Suicidal, Abused African American Women's Response to a Culturally Informed Intervention

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Objective: This study examined (a) the efficacy of a manualized, culturally informed, empowerment-focused psychoeducational group intervention (Nia) designed in accord with the theory of triadic influence or treatment as usual (TAU) for reducing psychological symptomatology (suicidal ideation, depressive symptoms, posttraumatic stress symptoms, general psychological distress), and (b) the effect of Nia versus TAU on the relation between exposure to intimate partner violence (IPV) and psychological symptomatology in these women. *Method:* Two hundred eight low-socioeconomic-status African American women with a recent history of IPV and a suicide attempt were randomized to Nia or TAU and assessed at baseline, postintervention, and 6- and 12-month follow-up. They were assessed on their levels of IPV (Index of Spouse Abuse), suicidal ideation (Beck Scale for Suicidal Ideation), depressive symptoms (Beck Depression Inventory–II), posttraumatic stress symptoms, and general psychological distress (Brief Symptom Inventory). *Results:* Hierarchical linear modeling found that women receiving the culturally informed Nia intervention showed more rapid reductions in depressive symptoms and general distress initially, and the between-group difference in depressive symptoms persisted at follow-up. Following intervention, compared with women randomized to TAU, women in Nia exhibited less severe suicidal ideation when exposed to physical and nonphysical IPV. *Conclusions:* Findings highlight the value of incorporating Nia as an adjunctive intervention for abused, suicidal, low-income women. They underscore the ways the intervention needs to be bolstered to address more directly more mediating and moderating constructs, as well as the need to target more effectively the key outcomes.

Keywords: suicide, depression, intimate partner violence, African American, empowerment intervention

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Violence against women is an international public health concern that demands intervention and prevention efforts at multiple levels. Physical and nonphysical intimate partner violence (IPV) has very negative consequences for women's mental health. Compared with nonabused women, abused women have a higher incidence and severity of suicidal attempts and ideation, symptoms of depression and posttraumatic stress disorder (PTSD), and overall emotional distress (Ellsberg, Jansen, Heise, & Garcia-Moreno, 2008; Heru, Stuart, Rainey, Eyre, & Recupero, 2006; Pico-Alfonso et al., 2006; Seedat, Stein, & Forde, 2005).

African American women compared with European American women are exposed to higher and more severe levels of violent trauma in intimate relationships (Moore, Probst, Tompkins, Cuffe, & Martin, 2007; West, 2002). Both physical and nonphysical IPV have been conceptualized as particularly problematic for low-socioeconomic-status (SES) African American women (Thompson, Kaslow, Kingree, et al., 2000). IPV increases women's risk for myriad psychological problems. Exposure to high levels of all forms of IPV is associated with increased levels of mental health symptoms among African American women, including suicidal ideation and attempts, depression, PTSD, and general psychological distress (Houry, Kemball, Rhodes, & Kaslow, 2006; Kaslow et al., 2002; Thompson, Kaslow, Kingree, et al., 2000). Compared with African American women who have never attempted suicide, demographically comparable suicide attempters are 2.5 and 2.8 times more likely to report physical and nonphysical IPV, respectively (Kaslow et al., 2000; Paranjape et al., 2007). Further, African American women with a history of a suicide attempt and who experienced IPV in the prior year are more depressed than their abused counterparts with no history of suicide attempts (Houry, Kaslow, & Thompson, 2005; Kaslow et al., 2002; Thompson, Kaslow, & Kingree, 2002).

Given the strong association between IPV and suicidal behavior among African American women and the high rates of psychological morbidity in this population, we developed a culturally informed, empowerment-focused psychoeducational group intervention for this population, the Grady Nia Project (detailed below), which was designed to ameliorate psychological symptomatology. There were a number of reasons to develop a new intervention for this cultural group. First, the elements incorporated into Nia are crucial for intervening with low-SES African American women because these women are reluctant to seek formal mental health services, particularly from the dominant system, and thus are more likely to participate in an Afrocentric intervention (Snowden, 2001). Second, to enhance intervention adherence and reduce early termination rates—common problems with African American women in psychotherapy—there was a need to create a culturally informed intervention protocol that placed a high emphasis on treatment engagement (Snowden, 2001). Third, although women across ethnic–racial and SES groups may experience both IPV and suicidal behavior, resolution of these problems may best be addressed by offering culturally meaningful and specific coping strategies. Finally, the emphasis in Nia on finding purpose and hope for oneself and one's community is likely to be more empowering than traditional intervention approaches not designed specifically for this population to women striving to enhance their sense of dignity.

The first goal of the randomized controlled trial was to determine whether Nia was more effective than treatment as usual (TAU) in reducing psychological symptomatology (suicidal ideation, depressive symptoms, posttraumatic stress symptoms, general psychological distress) in low-SES, abused and suicidal African American women. It was predicted that compared with women in TAU, women in Nia would have lower levels of each of the psychological symptomatology variables at postintervention and follow-up. The second goal of this randomized controlled trial was to investigate how Nia affected the relationship between IPV exposure and psychological symptomatology in this sample. It was expected that following the intervention phase, women in Nia would experience less severe psychological symptomatology when exposed to both physical and nonphysical IPV in comparison with women in the TAU group.

Method

Participants

A power analysis (Bakeman & McArthur, 1999) indicated that at least 190 women were needed for a hierarchical linear modeling (HLM) analysis with a power of .80, α = .05, and two predictors (group, time) to detect a small effect size. Two hundred eight (more than the required 190) African American women, ages 18–64, were recruited from a large public, university-affiliated hospital serving an indigent, urban population from July 2000 to August 2006. See Figure 1 for participant flow. As seen in Figure 1, 130 women were randomized to Nia, and of these, 86 attended the required minimum seven of 10 sessions. Of the 130 women allocated to Nia, 44 did not receive the complete intervention, and of these, 32 could not be tracked for postintervention and follow-up assessments. The number of women assigned to the Nia intervention who are classified as completers is 86. Also seen in this figure is the fact that 87 women were assigned to the TAU condition, and of these, 45 were tracked at postintervention and thus were deemed completers. Thus, the compl-

eter sample size for the two groups combined was 131. Eligibility included both IPV and a suicide attempt in the past year. Women presenting because of a suicide attempt or a recent IPV incident were referred by hospital staff. Women presenting for nonpsychiatric medical care in hospital clinics also were screened and recruited if they met the inclusion criteria even if they were not coming to the hospital for assistance following a suicide attempt or IPV incident. Exclusion criteria included inability to complete the pretreatment interview because of cognitive impairment, acute psychosis, or delirium. Compensation was $20, $30, $40, and $50 for the pretreatment, posttreatment, 6-month, and 12-month follow-up interviews, respectively. The study was approved by the university's institutional review board.

Measures

All measures were selected for their psychometric properties and prior use with similar samples. All measures are reliable, valid, and appropriate for the target population. In this sample, the scales have good internal consistency reliability (αs = .85–.93).

The following measures were used to assess the variables associated with the overarching psychological symptomatology construct. Suicidal ideation was assessed by the Beck Scale for Suicidal Ideation (BSS; Beck & Steer, 1991), depressive symptoms were measured via the Beck Depression Inventory–II (BDI-II; Beck, Steer, & Brown, 1996), posttraumatic stress symptoms were examined with the Davidson Trauma Scale (DTS; Davidson, 2003), and general psychological distress was tapped with the Global Severity Index of the Brief Symptom Inventory (BSI-GSI; Derogatis, 1993).

In terms of the IPV exposure construct, IPV severity was measured by the Index of Spouse Abuse (ISA; Hudson & McIntosh, 1981), physical and nonphysical subscales (ISA-P, ISA-NP). As a recent IVP incident was an inclusion criterion, the ISA was administered to all women at the initial assessment. At postintervention and follow-up assessments, the ISA was administered only to women who had an intimate partner since the last assessment.

Procedure

Participants were assessed preintervention, postintervention, and at 6- and 12-month follow-up. At all four assessment points, interviewers were blind to the participant's condition. Following preintervention assessment, women were randomized, via random allocation, to Nia or TAU. The random allocation procedure prescribed that out of each cohort of five women, three were randomized to Nia and two to TAU by the project coordinator, who used a random number sequence. This 3:2 random allocation process was used to ensure sufficient numbers of women in the Nia intervention group and who completed the intervention, based upon pilot data. There were no adverse events reported for women in either condition.

Women assigned to TAU were referred for standard psychiatric and medical care offered by the hospital, including free weekly suicide and IPV support groups. Women in Nia received a culturally informed, empowerment-focused psychoeducational group intervention (Davis et al., 2009). Nia consisted of 10 manualized, 90-min group meetings. Meetings included three to five women and two trained graduate or postdoctoral therapists, one of whom was African American. Nia expands upon existing evidence-based psychosocial treatments for suicidal behaviors (Comtois & Linehan, 2006) and IPV (Sullivan, 2003) by being designed as a culturally informed group
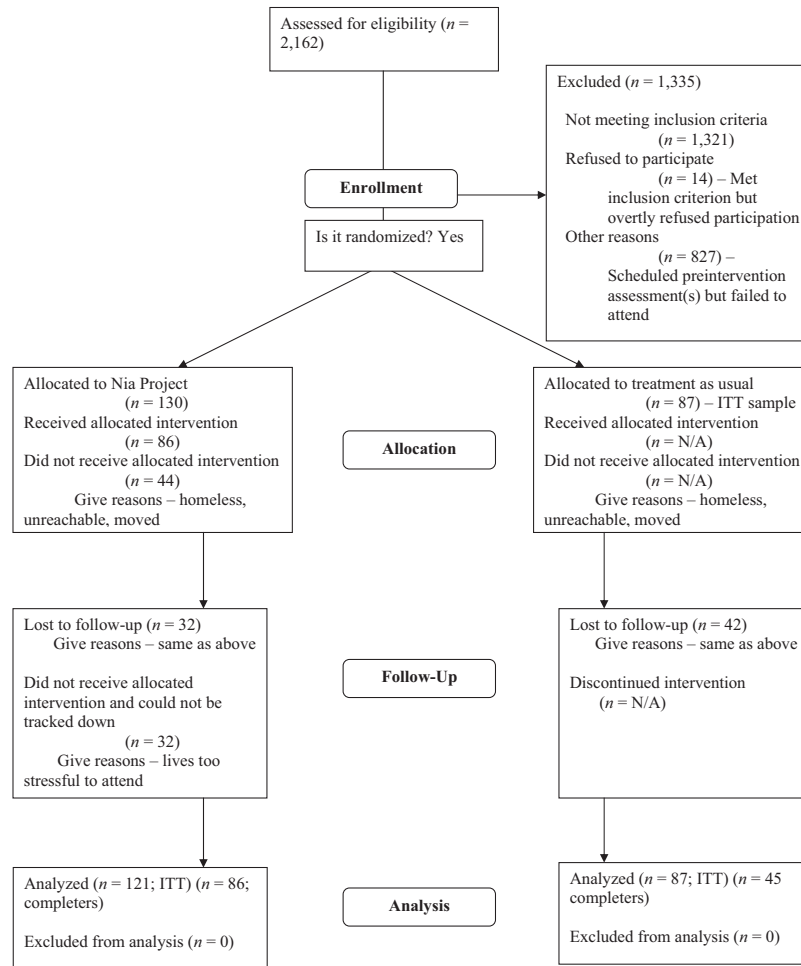
Figure 1. The CONSORT flowchart. ITT = intent to treat; N/A = not applicable.

intervention that is specific to African American women with a history of both IPV and suicide attempts. Nia was designed in accord with the theory of triadic influence (TTI; Flay & Petraitis, 1994), which describes intrapersonal, social and situational, and social and environmental streams of influence that are the ultimate causes of human behavior and that suggest proximal predictors (risk and protective factors) of behavior (Bell, 2006; Mann, Hosman, Schaalma, & de Vries, 2004). The TTI guides Nia by targeting resiliency, problem solving, self-efficacy, social connectedness, and other protective factors to enhance coping with stress exposure, including culturally relevant variables, that aid women in creating purpose and hope (Bell, 2006; Flay & Phil, 2002).

Although it is reasonable to argue that interventions for abused women should be designed to extricate them from abusive relationships, many women are reluctant to do so given concerns about safety, economic stability, and material resources; a desire for a partner or father for their children; shame, guilt, and love; and lack of adequate social support (Bliss, Ogley-Oliver, Jackson, Harp, & Kaslow, 2008). Further, many women in this sample are in the contemplation stage of change and thus not ready to leave their abuser (Bliss et al., 2008). Thus, to acknowledge the social and environmental contexts within which the women in the project are embedded and their stage in the

change process, Nia was designed to assist women in leading more violence-free lives, but without pressuring or requiring them to leave the perpetrator. However, they are taught strategies for removing themselves from violent relationships.

Nia is culturally informed (Davis et al., 2009), as it derives its name from the Kwanzaa term that means "purpose." It incorporates constructs from Afrocentric theory (Corneille, Ashcraft, & Belgrave, 2005) to empower women (Roberts, Jackson, & Carlton-Laney, 2000). The intervention uses African proverbs, attends to African American heroines and personal positive female mentors and role models, and emphasizes culturally relevant coping strategies (spirituality, religious involvement) to enhance self-awareness and connection (Hampton & Gullotta, 2006). For example, in the meeting devoted to enhancing intrapersonal protective factors, the women are asked to draw images that depict themselves as an African American goddess, as well as to collectively call out names of African American heroines and personal female positive mentors and role models to assist them in experiencing themselves as strong African American women.

Further, it builds on the strengths of African American women, their families, and communities (e.g., achievement oriented, strong work orientation, strong kinship bonds, flexible family roles, strong

Table 1
Sociodemographic Characteristics of the Sample

Characteristic	Value
Mean age (*SD*)	34.7 (9.4)
Relationship status (%)	
Single or never married	30.3
With partner, not living together	13.5
With partner, living together	19.7
Married	7.2
Separated	13.0
Divorced	13.9
Widowed	2.4
Currently in an intimate relationship (%)	69.1
Sex of current partner (%)	
Male	65.2
Female	3.9
Have children (%)	81.6
Education (%)	
Less than 12th grade	40.4
High school diploma or equivalent	33.6
Some college or technical school	19.2
Completed college or technical school	6.7
Unemployed (%)	84.6
Monthly income: individual/household (%)	
<$250	54.9/31.9
$250–$499	17.5/15.7
$500–$999	21.4/22.5
$1,000–$2,000	5.3/14.7
>$2,000	1.0/15.2
Homeless (%)	45.2

religious orientation; Brody et al., 2006; Campbell, Sharps, Gary, Campbell, & Lopez, 2002; Hampton & Gullotta, 2006; R. B. Hill, 1999). The group format has been advocated for African American women; it provides the opportunity to build networks for emotional and spiritual support, promote positive health, and share stories and obtain validation (Banks-Wallace, 2000; Williams, 1999).

Meetings included check-ins, structured discussions, and activities. Meeting 1, introduction and commitment to safety, familiarized participants with the intervention and established rapport among all parties. Meeting 2 provided education about IPV and suicide and their correlates, with attention to these constructs in the African American

community. Meeting 3 taught women safety planning for both IPV and suicidal behavior, taking race and SES into account. Meetings 4 and 5 focused on reducing intrapersonal risk factors (e.g., life stress, psychological disorders) and enhancing intrapersonal protective factors (e.g., hopefulness, optimism, adaptive coping strategies, problem solving), respectively. Meetings 6 and 7 addressed reducing social and situational risk factors and enhancing protective factors within this domain. Specifically, targeted risk factors include relationship problems and interpersonal dilemmas, whereas protective factors pertained to social support and interpersonal effectiveness. Meetings 8 and 9 were geared toward reducing cultural and environmental risk factors (resource needs and access problems, community stigma) and enhancing associated protective factors (resource procurement, employment). Meeting 10 reviewed topics previously covered, developed aftercare plans, and focused on graduation and feedback.

Fidelity to the manual was a focus of supervision. It was rated by independent raters who reviewed videotapes of the sessions and completed the 22-item Group Leader Manual Adherence and Competence Rating Form, which includes a 5-point rating scale for each item. If manual adherence was low (i.e., ≤3 mean score for all items combined), retraining and intensified supervision occurred. Manual adherence was 89%.

Results

Characteristics of the Sample

Sample demographics are reported in Table 1. There were no differences on any key demographics between the women in the two groups. Nia participants who completed the intervention attended a mean of 9.04 groups (*SD* = 1.04). Other forms of treatment received by participants in both groups are presented in Table 2. No between-group differences were noted on these other forms of treatment. Descriptive statistics for measures across the four assessments are presented in Table 3.

Effect of Nia on Psychological Symptomatology

HLM (Raudenbush & Bryk, 2002) was used to examine the first hypothesis, which pertained to the relative effect of Nia versus

Table 2
Treatment Utilization by Group During Intervention Interval (%)

Treatment	Group		χ^2
	Nia	TAU	
Mental health emergency service	33.3	43.2	0.91
Psychiatric hospitalization	24.4	20.5	0.20
Day treatment or intensive outpatient treatment	35.6	36.4	0.01
Psychiatric medication	62.2	56.8	0.27
Individual counseling or therapy	59.1	59.1	0.00
Crisis hotline	26.7	29.5	0.09
Medical emergency service	42.2	52.3	0.90
Medical hospitalization	22.2	31.8	1.04
Women's or domestic violence shelter	26.7	25.0	0.03
Self-help group	33.3	36.4	0.09
Al-Anon/Adult Children of Alcoholics	11.1	2.3	2.76
Other support group (e.g., church, HIV/AIDS)	59.1	40.0	6.60

Note. No chi-square tests were significant. TAU = treatment as usual.

Table 3

Means and Standard Deviations of Outcome Measures Across Assessments

Scale	Preintervention TAU n	M	SD	Preintervention Nia n	M	SD	Postintervention TAU n	M	SD	Postintervention Nia n	M	SD	6 Months TAU n	M	SD	6 Months Nia n	M	SD	12 Months TAU n	M	SD	12 Months Nia n	M	SD
Inventory of Spousal Abuse measures	87			121			38			39			25			30			29			29		
All other measures	87			121			44			45			35			34			31			31		
Beck Scale for Suicidal Ideation		15.2	11.3		12.8	9.7		10.5	8.8		5.3	5.2		11.9	11.6		6.2	5.5		11.0	10.8		7.8	7.7
Beck Depression Inventory—II		35.2	12.6		35.4	12.2		29.5	13.1		22.8	13.2		27.2	16.3		22.1	14.3		28.4	16.1		23.3	14.7
Davidson Trauma Scale		79.4	31.5		81.1	32.9		72.1	33.6		68.4	33.8		69.8	35.5		64.0	36.7		65.3	30.5		63.4	38.0
Brief Symptom Inventory–Global Severity Index		55.3	17.0		55.4	16.0		48.0	15.0		41.7	16.9		45.4	17.9		40.5	14.5		44.5	15.7		44.8	18.0
Inventory of Spousal Abuse–Physical		50.1	26.9		42.9	29.4		31.8	27.0		29.2	26.4		30.0	27.1		31.7	35.1		34.1	24.4		16.3	20.3
Inventory of Spousal Abuse–Nonphysical		46.0	18.7		40.1	22.5		47.7	28.6		43.1	29.8		39.3	28.4		39.3	34.8		45.25	26.4		26.1	24.7

Note. TAU = treatment as usual.

TAU on psychological symptomatology. Therefore, all TAU participants ($n = 87$) and all Nia participants ($n = 121$) were included in the outcome analysis. Time was coded as the assessment period minus 1 (i.e., 0, 1, 2, 3; representing preintervention, postintervention, 6-month follow-up, and 12-month follow-up assessments, respectively). In this way, model intercepts represented scores at preintervention, and model slopes represented change over the study's 12-month duration. For longitudinal analyses, Level 1 modeled intraindividual change, and Level 2 modeled group differences (Singer & Willett, 2003). To find the most appropriate model for intraindividual change across the four assessment points, we tested progressively higher order polynomials on Level 1. Specifically, we examined whether the change in each measure was best represented by a constant, linear, quadratic, or cubic model. When the higher order polynomial was not significant, we pared the model to the lower order polynomial. A linear polynomial represented constant change over the study's duration and would be depicted as a straight line, a quadratic polynomial would be illustrated as a line with one inflection point (i.e., one curve in the line), and a cubic polynomial would be depicted with two inflection points (i.e., two curves in the line). Once the most parsimonious Level 1 model was selected, we tested for between-group differences by incorporating group (Nia vs. TAU) as a predictor in the Level 2 models. The models were tested with HLM (Version 6.06; Raudenbush, Bryk, Cheong, & Congdon, 2004):

$$\text{Level 1: } Y = P_0 + P_1*(\text{Time}) + P_2*(\text{Time}^2) + P_3*(\text{Time}^3) + E$$

$$\text{Level 2: } P_0 = B_{00} + B_{01}*\text{Group}$$

$$P_1 = B_{10} + B_{11}*\text{Group} + r$$

$$P_2 = B_{20} + B_{21}*\text{Group} + r$$

$$P_3 = B_{30} + B_{31}*\text{Group} + r$$

Table 4 presents the parameter estimates for predicting change on psychological symptomatology (BSS, BDI-II, DTS, BSI-GSI). The intercept value B_{00} indicates the preintervention score for the TAU group, whereas B_{01} indicates the difference in preintervention scores between the TAU and Nia groups. Likewise, B_{10}, B_{20}, and B_{30} represent the longitudinal change parameters for the TAU group, and B_{11}, B_{21}, and B_{31} represent the difference between TAU and Nia groups on these parameters. The significance tests for the B_{01} values indicated that the preintervention scores on the outcome variables did not vary significantly between TAU and NIA groups. As can be seen, the shapes of the trajectories varied depending on the outcome measure assessed. The change of the sample was best characterized by a cubic model for the BSS, a quadratic model for the BDI-II and BSI-GSI, and a linear model for the DTS. The two psychological symptomatology measures on which the groups showed differential change were the BDI-II ($B_{11} = -6.77$, 95% CI [-13.51, -0.04], $\delta_P = -0.70$) and the BSI-GSI ($B_{11} = -8.52$, 95% CI [-16.58, -0.46], $\delta_P = -0.87$; $B_{21} = 2.79$, 95% CI [0.12, 5.46], $\delta_P = 1.37$).[1]

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[1] All effect sizes (δ_P) were calculated according to the recommendations of Raudenbush and Xiao-Feng (2001).

Table 4

Parameter Estimates for Predicting Change Across Assessments

Measure	Intercept (P_0)		Linear term (P_1)		Quadratic term (P_2)		Cubic term (P_3)	
	$B_{00 \text{ (TAU)}}$	$B_{01 \text{ (Nia)}}$	$B_{10 \text{ (TAU)}}$	$B_{11 \text{ (Nia)}}$	$B_{20 \text{ (TAU)}}$	$B_{21 \text{ (Nia)}}$	$B_{30 \text{ (TAU)}}$	$B_{31 \text{ (Nia)}}$
Beck Scale for Suicidal Ideation								
B	15.221	−2.37	−9.59	−5.16	6.28	2.32	−1.17	−0.24
SE	1.21	1.51	4.32	5.26	3.98	4.87	0.88	1.09
t	12.62***	−1.58	−2.22*	−0.98	1.58	0.48	−1.34	−0.23
Beck Depression Inventory–II								
B	35.32	−0.09	−7.62	−6.77	1.94	1.47		
SE	1.34	1.73	2.48	3.44	0.86	1.16		
t	26.28***	−0.05	−3.07**	−1.96*	2.25*	1.28		
Davidson Trauma Scale								
B	78.87	0.60	−4.66	−2.35				
SE	3.38	4.44	1.80	2.75				
t	23.33***	0.14	−2.58**	−0.85				
Brief Symptom Inventory–Global Severity Index								
B	55.29	−0.03	−8.33	−8.52	1.65	2.79		
SE	1.79	2.30	2.79	4.11	0.94	1.36		
t	30.95***	−0.01	−2.98**	−2.07*	1.75	2.05*		

Note. TAU = treatment as usual.
* $p < .05$.   ** $p < .01$.   *** $p < .001$.

Specifically, when predicting depressive symptoms (BDI-II), the linear parameter estimates reflected that both groups showed general reductions in symptoms, and the quadratic parameter estimates reflected that both groups had a slight increase in symptoms during the follow-up period. However, the Nia group's initial symptom reduction was significantly greater than that of the TAU group (B_{11} = −6.77), resulting in less severe depressive symptom scores throughout the study's duration, although they remained elevated in depressive symptoms. When predicting the BSI-GSI, results indicated that although the TAU group showed a significant reduction in general distress (B_{10} = −8.33), the Nia group showed a significantly greater reduction initially (−8.33 + −8.52 = 16.85) but then increased slightly during the follow-up period (1.65 + 2.79 = 4.44). The graphs in Figure 2 reflect these findings and show that the intervention group had more rapid reductions in both depressive symptoms and general distress initially than the TAU group. In addition, for the BDI-II, the intervention group continued to have less severe depression than the TAU group through the 12-month follow-up. However, for the BSI-GSI, both groups were equivalent at 12-month follow-up.

Effect of Nia on the Association Between IPV Exposure and Psychological Symptomatology

The second hypothesis centered on the association between IPV exposure and psychological symptomatology after the completion of the Nia intervention. We were interested in determining whether, after the intervention phase, the association between IPV exposure and psychological symptomatology was attenuated in women who participated in Nia. First, we had to verify that the magnitude of the relationship between IPV exposure and psychological symptomatology at preintervention did not differ between groups. To do this, we used a series of regression analyses. For each psychological symptomatology scale (BSS, BDI-II, DTS, BSI-GSI), we regressed the two IPV exposure variables (ISA-P, ISA-NP), group assignment, and interaction of IPV exposure and

group assignment. These eight regression analyses yielded no Preintervention Group × IPV interaction effects. This verified that, at pretreatment, there was an association between some psychological symptoms and IPV exposure, but these associations did not differ between the two groups.

Next, to determine whether women who participated in Nia experienced less severe psychological symptomatology at times of IPV exposure than women who did not participate in Nia, we again used HLM. The Level 1 model described the intraindividual relationship between psychological symptomatology and IPV exposure at assessment points following the intervention. In this sense, each participant theoretically has her own regression line describing how her level of IPV exposure predicts her level of psychological symptomatology. This association is estimated by data collected at the three postintervention assessments (postintervention, 6-month follow-up, 12-month follow-up). Her pretreatment psychological symptomatology and the systematic error due to the passage of time were covariates:

Level 1: Psychological Symptomatology = P_0
$$+ P_1*(\text{Pretreatment Symptomatology})$$
$$+ P_2*(\text{Time}) + P_3*(\text{IPV Exposure}) + E$$

Level 2: $P_0 = B_{00} + B_{01}*\text{Group} + r$
$$P_1 = B_{10}$$
$$P_2 = B_{20}$$
$$P_3 = B_{30} + B_{31}*\text{Group} + r$$

We tested for between-group differences by using the group variable (Nia vs. TAU) to estimate slope and intercept of the Level 1 model. A significant B_{01} would indicate a main effect for group assignment (i.e., psychological symptomatology differed between
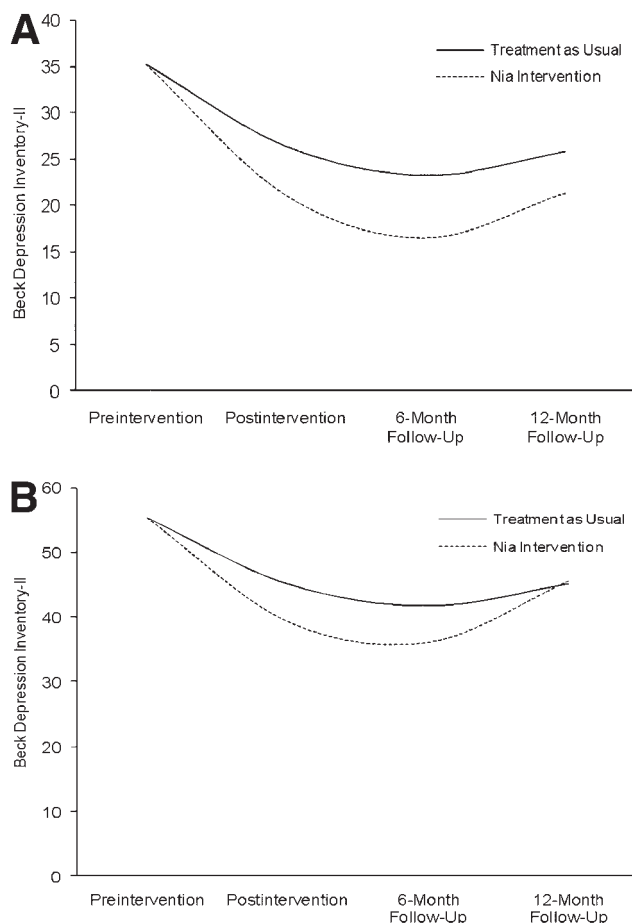
Figure 2. Change in depressive symptoms (A) and general distress (B) across assessment points.

TAU and Nia groups across regardless of IPV exposure level). A significant B_{31} would indicate an interaction effect for IPV exposure and group assignment (i.e., psychological symptomatology differed between TAU and Nia based on the level of IPV exposure level). Although there was a third level of nesting (women within Nia groups), this was not included in the analyses because there were no equivalent nesting groups for women in TAU. These analyses included only women who completed at least one postintervention assessment and who reported having an intimate partner since her last assessment. Therefore, these analyses included 38 of 44 TAU participants and 39 of 45 Nia participants who completed at least one postintervention appointment.

As seen in Table 5, HLM revealed that some relations between IPV exposure and psychological symptomatology at postintervention were modified by group assignment. No group main effects were found. Two interaction effects were found. First, HLM revealed that BSS scores differed between groups across values of the ISA-P ($B_{31} = -0.1071$, $SE = 0.0460$), $t(90) = -2.325$, $p < .05$, 95% CI [-0.1973, -0.0169], effect size = 2.27. Investigation of coefficients and graphical illustrations of this finding (see Figure 3) revealed that for women in the TAU group, the BSS score increased as their ISA-P score increased. However, for women in the Nia group, BSS scores remained relatively low

across ISA-P values. Second, HLM revealed a similar finding for BSS and ISA-NP. For women in the TAU group, the BSS score increased as their ISA-NP score increased ($B_{31} = -0.1278$, $SE = 0.0412$), $t(90) = -3.098$, $p < .01$, 95% CI [-0.2086, -0.0470], effect size = 2.46. However, for women in the Nia group, BSS scores remained relatively low across ISA-NP values. No interaction effects were found in depressive symptoms, posttraumatic stress symptoms, or general distress in reaction to the IPV exposure variables.

Discussion

Results from this randomized controlled trial revealed that abused, suicidal, low-SES African American women assigned randomly to a culturally informed, empowerment-focused psychoeducational group intervention as an adjunct to TAU manifested lower levels of depressive symptoms and general distress at postintervention than their peers assigned to a usual-care control group. These between-group differences in depressive symptoms were maintained throughout the duration of the project. However, the Nia intervention was not associated with greater reductions in suicidal ideation or symptoms of PTSD. Taken together, these findings underscore the therapeutic value of this TTI-guided intervention approach for ameliorating some forms of emotional distress, but suggest that it needs some modifications to target more effectively a broader array of psychological symptomatology.

Further, our results showed that compared with women in TAU, the women in Nia experienced attenuated levels of suicidal ideation at postintervention and follow-up in response to IPV exposure. This suggests that women who received a culturally informed, empowerment-focused psychoeducational group intervention become less suicidal in response to both physical and nonphysical IPV than their counterparts who did not receive the intensive group program. More specifically, for women in the Nia group, their level of suicidal ideation remained relatively low in the face of partner abuse, whereas for women in the control group, they became more suicidal when they experienced higher levels of IPV exposure. Given that three Nia sessions focused on suicide and IPV and their correlates, it is not surprising that we found between-condition effects in the expected direction for suicidal ideation. Consistent with the basic premises of the TTI, Nia was helpful to the women by reducing the residual effects of IPV in their lives (Bell & McKay, 2004). It is possible that in keeping with the TTI model, one mechanism by which the Nia intervention was helpful was through enhancing the women's sense of belongingness with members of their support system and community, which is critical given that thwarted belongingness is a predictor of suicidal behavior (Joiner, 2005; Stellrecht et al., 2006). However, contrary to predictions, participating in Nia did not render the women less susceptible to experiencing symptoms of depression, PTSD, or general distress in response to IPV exposure.

This report represents the first empirical investigation of the Grady Nia Project. On the one hand, the findings show that the intervention itself has some efficacy with regard to reducing psychological symptomatology including the reduction of symptoms in response to IPV exposure. However, the intervention was not as effective as anticipated. For example, suicidal ideation decreased only in response to IPV exposure and not in and of itself. This is

Table 5

Summary of Hierarchical Linear Modeling Analysis for the Effect of Nia on the Association Between Exposure to Intimate Partner Violence and Psychological Symptomatology Following the Intervention Interval

	Intercept				Slope			
Psychological symptomatology scale	B_{01}	SE	t	Effect size δ_{P0}[a]	B_{31}	SE	t	Effect size δ_{P3}[a]
Beck Scale for Suicidal Ideation								
ISA–Physical	0.1040	1.7340	0.060	0.03	−0.1071*	0.0460	−2.325	2.27
ISA–Nonphysical	1.9957	1.8234	1.094	0.80	−0.1278**	0.0412	−3.098	2.46
Beck Depression Inventory–II								
ISA−Physical	−4.0568	2.8611	−1.418	0.68	−0.0530	0.0705	−0.752	0.93
ISA−Nonphysical	−1.3425	3.2367	−0.415	0.22	−0.1007	0.0658	−1.532	1.09
Davidson Trauma Scale								
ISA−Physical	5.5020	7.2665	0.757	0.37	−0.1654	0.1675	−0.987	2.24
ISA−Nonphysical	5.0228	8.5749	0.586	0.31	−0.1006	0.1578	−0.637	0.99
Brief Symptom Inventory–Global Severity Index								
ISA−Physical	−0.0267	3.7020	−0.007	0.00	−0.0830	0.0803	−1.033	1.22
ISA−Nonphysical	1.4525	4.4034	0.330	0.13	−0.0890	0.0775	−1.148	0.96

Note. Preintervention psychological symptomatology and time were covariates. ISA = Inventory of Spousal Abuse.
[a] Standardized effect size as defined by Raudenbush and Xiao-Feng (2001).
* $p < .05$.   ** $p < .01$.

concerning given that the intervention was designed to reduce suicidal ideation. As another example, the women did not evidence reductions in their level of PTSD symptoms. No Nia sessions offered targeted interventions for PTSD. This is likely the reason that no condition effects were found for these outcomes. Previous research has indicated that trauma symptoms are related to suicidal behavior in this population (Houry et al., 2006; Kaslow, Jacobs, Young, & Cook, 2006; Kaslow et al., 2002; Thompson et al., 2002; Thompson, Kaslow, Lane, & Kingree, 2000). Therefore, it may be beneficial to add individual sessions that use evidence-based strategies for reducing PTSD, such as those focused on addressing maladaptive trauma-related cognitions and behaviors (Foa, Keane, Friedman, & Cohen, 2009). In general, the women's lives are so chaotic and traumatic, and the women have so many different

Figure 3. Postintervention relation between suicidal ideation (Beck Scale for Suicidal Ideation, or BSS) and physical intimate partner violence (Index of Spouse Abuse–Physical, or ISA-P) for Nia and treatment-as-usual groups.

psychological difficulties, that it will be challenging to develop a protocol of reasonable length that adequately addresses all their challenges and forms of distress.

Study results need to be considered in light of a number of limitations. There was significant attrition, which was not surprising given the unstable lives of the women in the project. A structured diagnostic interview was not conducted, and thus the focus is on symptoms rather than disorders as outcome variables. Reports of psychological symptomatology and IPV were only from the women, and thus their validity may be questionable. No direct measure of coping was included, and thus no specific conclusions can be drawn about whether Nia specifically impacted coping. Moreover, although the reality may be that for many of the women, it was not realistic for them to leave abusive partners, the fact that the intervention program did not require them to leave their perpetrator could be seen as a weakness of the protocol. Of course, a significant number of the women did, with the help of the project, leave their abuser. Given the nature of the sample with regard to race and SES, and the cultural specificity of the intervention, the generalizability of the findings remains an empirical question. Finally, this study addressed a question of moderation: namely, does the intervention attenuate the effect of IPV exposure on outcome? Future research should address the mediational question of whether or not the intervention reduced IPV and thereby improved psychological adjustment.

Despite these limitations, given that African American women experience higher levels of stress than European Americans (Turner & Avison, 2003), it is imperative that more evidence-based interventions be developed and tested to reduce various forms of stress in these women's lives, only one of which is IPV. The treatment outcome data are promising and suggest the potential for the Grady Nia Project to become an evidence-based intervention with more refinement and replication. Further, the analyses consider treatment response in light of the stressful lives of this sample, rather than focus solely on between-group differences following the intervention phase. The question was not simply
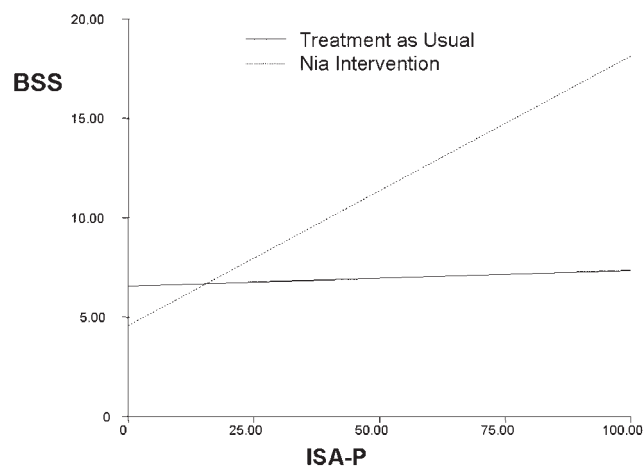
whether in an experimental versus a control group symptoms improve, but rather whether engagement in an active intervention helps disadvantaged women who are poor, unemployed, relatively uneducated, and oftentimes homeless cope more effectively with IPV, a serious and potentially life-threatening stressor. HLM allowed for this more complex analysis over time. The results offer suggestions for future intervention studies. They underscore the value of culturally informed interventions, particularly those designed to be empowering (Davis et al., 2009). They highlight the need to focus not just on outcome variables but also on enhancing coping strategies to aid abused and suicidal women in dealing with IPV.

Future interventions may be more effective if they directly target other psychological problems endorsed by abused, suicidal women (e.g., PTSD) and if they assist women in transversing the stages of change (Bliss et al., 2008). They also could be modified to be more inclusive of all TTI constructs. Optimally, large-scale community-wide prevention programs need to be instituted for low-SES African American women that target a broad array of life stressors, such as household disrepair, neighborhood disorder, and economic hardship, which are associated with psychological distress in poor, urban, abused women (T. D. Hill, Mossakowski, & Angel, 2007). These programs may be even more relevant if they address one additional form of stress exposure of particular concern to African Americans, namely racial microaggressions, using culturally informed therapeutic strategies for assisting women in meaning making and sustained healing (Bell & Mattis, 2000; Sue et al., 2007; Sue et al., 2008). Finally, attention needs to be paid in assessing these interventions to the mechanisms through which change occurs, such as an increased sense of belonging or the development of more effective coping mechanisms.

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