



# Acceptability of a mindfulness intervention for depressive symptoms among African-American women in a community health center: A qualitative study

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## ABSTRACT

**Introduction:** In this study we examined the acceptability and feasibility of a mindfulness based group intervention for socio-economically disadvantaged women in an urban community health center (M-Body).

**Method:** Women ages 18–65 with depressive symptoms who participated in an 8-week mindfulness based group intervention were invited to attend follow up focus groups about their experience. Inductive content analysis was used to identify themes from transcripts.

**Results:** All participants were African-American (N = 27). Participants had limited past experience with mindfulness. They reported benefits included anger management, increased control of thoughts, emotions and behaviors, enhanced awareness/focus and feeling calm and relaxed. Barriers to session attendance included transportation, employment, family responsibilities and child care. Participants suggested modifications such as providing the audio in multiple formats, increasing time spent doing yoga, modifying yoga postures and providing an orientation session. They stated that the content and delivery format of the group was acceptable.

**Discussion:** The mindfulness based intervention for depression was acceptable, reduced stress and improved coping and functioning among women in a community health center.

## 1. Introduction

Mindfulness based interventions have collectively been shown to improve physical and mental health.<sup>1–4</sup> Mindfulness based interventions are an important alternative mental health treatment option for socio-economically disadvantaged, racial/ethnic minority adults who at increased risk for having had a depressive episode in the last year<sup>5–8</sup> and 40–60% less likely to receive treatment.<sup>5,6,9</sup> However, the acceptability, feasibility and effectiveness of mindfulness based interventions among racial/ethnic minority adults are unknown as they are under-represented in the mindfulness literature.<sup>10–12</sup>

Early research indicates that mindfulness based interventions are acceptable, feasible and effective among low-income, racially and ethnically diverse adults.<sup>13–17</sup> Participants report the skills they acquire are important, they are willing to practice mindfulness techniques on their own, and mindfulness becomes an integral part of their lives.<sup>17–19</sup> Participants state that using complementary and integrative health approaches enables them to feel more in control of themselves and their health.<sup>20</sup> Participants report increased ability to cope with stress, control anger, self-awareness, self-care, social support and overall health

benefits.<sup>13,14,17</sup> Mindfulness based interventions have been shown to be efficacious in reducing mental health symptoms<sup>16,21,22</sup> and improving general health,<sup>18,23–26</sup> daily functioning, interpersonal relationships and overall quality of life<sup>17,19,27–30</sup> in socio-economically disadvantaged, racial/ethnic minority populations. A study by our group found that low-income African-American participants in a mindfulness based intervention delivered in an urban community health center demonstrated a significant decrease in depressive symptoms and stress and a significant increase in mindfulness.<sup>31</sup> A few other studies also report program completion rates higher than those of other evidence based treatments.<sup>17,18,28</sup>

Despite these reported benefits, there are some challenges to participation in mindfulness based interventions. Participants report lack of time to complete formal homework, difficulty finding childcare, and limited accessibility of the groups.<sup>17</sup> Additionally, some participants find meditation boring and have difficulty staying awake, dislike group dynamics such as absences, group members not participating and talking at the same time.<sup>15</sup> A few studies have examined the potential conflict between mindfulness based interventions and religious/spiritual beliefs among racial/ethnic minorities. In these studies,

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participants found the practice to be spiritual, but not replacing or in conflict with their spiritual beliefs and practices.<sup>13,14</sup>

To date, there have been few studies to examine the acceptability and feasibility of a mindfulness based intervention in low-income, racial/ethnic minority populations. No studies have examined the acceptability and feasibility of a mindfulness based intervention in a community health center setting. The aim of this study was to explore participant perspectives on the acceptability and perceived utility of the mindfulness intervention content, and suggestions for modifications of the content and delivery format of the intervention.

## 2. Method

### 2.1. Setting and study population

Participants were recruited from an urban community health center. The majority of patients were African American or Hispanic (89%), uninsured (58.86%) and at or below 200% of the poverty line (96%). The research staff discussed the investigation with all of the healthcare providers. The study was also advertised in brochures and posters displayed in the clinics. Potential participants were referred by their physicians or nurses during regular healthcare visits, recruited from the waiting room by the research team or self-referred.

### 2.2. Screening and eligibility

All potential participants were provided an overview of the study by research staff and verbal consent to participate in the screening procedure was obtained. Referrals were screened for eligibility using the Quick Inventory of Depressive Symptomatology – Clinician (QIDS-C) or Inventory of Depressive Symptomatology – Clinician (IDS-C). Adult women (ages 18–65) who met criteria for a mild-severe depressive episode (QIDS-C = 6–24, IDS-C = 12–59) were eligible for participation. Individuals who endorsed current or recent (past 30-day) suicidal plan or attempts were not eligible and were instructed to contact their primary care provider and given other mental health resources. Women who were not fluent in English or who had a current meditation or yoga practice of once a week or more were also excluded.

### 2.3. Measures

#### 2.3.1. Eligibility

Eligibility was assessed using The Inventory of Depressive Symptomatology – Clinician Rated (IDS-C) and The Quick Inventory of Depressive Symptomatology (QIDS-C). High convergent validity was found between the QIDS-C and IDS-C ( $c = 0.81$ ).<sup>32</sup> The *Quick Inventory of Depressive Symptoms (QIDS-C)* is a 16-item clinician-rated questionnaire that assesses symptoms associated with major depressive disorder as detailed by the American Psychiatry Association Diagnostic and Statistical Manual of Mental Disorders – 4th editions (DSM-IV) (APA 1994). Individuals respond to items using a 0–3 point scale; items are summed (0–27) for each of the nine symptom domains in the DSM-IV with higher scores indicating more severe and frequent depressive symptoms during the past week.<sup>33</sup> Women with scores of 6–24 on the QIDS-C were eligible for participation in the study.

The *Inventory of Depressive Symptoms – Clinician Rated (IDS-C)* is a 30-item clinician-rated questionnaire that assesses all symptoms associated with major depressive disorder as detailed by the American Psychiatry Association Diagnostic and Statistical Manual of Mental Disorders – 4th editions (DSM-IV) (APA 1994). Individuals respond to items using a 0–3 point scale, 28 out of 30 questions are then summed, with higher scores indicating more severe and frequent depressive symptoms during the past week.<sup>34</sup> Women with scores of 15–69 on the IDS-C were eligible for study participation. The IDS-C was used to determine eligibility for the first pilot group. Due to the lengthy administration time of the IDS-C (30–40 minutes), the shorter QIDS-C

(15–20 minutes) was used to determine eligibility for the second pilot group.

### 2.4. Study design

Eligible women were invited to participate in the 8-week M-Body group and a 60 min focus group after the completion of the M-Body group, an adapted version of the evidence-based Mindfulness Based Stress Reduction (MBSR) that has been tailored for the community health center setting and patient population.<sup>56</sup> The core content of MBSR was not changed. Details on the content of the M-Body group have been reported elsewhere.<sup>31</sup> Women who completed the baseline session but did not attend any M-Body group sessions were also invited to participate in the focus groups. The focus groups were led by the Principal Investigator of the study. Focus groups were audio-recorded and transcribed by a transcription company. The focus groups covered the following themes: knowledge, perceptions and past experiences with mind-body approaches, impressions about the M-Body group, benefits and consequences to participating in the M-Body group, barriers and facilitators to participating in the M-Body group, and suggested changes to the design/structure of M-Body. Participants received reimbursement for public transportation and a \$25 gift card for participating in the focus group.

#### 2.4.1. Analyses

Descriptive analyses were conducted on socio-economic and demographic characteristics of the sample. These analyses are reported in frequency and percentages (N, %). Only those subjects who participated in the focus groups are included in the subsequent analyses (N = 27). The focus group guide dictated the topics of data analysis. The analyses include data from two focus group transcripts and a demographic questionnaire. Primary themes from the focus groups were identified by inductive content analysis. The level of analysis was across participants and across focus groups to allow for themes to be developed overall for all participants. The research team first analyzed the data with multiple readings of the transcripts to gain a general sense of the data. The transcript was then independently coded for common themes by three members of the research team. The research team discussed and validated the themes, reached consensus and consolidated themes. For particularly salient themes, counts were conducted to examine the frequency that these themes occurred during the discussion.

The Institutional Review Board of Northwestern University approved this study. Informed consent was obtained from all individual participants included in the study.

## 3. Results

### 3.1. Referral, screening and enrollment

A total of 86 individuals were referred, 55 were screened, 50 were eligible and 31 enrolled in the study. Fourteen women were enrolled in the first pilot group and attended at least 1 session, with a mean session attendance rate of 6.4 sessions. Seventeen women enrolled in the second pilot group, 15 attended at least 1 session, with a mean session attendance rate of 6.6. Reasons for losses included change in schedule, no response, disconnected number, medical complications, not a patient at the community health center and concern about ability to do yoga. Participant characteristics can be found in [Table 1](#).

### 3.2. Knowledge, perceptions and past experiences with mind-body approaches

M-Body participants had limited past experience with meditation, mindfulness and yoga. Several women had heard the term ‘mindfulness’ but did not incorporate mindfulness practices into their daily lives. Most women reported never meditating or practicing yoga. Others

**Table 1**  
Demographic and socio-economic characteristics of participants in the M-Body intervention.

|   | N = 31 | %    |
|---|--------|------|
| <b>Age (range)</b>                          |        |      |
| range                                       | 26–67  |      |
| mean  | 51.10  |      |
| <b>Marital Status</b>                       |        |      |
| Single, never married                       | 19     | 61.3 |
| Married, Partnered                          | 5      | 16.1 |
| Separated, Divorced, Widowed                | 7      | 22.6 |
| <b>Education</b>                            |        |      |
| High school, GED or less                    | 10     | 32.3 |
| Some college, vocational                    | 14     | 45.0 |
| 4 year college                              | 5      | 16.1 |
| Master's degree                             | 2      | 6.5  |
| <b>Employment status</b>                    |        |      |
| Employed full time                          | 7      | 22.6 |
| Employed part time                          | 7      | 22.6 |
| Full time student                           | 3      | 9.7  |
| Retired                                     | 2      | 6.5  |
| Homemaker                                   | 1      | 3.2  |
| Unemployed                                  | 9      | 29.0 |
| Disabled                                    | 2      | 6.5  |
| <b>Personal income</b>                      |        |      |
| < \$9,999                                   | 9      | 29.0 |
| \$10,000 – \$19,999                         | 10     | 32.3 |
| \$20,000 – \$34,999                         | 6      | 19.4 |
| \$35,000 – \$49,999                         | 2      | 6.5  |
| > \$50,000                                  | 3      | 9.7  |
| Refused                                     | 1      | 3.2  |
| <b>Insurance</b>                            |        |      |
| Private                                     | 7      | 22.6 |
| Medicare                                    | 8      | 25.8 |
| Medicaid                                    | 11     | 35.5 |
| Champus, Champva, VA, other military health | 1      | 3.2  |
| Other                                       | 5      | 16.1 |
| <b>Chronic Health Conditions</b>            |        |      |
| No  | 3      | 9.7  |
| Yes   | 28     | 90.3 |
| Hypertension                                | 12     |      |
| Cholesterol                                 | 11     |      |
| Depression                                  | 11     |      |
| Arthritis                                   | 11     |      |
| Osteoporosis                                | 1      |      |
| Obesity                                     | 8      |      |
| Diabetes                                    | 2      |      |
| COPD  | 2      |      |
| Asthma                                      | 2      |      |
| <b>Past MH treatment</b>                    |        |      |
| Past Year                                   |        |      |
| No  | 27     | 87.1 |
| Yes   | 4      | 12.9 |
| Individual Therapy                          | 3      |      |
| Group Therapy                               | 2      |      |
| Emergency Room                              | 1      |      |
| Medication                                  | 2      |      |
| <b>Lifetime</b>                             |        |      |
| No  | 16     | 51.6 |
| Yes   | 15     | 48.4 |
| Individual Therapy                          | 13     |      |
| Group Therapy                               | 2      |      |
| Medication                                  | 3      |      |
| <b>Meditation experience</b>                |        |      |
| Past  |        |      |
| No  | 14     | 45.2 |
| Yes   | 16     | 51.6 |
| Current                                     |        |      |
| No  | 24     | 77.4 |
| Yes   | 7      | 22.6 |
| Yoga experience                             |        |      |
| Past  |        |      |
| No  | 22     | 71.0 |
| Yes   | 9      | 29.0 |
| Current                                     |        |      |
| No  | 29     | 93.5 |
| Yes   | 2      | 6.5  |

reported that meditative practices were already a part of their established spiritual practice.

One participant stated “*Meditation I had already did that, but it was mainly on a spiritual thing like if you are reading the Bible you are meditating...that’s something I had always done.*” Another participant reported that she joined the group because she wanted to reconnect with her past practices of yoga and meditation that she found beneficial. Others reported an existing informal practice of mindfulness, “*I would go outside and sit on the porch and sit there for 10, 15 min...but now I do realize it is a lot more important for me to get you know fully into it.*”

### 3.3. Reasons for joining the M-body group

Reasons for joining the M-Body group included: reconnect with mind body health approaches used in the past, learn how to more effectively cope with stress, social support, past episodes of depression, learn how to be more in control of their lives. Two participants stated that they were previously treated with antidepressants and they were interested in other depression treatment options. One woman elaborated, “*I’ve seen doctors, I’ve been on medication...I just heard something that could help me...and I jumped on it.*” Another said “*That’s [M-Body] what I need along with everything else down here at the clinic and the medication and everything. And I felt like this would help and it did.*” Several participants were interested in learning how to decrease stress in their lives; they wanted help dealing with recent stressful life events such as interpersonal conflict, marital conflict, violence in the community and employment. A few members of the group also remarked that the yoga piqued their interest in participation.

### 3.4. Benefits of the M-body group

Benefits of the M-Body group fell into four main themes: anger, control, awareness/focus and calm/relaxation. Participants noticed the presence of anger, triggers for anger and the physiological manifestations of their anger. “*I just always thought when I get upset or mad, it’s always just a headache and by me paying attention to my body more, I noticed what triggers it is if you just be so upset and so angry and all of this is inside of you and your body is just tearing down.*” Several women stated the group helped them to control their anger. “*I would just start screaming and hollering...I find that now that I’ve learned these techniques to be able to stop and...not be so overly aggressive.*” The M-Body group taught participants to mindfully respond (versus react) to reduce anger in interpersonal communications.

M-Body participants reported the mindfulness practices taught them to be more in control of their thoughts, emotions and behaviors. They noticed that they had been “*out-of-control*” or “*losing my mind*” before participation in the group. Some women commented on the need to be “*proactive instead of reactive*” and develop skills to cope with stressful situations. “*Whatever that might be in your life, whatever that stressor is in your life, you need to be able to have something to gird you or hold you ...*” They developed the ability to Stop, Take stock, Observe and Proceed (STOP). One participant stated, “*It felt good to be in control of my emotions for the first time in my life.*” They also noticed physiological changes as they became better able to manage their stress response. “*I calm down and I noticed that it kept, you know, my stomach don’t really you know hurt like it was before and I never noticed that ...*”

Participants reported an enhanced sense of awareness and focus and less distracting thoughts or “*wandering mind.*” They named an increased ability to be in the present moment and notice emotions and thoughts. One participant said, “*I do pay attention to how I’m feeling and actually think about why it is I’m feeling this way.*” Several women commented on increased awareness during daily activities such as driving or taking a shower. “*... if I’m in the shower, I’m in the shower, because usually I’m in the shower, then get out, then oh yeah, gotta do that too, and I actually took time for the first time I’ve been doing the first couple of sessions to actually be in the shower...*” Participants also noticed increased awareness in

interpersonal communications. One person said *“I’ve become more aware of not just my surroundings but the way I speak.”* Participants reported that they had an increased ability to address their own needs. They reported an increased awareness of their experience of stress, triggers for stress and physiological responses to stress. *“We have to be able to do everything and that brings about a lot of stress, because that’s why I came. I came because one of the things that I read on there was stress... I had put so much stress on myself and this helped me just reorganize things and put them in the proper perspective.”*

Many women mentioned a new sense of relaxation and calm in their lives. Some specifically acknowledged that the body scan practice was so relaxing that they fell asleep. Several participants said that they did not have the time and space that allowed them to feel calm and relaxed in their daily lives. Some women spoke about a new ability to feel relaxed even in the midst of stressful and hectic situations. *“It’s the calming down of the inner voice...especially during stressful periods of time.”* Others noted difficulty in achieving a sense of calm and relaxation. *“...can’t really just relax, like that, you know.”* Participants described a new ability to check in with the self and *“take a break,”* identify stressors, communicate more effectively with others and feel supported by the other women in the group.

### 3.5. Barriers and facilitators to participating in the M-body group

#### 3.5.1. Barriers

Participants reported barriers to session attendance including transportation, employment, family responsibilities and child care. A few women had unexpected and stressful life events occur during the group that caused them to miss sessions such as losing housing, a car accident, death in the family and becoming pregnant. Several participants stated that they did not have enough time to complete the formal home practice due to busy home schedules. One woman said she had difficulty adjusting to being in a group and tolerating listening to other people voice their concerns. Several women endorsed psychological barriers to participation such as avoidance of difficult emotions and thoughts and mental health treatment stigma. *“My barrier is a mental one that prevents me from getting here...something that doesn’t want you to deal with who you really are and having to put yourself in that space to where you’re allowed to actually think about it.”* A few participants reported feeling embarrassed about inquiring about the M-Body group (seeking help) and said they did not identify as ‘depressed.’ One woman said, *“I’m not depressed, do I really have to be depressed to be in this group?”*

#### 3.5.2. Facilitators

Several participants reported that conducting the group at the clinic where they already received healthcare made it easier to attend the sessions due to familiarity with traveling to the clinic, parking and coordination with other health care visits. They commented that the transportation cards that were provided facilitated their attendance. Most participants thought the shortened session length (1.5 h) made it easier to participate; however a few said that they would consider attending a 2.5 h group. Participants found the manual and audio CD to be informative and allowed them to continue practicing after the completion of the program. Participants reported that the homework allowed them to understand the material at a deeper level. Most participants described the group setting as beneficial and stated that they enjoyed the social support. They said that they felt more comfortable during the sessions and spoke more freely because the group was all women. *“That was the whole point, you know, that I have some place that I could go with a bunch of other women in different areas of their life but still be able to open up honestly and ask for help.”* Several participants stated that the group leader was a positive influence on their participation. They identified patience, compassion, experience, race, and gender as traits that are important in a group leader.

### 3.6. Suggested modifications to the design/structure of M-body

Most participants expressed the desire to continue their mindfulness practice. Several stated that they would like more sessions or the opportunity to participate in an intermediate mindfulness group. *“I think the eight weeks is just a little bit too short...this is such an empowering session it kind of sticks with you, but I think if by not coming after a little while it might fade.”* *“I was thinking the sessions of the weeks should have been longer...I’d say four months...because it’s just like we really just getting into it and its over.”* Participants also suggested that an orientation session before the first session would help people better understand what to expect in the group. A few women wanted to know how their depressive symptoms changed over the course of their participation in the group. Participants suggested that the audio CD be offered in different formats (mp3), such as a file that could be used on their phone. A few participants also recommended child care during the group sessions. Some participants said that they would like an increased focus on yoga and others were interested in more mindfulness meditation practice during the group sessions. One participant requested additional modifications for the yoga poses. Finally, many women suggested offering a similar group for other populations such as adolescents or senior citizens.

## 4. Discussion

Significant proportions of socio-economically disadvantaged, racial/ethnic minority adults have untreated mental health needs.<sup>5–8</sup> It is imperative that alternatives to conventional depression treatments are considered that are acceptable, feasible and effective among these underserved populations. This study provides early evidence that mindfulness based interventions are an acceptable, non-medication treatment option for depression that could be widely offered in community based healthcare settings.

Significant proportions of women in the community health center were interested in participating in the intervention. Most of those who were referred and screened were eligible for the study (91%), which underscores the high level of mental health need among adult women in the community health center setting. Participants expressed interest in learning new approaches to help cope with their mood, stress and improve functioning. A few participants stated that they were previously treated for depression with antidepressants and they were interested in alternative treatment options. This is consistent with existing research indicating that many individuals prefer non-pharmacological treatments for depression, especially racial/ethnic minorities,<sup>35–37</sup> and highlights the importance of expanding the available depression treatment options that are offered in community based primary care settings.

M-Body participants reported positive outcomes associated with participation in the group including increased ability to notice and cope with anger and stress, physiological manifestations of anger and stress, increased present moment awareness, control over thoughts, emotions and behaviors, improved interpersonal communications, calm and relaxation. Participants reported that the structure and content of the group was acceptable. Consistent with other studies of mindfulness based interventions with racial/ethnic minority populations,<sup>13,14</sup> in general, participants did not report that the group conflicted with their religious/spiritual beliefs and alternatively related the mindfulness practice to spiritual practices with which they were already familiar. However, one participant attended one session and then discontinued due to stated religious conflict. This participant attended the focus group, but did not offer any comments.

Participants suggested minor modifications including providing the audio in multiple formats, increasing the time spent doing yoga, offering modifications to the yoga postures and providing an orientation before the group begins. Several participants expressed the desire for the group to be held over a longer duration. Suggestions for number of

weeks ranged from 12 weeks to 6 months. Engagement in the group is evidenced by the average session attendance rate of 6.4 for the first group and 6.6 for the second group, which is higher than that of evidence based CBT groups. Woods-Giscombe et al. (2014) asked African-American adults with experience in mindfulness meditation to recommend changes or modifications to MBSR for a mindfulness program for African-Americans. The participants suggested emphasizing the health benefits of mindfulness, connecting mindfulness to a familiar religious practice or spiritual ideology, connecting mindfulness to familiar activities, adapting the way that mindfulness is taught to African American audiences (mindfulness vs. meditation, African-American instructor, materials written by an African-American and a shortened practice.<sup>14</sup> Research examining the impact of cultural adaptations to manualized CBT for depressed African-American women referred by primary care doctors has found that those who receive culturally adapted treatment exhibit greater decreases in depressive symptoms than those who receive the non-adapted CBT. This has implications for the clinical utility in adapting evidence based treatments, like mindfulness based interventions, for depression.<sup>38</sup>

The M-Body group was held in an urban community health center to reach a population of disadvantaged women with multiple social-environmental stressors and limited access to mental health care. Study participants reported factors such as marital and familial conflict, work demands, health concerns and community violence were both facilitators and barriers to their participation in the group. Results from the qualitative data analysis presented in this study and quantitative analysis<sup>31</sup> suggest that participation in the group was associated with reduced stress and depression. Despite these positive outcomes, social-environmental stressors may have interfered with participants' ability to realize the full potential of the intervention. Significant efforts were made to reduce barriers to participation by providing bus cards, meals and verbal support. However, more work needs to be done to identify effective strategies to promote participation in health interventions to individuals who are experiencing myriad external, environmental stressors.

The results of this study should be considered within the context of several limitations. The intervention was conducted as a pilot study, and thus the sample size is relatively small (N = 31). The results may not be generalizable to other community health centers with different patient populations and organizational characteristics. While we found the M-Body intervention to be acceptable among the participants in this health center, we did not examine acceptability among the clinical staff and executive leadership. A proportion of individuals were lost between referral and enrollment. Future studies should examine the concrete and psychological factors that might lead women to self-identify a mental health need, initiate contact with a provider and later disengage. Similarly, future studies should examine the social and environmental characteristics that are associated with access and engagement in mindfulness interventions integrated in community health centers. This information would inform targeted efforts to improve program participation and clinical outcomes among those who are experiencing multilevel challenges.

In sum, preliminary data suggest that a mindfulness based intervention for depression is acceptable and feasible among disadvantaged depressed women in a community health center setting. These interventions build upon the inherent capacities of individuals to take an active role in their own health care and have the potential to positively affect multiple health outcomes.

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#### Transparency document

The [Transparency document](#) associated with this article can be found in the online version.

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