notwithstanding, the results add to a growing literature that substantiates the role of compassion-based interventions in behavioral health care. They also extend our appreciation of the role of self-criticism in the treatment of depressive symptoms. Our findings suggest that an intervention designed to target self-criticism has the potential to reduce depressive symptoms in African Americans facing significant financial barriers and recent suicidality.

REFERENCES


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