A Culturally Adapted Depression Intervention for African American Adults: An Efficacy Trial

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ABSTRACT

Background: Major depressive disorder (MDD) is one of the most common, costly, and debilitating psychiatric disorders in the United States, and the World Health Organization has identified MDD as a leading cause of disability. Although the rates of MDD among African American and White populations in the US are comparable, African Americans in the US tend to experience higher rates of disability associated with MDD compared to White people. Despite the high burden of MDD among African Americans, their use of mental health services is low, in part due to suboptimal care.

Objectives: This study evaluated the efficacy of a culturally adapted depression intervention (Oh Happy Day Class [OHDC]) compared to an active control, the Coping with Depression (CWD) course.

Methods: A clustered randomized controlled trial was conducted with a sample of 132 patients with mild to moderate depressive symptoms. They were randomly assigned in a 2-armed randomized controlled trial. They received 1 of 2 (OHDC or CWD) 12-week interventions in weekly in-person group sessions. The primary outcome was a change in depressive symptoms during and post-intervention, measured with the Center for Epidemiologic Studies Depression Scale (CES-D) and the Quick Inventory of Depression Symptoms (QIDS). Analyses included log-rank test and mixed effects linear regression models.

Results: Both interventions were efficacious in reducing symptoms of depression. However, a greater dose of the culturally adapted intervention, Oh Happy Day Class, showed a greater reduction in depression symptoms.

Conclusion: This study represents the first randomized controlled trial evaluating the culturally adapted treatment depression intervention, Oh Happy Day Class. These findings provide evidence for and the need for culturally adapted treatments. Future research with larger samples of African Americans from different regions across the US could examine effectiveness and generalizability of the Oh Happy Day Class depression treatment.

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BACKGROUND

Major depressive disorder (MDD) is one of the most common, costly, and debilitating psychiatric disorders in the United States, and the World Health Organization has identified MDD as a leading cause of disability.[1,2] Additionally, MDD is associated with higher rates of chronic diseases and impaired functioning.[1] The societal costs of MDD include lower educational attainment and low probability of marrying with early onset MDD; increased rates of teen pregnancy with early onset MDD; negative impact on work performance, which then negatively affects financial success; and high comorbidity with a wide variety of chronic physical disorders, including arthritis, asthma, cancer, cardiovascular disease, and diabetes.[3] Despite the debilitating burden of depression, treatment use is low among individuals with depression, and treatment is often inadequate or of low quality.[1,4,5]

African American Adults, Major Depressive Disorder, and Care

African Americans across the US experience significant disparities in mental health care.[6-9] According to the US Department of Health and Human Services seminal 2001 publication, *Mental Health: Culture, Race and Ethnicity*,[10] African Americans have less access to mental health care and tend to receive poorer quality mental health services.[4,10] Additionally, these disparities are associated with poor mental health outcomes. The 12-month prevalence of MDD among African American and

White populations is relatively similar (7.9% and 5.4%, respectively); however, African American adults report more chronic MDD and higher rates of disability associated with MDD than do White adults (56.5% vs 38.6%, respectively).[1,6]

Although African Americans are burdened by depression, they report less adequate mental health care. A national psychiatric epidemiology survey that examined access and quality of depression care in the US showed that African Americans received adequate mental health care only 14% of the time.[2] Another study showed even lower rates of outpatient service use among African Americans – only 5.6% reported having 4 or more visits within 12 months, compared to 81.6% of White individuals reporting having 4 or more visits within 12 months.[6] Additionally, African Americans showed higher rates of attrition from psychotherapy and pharmacotherapy than White patients.[1,3] Despite their low use of outpatient mental health services, African Americans are overrepresented among inpatient psychiatric care patients. In particular, their use of emergency departments for mental health problems – including MDD – far exceeds other groups.[8-10]

Poor quality depression care for African Americans might partially explain the lower rates of service use, the high attrition, and the high rates of inpatient psychiatric care. One study that examined the quality of depression care among a representative sample of African Americans in the National Survey of American Life (N=3,673) found optimal depression care among African Americans is low.[2] This finding is consistent with earlier research, suggesting that African Americans are often underdiagnosed and undertreated for depression.[6,7,9,11,12] In sum, the literature suggests that depression care remains suboptimal for African Americans who suffer from major depressive disorder.[2,13,14]

Culturally Adapted Treatments

The term culturally adapted treatments (CAT) refers to any modification to evidence-based mental health treatments that involves either changes to the approach to service delivery, the nature of the therapeutic relationship, or the components of the treatment itself to accommodate the cultural beliefs, attitudes, and behaviors of the target population.[7,15] Research indicates culturally adapted interventions are effective in treating mental disorders among racial and ethnic minorities.[7,11] However, there is a need for more research on culturally adapted interventions designed specifically for African American adults with depression.[7,15,16]

Purpose of Study

We examined the efficacy of a culturally adapted depression intervention (Oh Happy Day Class [OHDC]) compared to a standardized active control (Coping With Depression Course [CWD]) among African American adults with depression. Both the OHDC and CDW are 12-week behavioral group interventions. Although our earlier work showed efficacy of the OHDC among African American adults with depression in the short term (3 months pos-

tintervention),[17] we did not compare OHDC with an unadapted intervention. Currently, best practices call for comparing the culturally adapted with the unadapted intervention to increase the rigor of CATs research. In addition, a meta-analysis of 78 studies of CATs identified only 9 studies that use the culturally adapted vs unadapted forms of the same intervention design.[16] We examined the efficacy of the OHDC compared to the unadapted CWD in reducing symptoms of depression among African American adults at 6 and 12 weeks, and 3 and 6 months postintervention. We hypothesized that the OHDC compared to the CWD would result in fewer depressive symptoms. Because of the high rates of disability associated with depression among African Americans, we predicted the OHDC would increase self-reports of improved mental and physical health.

Interventions

Oh Happy Day Class

OHDC is a culturally adapted depression intervention adapted from CWD, an intervention originally designed for White adults experiencing MDD. Details about adapting the CWD to develop the OHDC have been reported elsewhere.[17] A brief description of OHDC and preliminary data supporting effectiveness of the OHDC are summarized below.

OHDC is 12-module group therapy intervention that uses cognitive behavioral therapy and a support group format, combined with a strong psycho-education focus.[17] The weekly sessions are called classes. Classes are 2.5 hours long, and the content is focused on increasing participants' knowledge of depression and treatment options, developing healthy coping behaviors, and shifting negative perceptions of health and disability status to more positive attitudes. The clinical sessions were delivered by 2 African American counselors, each with a masters' degrees in counseling psychology. See Table 1 for OHDC modules.

OHDC effectiveness was examined in 2 pilot studies. Results for pilot 1 indicated that 73% of subjects completed the full OHDC—with a 0.38 effect size—and showed a statistically significant decline in depression symptoms from preintervention to postintervention. Results for pilot 2 indicated that 66% of subjects completed the full OHDC—with a 1.01 effect size for men and a 0.41 effect size for women—and showed a statistically significant decline in depression symptoms from preintervention to postintervention.[17] These promising findings provided pilot data to support the National Institutes of Health-funded randomized controlled trial reported in this paper.

Coping with Depression Course

The CWD is a multimodal psychoeducational group treatment for depression. It is referred to as a course because of the prioritization of an explicit educational experience for patients, whereby patients are taught techniques and strategies for coping with problems related to depression.[18] CWD is grounded in social learning theory and cognitive behavior theory and uses a psychoeducation

format in which participants learn skills to help them cope with their depression.[18-20] CWD focuses on several target behaviors (social skills, thinking, pleasant activities, relaxations), in addition to other behaviors aligned with cognitive behavior therapy.[19-20] CWD has 12 modules and is delivered as a course offered weekly, with 2-hour sessions in a clinical setting. The clinical sessions were delivered by 2 White psychologists, each with a PhD in clinical psychology. See Table 1 for the CWD course modules.

CWD is the most studied depression intervention.[17,18] A meta-analysis of 25 studies examining the effectiveness of CWD found it to be effective in the treatment of MDD, which influenced our decision to culturally adapt the CWD in developing the OHDC (discussed elsewhere[17]). In their meta-analysis, Cuijpers and colleagues[20] found that CWD reduced symptoms of depression compared to controls (effect size 0.28, 95% CI, 0.18-0.39 with 18 trials).

METHODS
Design and Sample

A clustered randomized controlled trial[21,22] was conducted to examine the efficacy of the culturally adapted depression intervention (OHDC) compared to the unadapted intervention (CWD) in reducing symptoms of depression among African American adults. Participants were randomly assigned to OHDC or CWD. After randomization, participants in the OHDC and CWD arms were grouped into class groups of 7 participants each.

Although the groups were configured by gender, no specific gender stratification was used in configuring the groups. The study was reviewed and approved by the institutional review board of the University of Wisconsin-Madison. All participants provided written informed consent for screening and separate consent for random assignment to the depression interventions.

We powered the trial based on measures of change in our aims, specifically in the level of depression (Center for Epidemiologic Studies Depression Scale [CES-D] and Quick Inventory of Depression Symptoms [QIDS]), and change in mental health status (Short Form Survey [SF-12 mental]) and physical health status (SF-12 physical). The sampling for the trial was based on detecting effect sizes in average CES-D reduction from .62σ and a 20% increase in SF-12 mental and SF-12 physical (effect sizes of .58σ and .68σ, respectively). Using the smallest detectable effect size (.58σ), we project that an optimal grouping of 13 groups of 7 patients, or a total of 26 groups and 182 participants, are required to achieve power at .80 and detect the proposed effect at α = .05

Table 1. Modules for the Oh Happy Day Class and Modules for the Coping with Depression Course

Week	Oh Happy Day Class (OHDC)	Coping With Depression (CWD)
1	Introduction, overview of group counseling and Nguzo Saba principles	Depression and social learning
2	Depression -- etiology, risk factors, symptoms and treatment options	How to design a self-learning plan
3	Men/women and depression	Learning to relax
4	Depression and chronic physical illness	Relaxation in everyday situation
5	Community resources	Pleasant activities and depression
6	Anger management	Formulating a pleasant activities plan
7	Stress management and learning to relax	Two approaches to constructive thinking
8	Constructive thinking	Formulating a plan for constructive thinking
9	Forgiveness	Social skills: the ability to be assertive
10	Pleasant activities and depression	Using your social skills
11	Maintaining gains and developing a life plan using Nguzo Saba	Maintaining your gains
12	Review and graduation celebration	Developing a life plan
13	Booster session and reunion (3 months postintervention)	Booster session (3 months postintervention)

(1-tailed test), assuming a substantial design effect > 2.0.[21-23]

Inclusion criteria were self-identified African American men and women, between the ages of 30 and 65, with symptoms of depression as evidenced by data from CES-D, a 20-item self-report inventory. Although the age of inclusion was broad, our earlier studies have shown positive outcomes with mixed aged groups.[17] The exclusion criteria included individuals who self-reported alcohol or other drug abuse/dependence; major psychotic illnesses, such as schizophrenia; self-reported changes in antidepressants (dosage or type) less than 6 weeks prior to participating in the study; self-report of current psychotherapy treatment; and self-report of current suicidal ideations. To be eligible for the study, participants needed to have current MDD and to be negative for mania, psychosis, or alcohol or drug abuse or dependence in the past 3 months. The demographic characteristics of the sample are presented in Table 2.

MEASURES
Screening Measures and Outcome Measures

The CES-D was used both as a screening measure and an outcome measure. The CES-D is a 20-item self-report inventory developed by the National Institute of Mental Health to assess the frequency and severity of depression symptoms in the past week.[24,25] Respondents indicated how often each symptom was experienced during the past week on a 4-point scale from "rarely or none of the time (0)," "some or a little of the time (1)," "occasionally or a moderate amount of the time (2)," or "most or all of the time (3)." The item scores have been summed for analyses, with a possible range of 0 to 60. A standard cutoff score of 16 indicates depressive symptoms.[24,25] The CES-D has good reliability and is sensitive to changes in patients' depression status after treatment.[24,25] In our study, we have had Cronbach's alpha of 0.87 at baseline.

Table 2. Demographic Characteristics of the Sample

	CWD		OHDC	
	Mean	SD	Mean	SD
Age	52.17	6.5	51.08	8.4
Number of Children	3.4	2.2	3.3	2.1
	Freq	**%**	**Freq**	**%**
Gender				
Female	42	77.78	25	67.57
Male	12	22.22	12	32.43
Income				
$0–$10,000	44	83.02	24	68.57
$10,001–$20,000	2	3.77	5	14.29
$20,001–$30,000	5	9.43	1	2.86
$30,001–$40,000	2	3.77	4	11.43
Employment status				
Employed full-time	5	9.26	4	11.43
Employed part-time	6	11.11	5	14.29
Retired	2	3.7	1	2.86
Disability	18	33.33	7	20
Other	23	42.59	18	51.43
Socioeconomic status				
Working class	31	65.96	22	70.97
Middle class	9	19.15	5	16.13
Upper middle class	0	0	2	6.45
Retired	7	14.89	2	6.45
Insurance				
No	13	26	10	27.03
Yes	37	74	27	72.97
Marital status				
Married	4	7.27	6	16.67
Living with partner	7	12.73	2	5.56
Separated	5	9.09	2	5.56
Divorced	10	18.18	5	13.89
Widowed	0	0	1	2.78
Never married	26	47.27	20	55.56
Married—separated	1	1.82	0	0
Living with—never married	2	3.64	0	0
Do you have children				
No	12	21.82	6	16.22
Yes	43	78.18	31	83.78
Educational level				
Elementary	1	1.85	0	0
8th grade	6	11.11	4	10.81
High school degree or GED	23	42.59	16	43.24
2-year college or technical college	12	22.22	12	32.43
Bachelor's degree	4	7.41	1	2.7
Master's degree	1	1.85	1	2.7
Other	7	12.96	3	8.11

Abbreviations: CWD, Coping with Depression; OHDC, Oh Happy Day Class.

Outcome Measures

Primary Aim 1: Decreased Depression Symptoms

Decreased depression symptoms were measured with the CES-D described above and the 16-item QIDS. The QIDS uses DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) criteria to assess depressive symptom severity and symptom change. Scores range from 0 to 27 and higher scores suggest higher severity.[26]

We used the clinician-rated QIDS-CR. Studies show high internal consistency for the QIDS-CR (0.85),[26] which was consistent with our QIDS-CR of 0.79.

Secondary Aim 2. Change in Physical and Mental Health Functioning

Physical and mental health was measured by the Short Form Survey (SF-12), a self-report scale of physical and mental health status. The SF-12 was developed to measure physical health (role limitations resulting from physical health problems, bodily pain, general health, energy, and fatigue) and mental health (social functioning, role limitations resulting from emotional problems, psychological distress, and psychological well-being).[27] Published procedures for scoring were used to create 2 set of scores: the physical component summary and the mental health component summary. Scores range from 0 to 100 (mean = 50, SD = 10); scores greater than 50 suggest above average health. The SF-12 demonstrates good internal consistency and reliability among African Americans.[27] In our work, we had Cronbach's alpha = 0.89 for the physical health status and 0.76 for mental health status.

Descriptive Measure/Covariates

A demographic questionnaire was used to obtain year of birth, city of residence, education, income, marital status, number of children, health insurance status, employment status, and socioeconomic status.

Procedures

The sample for this study was drawn from an urban city in the Midwest. We worked with community health clinics and community agencies to recruit participants. Local health clinics serving African American patients were informed of the study and agreed to refer patients/clients. Information sessions were held at local clinics to inform both clinical staff and receptionists about the study and to facilitate appropriate identification and referrals. Study flyers were posted in the waiting areas of clinic lobbies. Community agencies with existing relationships and partnerships with our study team readily endorsed the study and publicized it in the African American community. For example, the Urban League and local urban housing complexes offered to post flyers in their common office areas and lobby bulletin boards. All eligible individuals age 30 years and older who expressed interest in the study were screened using the CES-D after providing written informed consent. Upon meeting the inclusion criteria, participants were enrolled in the study and, based on randomization, attended the 12-week OHDC or 12-week CWD. Data were collected from participants at baseline, 6 and 12 weeks, and 3 and 6 months postintervention.

Statistical Analysis

Hypothesis Testing and Data Analysis

Primary Aim 1: Examine efficacy of the OHDC in reducing

symptoms of depression at the middle (week 6) and immediate end (week 12) of the intervention and 3 and 6 months postintervention. We hypothesized that among African Americans adults with depression, the OHDC would result in a greater reduction in depressive symptoms compared to the CWD at weeks 6 and 12 and 3 and 6 months postintervention.

Primary Aim 2: Examine the efficacy of the OHDC in improving self-report of mental and physical health status. We hypothesized the OHDC compared to the CWD would result in greater self-report of improved mental and physical health status at the immediate end of the intervention (week 12) and 3 and 6 months postintervention.

Data Analysis

Hypotheses for primary aims 1 and 2 were assessed using 2-level mixed effects linear regression models with repeated measures.[28,29] A secondary analysis of treatment fidelity was also conducted using the mixed effects model.[29] All analyses were conducted using Stata Version 16. See Table 3.

RESULTS

Demographics and clinical characteristics for our participants are summarized below and in Table 2. Demographic data showed that over 50% of the participants were working class and had a disability. Thirty-two percent had some college education (2-year college or 4-year college graduate). Thirty-five percent were unemployed, and slightly over 60% reported income of $0 to $10,000 per year. African American women made up 74% of the sample. Marital status included married, divorced, and living with partner, while 51% of the sample reported never having married. Regarding mental health status, 42% reported history of depression. At the time of enrollment in the trial, 100% participants tested positive for diagnosis of major depressive disorder.
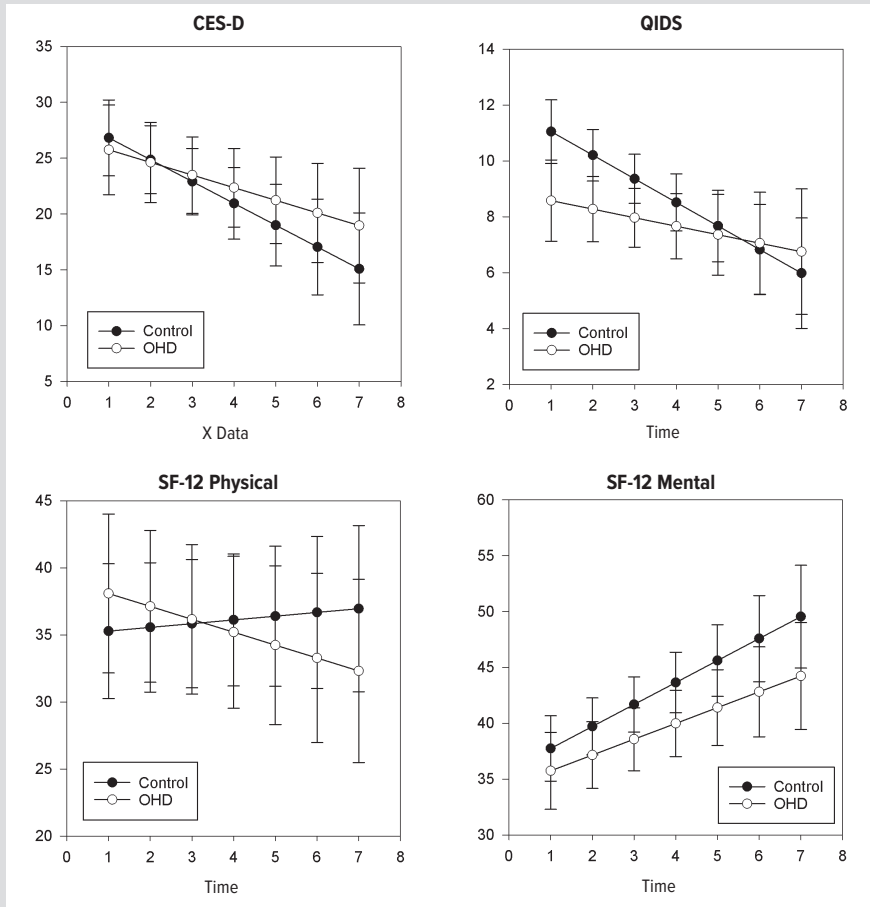
Depression Symptoms

In both OHDC and CWD groups, symptoms of depression were compared over time. We hypothesized that among African American adults, the OHDC would result in greater reduction in depressive symptoms (CES-D and QIDS) compared to the CWD at 6 and 12 weeks during the intervention and at 3 and 6 months postintervention. Depression scores on the CES-D and the QIDS are provided in Figure 1. Both CES-D and QIDS measures declined for both groups over time. Early measures of the QIDS

Table 3. Fidelity Analysis

Center for Epidemiologic Studies Depression Scale (CES-D)

Fixed Effects	Coefficient	Standard Error	z	P>|z|	95% CI
Low	-2.359226	5.519476	-0.43	0.669	-13.1772 to 8.458749
High	-5.533661	4.579595	-1.21	0.227	-14.5095 to 3.44218
Time	-2.99722	0.990718	-3.03	0.002	-4.938992 to -1.055448
Low X time	3.382752	3.212242	1.05	0.292	-2.913128 to 9.678631
High X time	2.384056	1.66014	1.44	0.151	-0.8697591 to 5.63787
Constant	30.51467	2.56805	11.88	0.000	25.48138 to 35.54795

Random Effects	Coefficient	Standard Error	R-square	95% CI
Group level	12.96208	8.652741	0.210	3.503173 to 47.96098
Patient level	122.0059	12.80601	0.038	99.32 to 149.8734

Quick Inventory of Depression Symptoms (QIDS)

Fixed Effects	Coefficient	Standard Error	z	P>|z|	95% CI
Low	-0.0131513	1.545606	-0.01	0.993	-3.04248 to 3.016181
High	-1.453977	1.032525	-1.41	0.159	-3.47768 to 0.569735
Time	-0.0807986	0.0952018	-0.85	0.396	-0.267390 to 0.1057935
Low X time	0.4513376	0.5121654	0.88	0.378	-0.552488 to 1.455163
High X time	0.081918	0.149985	0.55	0.585	-0.212047 to 0.3758832
Constant	9.2581	0.6568294	14.10	0.000	7.97073 to 10.54546

Random Effects	Coefficient	Standard Error	R-square	95% CI
Group level	1.898688	.8912951	0.082	.7566181 to 4.764644
Patient level	19.83757	.9134547	0.017	18.12565 to 21.71119

SF-12 Physical Score

Fixed Effects	Coefficient	Standard Error	z	P>|z|	95% CI
Low	3.644762	4.89808	0.74	0.457	-5.955299 to 13.24482
High	-0.7342404	4.397788	-0.17	0.867	-9.353747 to 7.885267
Time	-0.14106	0.2146898	-0.66	0.511	-0.5618442 to 0.2797242
Low X time	0.1703807	0.8405784	0.20	0.839	-1.477123 to 1.817884
High X time	0.0059132	0.3215571	0.02	0.985	-0.6243271 to 0.6361534
Constant	35.43684	2.85533	12.41	0.000	29.8405 to 41.03319

Random Effects	Coefficient	Standard Error	R-square	95% CI
Group level	50.94499	21.8001	0.005	22.02217 to 117.8536
Patient level	107.9199	4.554611	0.007	99.35223 to 117.2263

SF-12 Mental Score

Fixed Effects	Coefficient	Standard Error	z	P>|z|	95% CI
Low	-10.90048	3.274445	-3.33	0.001	-17.31828 to -4.482687
High	-3.188375	2.526148	-1.26	0.207	-8.139534 to 1.762785
Time	0.2065984	0.2074916	1.00	0.319	-0.2000776 to 0.6132744
Low X time	0.4036951	0.8127201	0.50	0.619	-1.189207 to 1.996597
High X time	-0.0781648	0.3108164	-0.25	0.801	-0.6873537 to 0.5310241
Constant	42.42334	1.650104	25.71	0.000	39.1892 to 45.65749

Random Effects	Coefficient	Standard Error	R-square	95% CI
Group level	13.63171	6.057935	0.141	5.705271 to 32.57051
Patient level	101.0428	4.262453	0.038	93.02463 to 109.7522

Figure 1. CES-D and QIDS Measures of Depression Symptoms, SF-12 Measure of Physical and Mental Status

Abbreviations: CES-D, Center for Epidemiologic Studies Depression Scale; QIDS, Quick Inventory of Depression Symptoms; SF-12, 12-item Short-Form Health Survey.

than the controls. Both dose groups were also higher than controls for SF-12 mental measures. Marginal means for low dose at 6 months (time period 5) could not be estimated due to zero cases. See Figure 2.

DISCUSSION

We examined the efficacy of the OHDC compared to the control CWD in reducing symptoms of depression among African American adults at 6 and 12 weeks and at both 3 and 6 months postintervention. We hypothesized the OHDC versus the CWD would result in fewer depressive symptoms. Given the high prevalence of depression and the high rates of in-patient psychiatric admissions among African American adults in Wisconsin, the decline in depression symptoms we observed was impressive. CES-D and QIDS measures declined for both groups over time, suggesting that both interventions were efficacious in helping participants move from moderate to mild symptoms of depression.

Interestingly, the results from fidelity analysis of treatment dose among the OHDC group showed those subjects who had high dose (4 or more sessions) showed a steady decline in depression as measured in CES-D versus the lower dose of OHDC and also CWD subjects. In addition, findings of depression as observed in the clinician-administered QIDS indicated the high-dose subjects in OHDC were lower overall in depression compared to the low-dose and CWD subjects. These findings suggest a positive dose response relationship, indicating that a higher dose of OHDC treatment is associated with decline in depression symptoms.

Our study and results represent the first fidelity dose response among African Americans. Although dose response to treatment is consistently examined in biomedical research, we found no studies that addressed dose response to behavioral treatment among African Americans adults with depression. These concerns are vividly captured by the call to action by Alegría and colleagues:[30] "Efforts to develop a more comprehensive understanding of the optimal time and dosage of certain interventions could inform future policy and program planning." Findings from our work underscore the need for additional research to examine the dose response in mental health treatment among African Americans with depression. Such research might shed light on dose response—research that may well impact the minimal number of sessions required to achieve clinically significant changes in depression symptoms.

indicated that the OHDC group was significantly lower than the CWD group but converged later on.

Mental and Physical Health Status

Mental and physical health status at 6 and 12 weeks during the intervention and at 3 and 6 months postintervention showed both groups increasing in parallel for SF-12 mental scores. Interestingly, the SF-12 physical indicated a general decline for the OHDC group while the CWD was stable (Figure 1).

Fidelity Analysis

Fidelity or dose of treatment was explored by splitting the OHDC group into subjects who attended less than 4 sessions as low dose and those who attended 4 or more as high dose. Those high-dose subjects exhibited a steady decline in CES-D measures compared to the lower-dose and CWD subjects (control). Measures of depression using the observable QIDS indicated high-dose subjects were lower overall in depression symptoms than the low-dose and controls but were stable across time. Measures of SF-12 physical showed little difference in dose but, in general, were lower

Such work could inform policies and programming aimed at improving quality of mental health services and improving mental health outcomes for target populations.

We examined mental and physical health status at 6 and 12 weeks during the intervention and at 3 and 6 months post-intervention. Both groups showed parallel changes in mental health scores, suggesting increasing levels of mental wellness. Physical health scores indicated a general decline for OHDC group, whereas the CWD maintained stability, though not statistically significant. Furthermore, the measures of physical health scores showed little difference in dose but, in general, were lower for OHDC subjects than CWD subjects.

These findings showing no response to physical functioning are consistent with research in depression showing that depression in African Americans is often chronic with associated disability. In a national survey examining the prevalence, persistence, treatment, and disability of depression, Williams et al[1] found chronicity of depression was higher for African Americans (56.5%) than for White adults (38.6%), leading to an overall greater degree of functional impairment among African Americans. These data show the need for intervention research to explore integrating physical health wellness in depression interventions.

Limitations

There are a few limitations in our study. First, the study cohort is homogeneous, ie, only African American adults, which may limit the generalizability of the results to other racial and ethnic groups.

Due to difficulty with recruitment and attrition, we were challenged in getting our required sample size, which compromised power; thus, our findings should be interpreted cautiously. There was higher-than-expected missing data, which may have been due to measures being self-administered. More oversight was needed to reduce the risk of missing data. This research was conducted in a Midwestern city, which limits generalizability to African Americans in other regions.

CONCLUSION

This clinical trial examining the efficacy of a culturally adapted depression intervention designed for African American adults with

Figure 2. Results of Treatment Dose From Fidelity Analysis
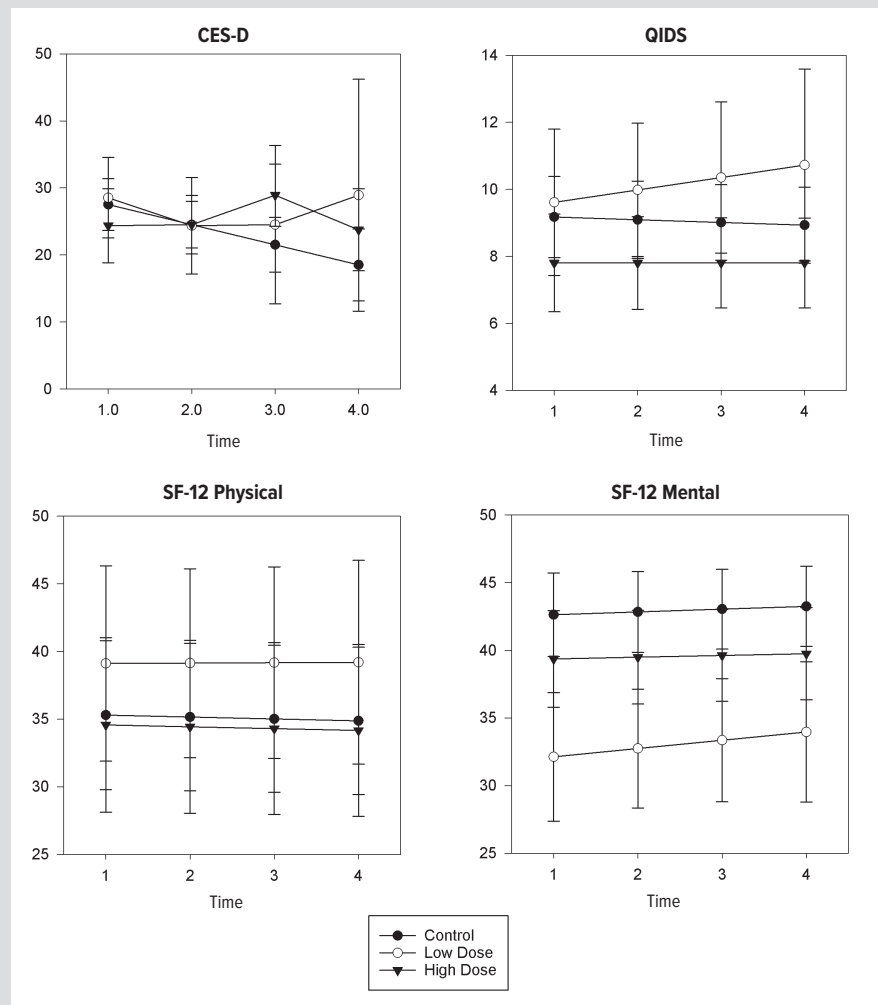
Abbreviations: CES-D, Center for Epidemiologic Studies Depression Scale; QIDS, Quick Inventory of Depression Symptoms; SF-12, 12-item Short-Form Health Survey.

depression demonstrates the potential of the Oh Happy Day Class. In sum, both interventions were effective in reducing symptoms of depression. However, higher doses of OHDC showed greater reduction in depression symptoms, providing evidence of effectiveness of a culturally adapted intervention designed for African Americans. Given this is the first clinical trial of the OHDC, more research is needed to explore its full impact. We recommend conducting studies with larger samples of African Americans across various geographic regions to increase generalizability of findings.

necessarily represent the official views of the National Institute on Minority Health and Health Disparities or the National Institutes of Health.

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