Lessons Learned

Providing a Mindfulness-based Stress Reduction Program for Low-income Multiethnic Women With Abnormal Pap Smears

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Although the incidence rate of cervical cancer has decreased over the last several years, low-income ethnic minority women remain at increased risk for morbidity and mortality from cervical cancer. We conducted a pilot study to examine the feasibility and acceptability of mindfulness-based stress reduction (MBSR) program among multiethnic low-income women with abnormal Pap smears. Spanish- and English-speaking women recruited through convenience sampling participated in MBSR classes 2 hours each week over 6 consecutive weeks. State anxiety and self-compassion were measured before and after the MBSR program. Focus groups and surveys were used to evaluate the program. Although 51 women were initially recruited, pre- and post-MBSR data were available only for 8 women. There was a significant reduction in anxiety and a trend toward increased self-compassion in this group of women. The participants evaluated the MBSR program very positively. The high attrition rate highlights the challenges of conducting MBSR research with this demographic of women. Potential strategies for improving recruitment and retention of low-income multiethnic women are discussed. KEY WORDS: abnormal, Pap smear, MBSR, multiethnic women Holist Nurs Pract 2007;21(1):26–34

Although overall rates of cervical cancer have declined over the last several decades, the incidence and mortality rates have increased among low-income women and those with less education.1 Hispanic women living in the United States are twice as likely to be diagnosed with cervical cancer as non-Hispanic whites.2 In addition, the death rate from cervical cancer is 40% higher among Hispanics than among other groups.2 African American women are diagnosed with cervical cancer at a later stage than Caucasian women.3 Reducing cervical cancer deaths from 3/100,000 females to 2/100,000 females is one of the Healthy People 2010 objectives.4 Cervical cancer is a preventable disease that disproportionately affects low-income ethnic minority women.

Pap smear screening is an effective method of detecting preinvasive cervical lesions, and has led to a decline in the rates of cervical cancer.5 After an abnormal Pap smear diagnosis is made, either close monitoring with Pap smears or further diagnostic testing with colposcopy is recommended.6 In cases where a high-grade squamous intraepithelial lesion, carcinoma in situ, or carcinoma is detected, treatment is indicated.6 Unfortunately, for many women, an abnormal Pap smear diagnosis leads to a great deal of psychological as well as physical morbidity.

A holistic nursing approach to caring for women with abnormal Pap smears includes attending to both their physical and psychological needs. Nurses are involved in almost all aspects of caring for women with abnormal Pap smears: informing and counseling women about abnormal results, providing education and emotional support, offering colposcopy and treatment, referring women to outside providers, and managing follow-up. Although guidelines have been recently developed for addressing the physical needs...
There is little consensus about how to effectively address their psychological needs.

**LITERATURE REVIEW**

**Psychological effects of abnormal Pap smears**

The psychological morbidity experienced by women related to being informed of their abnormal Pap smear result and to stresses encountered in subsequent follow-up such as repeat Pap smears, colposcopy, and treatment has been well documented in a review by Rogstad. Psychological reactions after being informed of an abnormal Pap smear result include psychosexual trauma, effects on self-esteem and body image, and anxiety. Numerous studies have indicated that fear is pervasive among women with abnormal Pap smears. Women are primarily fearful of having cancer and of undergoing medical procedures such as colposcopy. Since anxiety and fear have been found to be deterrents to follow-up after an abnormal Pap smear, it is imperative that we develop interventions that address anxiety among women with abnormal Pap smears.

**Interventions to decrease anxiety**

The most studied approach to decreasing anxiety among women with abnormal Pap smears has been the development of educational materials. The results from these studies have been mixed; some studies showed an improvement in anxiety scores, while others did not. Similarly, studies that have sought to reduce anxiety by decreasing wait time for biopsy results by allowing patients to choose treatment or observation, and by offering music, have all had conflicting results. Many of these studies were conducted outside the United States in relatively homogeneous patient populations. Literacy and language issues must be considered when written educational materials are developed for multiethnic low-income women. Some of the interventions have successfully provided short-term reductions in anxiety but few have been evaluated over the long term. Since abnormal Pap smear follow-up normally occurs over the course of at least 2 years, an intervention with long-term effectiveness is required. New innovative interventions are needed to decrease anxiety and improve adherence to follow-up among low-income ethnic minority women with abnormal Pap smears.

**Mindfulness-based stress reduction**

The mindfulness-based stress reduction (MBSR) program was developed by Kabat-Zinn at the Stress Reduction Clinic at the University of Massachusetts Medical Center. The program was developed to help patients cope with the physical and psychological manifestations of illness. The focus of the program is to train mindfulness and moment-to-moment awareness in daily life. Over the last couple of decades, MBSR programs have proliferated across the United States and worldwide, and can be found in a variety of settings from medical clinics to the corporate workplace. A number of research studies have investigated the health benefits of MBSR.

**MBSR research**

Two meta-analyses have concluded that MBSR can be helpful for a broad range of clinical and nonclinical problems. It has been found to be successful in reducing psychological as well as physical symptoms. For instance, MBSR has been found to reduce symptoms of anxiety and panic and general psychological symptomatology. Mindfulness-based cognitive therapy, an adaptation of MBSR by psychologists, has been found to decrease relapse rates among depressed patients. MBSR appears to be effective in helping patients cope with a variety of affective disorders and stressful life events.

MBSR may have an important role in reducing the physiological effects of stress on the body as well. This may have important implications for women with abnormal Pap smears. For instance, one study showed a relationship between stressful life events and increased cortisol levels among women with abnormal Pap smears. Another study showed higher life stress was related to progression and persistence of cervical dysplasia among HIV-infected women with abnormal Pap smears. Preliminary studies suggest that MBSR may have an affect on stress hormones, the immune response, and brain electrical activity. Future research in psychoneuroimmunology may help us gain insight into the role of MBSR in mediating the effects of stress and, perhaps, altering the progression of cervical neoplasia.

Few MBSR research studies have been conducted among multiethnic, low-income populations. One nurse researcher working in inner-city community clinics with Spanish- and English-speaking patients has reported an improvement in general health and
health-related quality of life, a significant decrease in chronic care visits, and a significant decrease in medical and psychological symptoms and an increase in self-esteem among patients who attended MBSR programs. These studies suggest that MBSR programs can be successfully implemented among low-income multilingual multiethnic populations, and that they can make an impact on health status and healthcare utilization.

METHODS

As part of a larger participatory action research study designed to improve adherence to abnormal Pap smear follow-up, we held focus groups with women with abnormal Pap smears in English and Spanish to gather information about their experiences with abnormal Pap smears and the factors that affected follow-up. Participants in these focus groups identified fear and anxiety as one of the primary deterrents to receiving follow-up care. This was similar to the findings of a previous study among HIV-infected women with abnormal Pap smears. MBSR is a holistic patient-centered intervention that has demonstrated effects on both psychological and physiological aspects of health. It could potentially help women with abnormal Pap smears cope with anxiety and fear by developing self-regulatory behaviors and self-compassion. We convened 2 panels to gather feedback about the proposed intervention; one with providers and staff who care for women with abnormal Pap smears and another with patients who had abnormal Pap smears. Both panels enthusiastically endorsed MBSR as the study intervention. The purpose of this pilot study was to explore the acceptability and feasibility of providing MBSR for low-income multiethnic women. In particular, we sought to determine whether MBSR decreased anxiety and improved self-compassion among low-income, multiethnic women with abnormal Pap smears and whether these women found the program helpful and continued to practice MBSR.

Procedures

Approval to conduct the study was obtained from the institutional Committee on Human Research. Most participants were recruited by a bilingual/bicultural (English/Spanish) research assistant who approached women while they attended appointments for abnormal Pap smear-related follow-up. Recruitment took place at an inner-city outpatient women’s clinic at a public hospital that primarily serves low-income women eligible for subsidized programs. During this initial contact, the research assistant explained the study and screened participants for the following eligibility criteria: age more than 18 years, not pregnant, fluent in English or Spanish, and abnormal Pap smear within the last 12 months. Ethnicity, language, and information about childcare needs were also collected. Participants were also recruited through flyers in Spanish and English advertising stress-reduction classes for women with abnormal Pap smears and by word of mouth. Our goal was to recruit 30 Spanish- and 30 English-speaking women. After the initial recruitment, participants were contacted via telephone to confirm attendance at the MBSR classes.

On the first day of the MBSR program, all participants were asked to sign a written consent to participate in the study. All study materials were offered to participants in either English or Spanish. Demographic information was collected at the initial MBSR session: age, ethnic identity, sexual identity, living situation, years of education, caregiving to children/others at home, adequacy of income, and transportation to the clinic. Participants completed the 20-item state portion of the State-Trait Anxiety Inventory (STAI), which measures anxiety at the present moment. The items were rated on a scale of 1 to 4, “not at all” to “very much.” The STAI is a reliable, valid measure of anxiety that has been translated into many languages including Spanish. It has been used extensively in many types of research and among ethnically diverse populations. Participants also completed the 26-item Self-Compassion Scale, which elicits responses to questions related to how one acts toward one’s self during difficult times. Each item was rated on a scale of 1 to 5, “almost never” to “almost always.” It is composed of subscales for self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification. A higher score indicates higher self-compassion. The Self-Compassion Scale is an instrument that was recently developed and validated for assessment within MBSR programs. The instrument was translated into Spanish by the study staff.

Participants completed the state portion of the STAI and the Self-Compassion Scale at 3 time points: (1) the initial class session (baseline), (2) upon completion of the MBSR classes (post-MBSR) and (3) 3 months after the conclusion of the MBSR group (follow-up). During the first two time points, the
instruments were read aloud to the group of participants. The 3-month follow-up questionnaires were mailed to the participants and returned by prepaid mail. During the MBSR classes, participants were given weekly incentives including refreshments, transportation vouchers, $10 in cash, and childcare. The research assistant called the participants every week as a reminder to attend the subsequent classes. The MBSR classes were evaluated by a written evaluation and in focus groups. An 11-item written evaluation was competed at the end of the last session. Each item was rated on a scale of 1 to 4, “do not agree” to “strongly agree.” The items assessed the experience of being in the MBSR program, the affect it had on their abnormal Pap smear experience, and the sustainability of MBSR in their lives. In addition, all participants were invited to attend a focus group for the purpose of evaluating the MBSR classes and discuss their experiences with MBSR. The focus groups were held the week following the conclusion of the MBSR groups and were facilitated by the principal investigator and research assistant in English and Spanish. The focus groups were audio taped. Participants were paid $20 to attend the focus group and refreshments were provided.

**MBSR curriculum**

The MBSR program were modeled after the MBSR program at the University of Massachusetts Stress Reduction Clinic. On the basis of discussions with MBSR instructors experienced with this population, the traditional curriculum was adapted to accommodate the needs of low-income ethnically diverse women. Rather than the traditional 2.5 hours for 8 weeks with a full-day retreat, the group met for 2 hours each week over the course of 6 weeks. Two courses were taught by 2 experienced MBSR teachers; one in Spanish and one in English. Women were encouraged to attend all 6 classes. Participants received cassette tapes in either Spanish or English and handouts of yoga exercises to assist them in their daily home meditation practice. No expectations or requirements about homework or at-home practice were placed on participants because of concerns about literacy, limited access to a quiet, private place to meditate, and lack of access to tape players. The participants were encouraged to devote time each day, or as often as possible, to the mindfulness practices learned in classes. The purpose of our MBSR program was to offer women the opportunity to learn techniques to reduce stress, improve self-esteem, manage pain, and reduce anxiety.

The program consisted of instruction and practice of the following: (1) “mindful eating,” which involves awareness of the sensations required in eating with full attention (2) “sitting meditation,” which involves awareness of breath, body sensations, thoughts, and emotions; (3) “body scan,” which involves a movement of attention through the body from toes to head while observing sensations in the different regions of the body; (4) “hatha yoga,” which consists of stretches and postures designed to enhance awareness and to balance and strengthen the musculoskeletal system. Inherent in all these practices is an emphasis on mindful breathing, continually bringing attention to the breath. These activities are designed to enhance awareness of one’s body, thoughts, and emotions and to teach participants to choose their emotional responses to anxiety inducing and stressful situations. As part of the program, participants were encouraged to develop a realistic plan of their own to sustain ongoing practice once the program was completed. Each weekly session was divided among instruction and practice of meditation, teaching about the importance of coming back to the present moment and working with whatever is arising, group discussion, and experiences with individual homework. In addition, participants were encouraged to talk about how mindfulness might be helpful in their experiences with abnormal Pap smears during the course.

**DATA ANALYSIS**

The study sample characteristics were determined using descriptive statistics. The Friedman’s (ANOVA) test was performed to assess main effect of time on STAI and Self-Compassion Scale scores. Pairwise comparisons were performed using the Wilcoxon signed rank tests to determine if there were any significant differences between the 3 time points; first day of the program, last day of the program, and 3 months after the program. The MBSR written evaluation was analyzed using descriptive statistics. The MBSR evaluation focus group audiotapes were translated and transcribed by a professional transcription service. Constant comparative analysis was used to develop the major themes derived from the data. The qualitative data analysis was conducted with the aid of the computer software program NVivo.
A summary of the findings from the qualitative data analysis is reported here.

**RESULTS**

Fifty-one women (40 English-speaking, 11 Spanish-speaking) women were initially recruited for the MBSR classes. However, by the time of the follow-up call 2 months later, 28 (54%) had dropped out or could not be contacted by telephone. In addition, at the start of the programs, another 10 women (20%) did not attend. Reasons for dropping out included lack of time, lack of interest, and family responsibilities. Thirteen (10 English-speaking, 3 Spanish-speaking) women (25%) began the MBSR classes. Eight (5 English-speaking, 3 Spanish-speaking) women (16%) completed the program, defined as attending at least 4 of the 6 class sessions and completing the post-MBSR questionnaires. Analyses were conducted on data collected only from participants that completed the MBSR program ($N = 8$). Because of the small number of participants, language groups were combined in the analysis.

The mean age of the 8 MBSR participants who completed the study was 39 years, with a range of 31 to 54 years. The mean age of the women who did not complete the program was 43 years, with a range of 31 to 58 years. Ethnicities included 3 Latinas, 2 African Americans, 1 Asian, 1 Caucasian, and 1 African. The ethnicities of the women who did not complete the study were 3 Caucasian, 1 African American, and 1 Filipina. All participants who completed the study identified themselves as heterosexual. Two women (25%) lived in recovery homes, 5 women (63%) lived in apartments, and 1 (12%) woman lived with family/friends. Two women (25%) indicated that they cared for children or others at home. Most women took the bus (75%, $n = 6$) to the clinic. Four women (50%) had less than a high school education. Six women (75%) believed their income was not adequate to meet their needs.

**State anxiety**

A Friedman’s ANOVA showed no main effect of time on STAI scores. A Wilcoxon signed rank test revealed that the decrease in STAI scores was significant between baseline (mean = 46.2) and post-MBSR (mean = 36.8) ($Z = 2.197; 2$-tailed $P = .028$). No significant differences were found between STAI scores for baseline and follow-up time points or between post-MBSR and follow-up time points.

**Self-compassion**

A Friedman’s ANOVA showed no main effect of time on Self-Compassion Scale scores. Further pairwise comparisons using the signed rank test did not reveal any significant differences between time points.

**MBSR program evaluation**

The written evaluation of the MBSR program was very favorable (mean score = 33.2, possible range = 11–44). Five women (63%) attended the post-MBSR focus groups. In the focus groups, women reported that as a result of the MBSR programs they were able to decrease stress in everyday life, better able to cope with health problems, more likely to attend gynecological appointments, and planning to use MBSR during gynecological examinations.

**Selected excerpts from the focus groups**

 Basically I found a balance between emotions and emotional versus being rational or mindful. It does help tremendously and I think it’s a lifelong kind of benefit to this . . . I’m not overwhelmed. I’m actually sort of calm. I have a control. About how I want it to be. And (for) the very first time I feel I can enjoy the moment and what does it really mean by enjoying the moment.

(In Spanish): Everything made me mad and desperate and now that I’ve started going [to the classes] I’ve become . . . more. . . . now I’ve learned that when I get mad about something I breathe and I say that I have to control myself.

Whatever you’re doing right now at the moment, you should deal with that. Don’t trip on you know, an hour from now or an hour ago, just, you know, trip on what you’re doing right now. And she taught us how to do that. Yeah. It was cool. I liked it.

**DISCUSSION**

In this small pilot study, we were able to show a significant decrease in anxiety among women with abnormal Pap smears who attended the MBSR program. At baseline, the mean STAI score was 46.2. This score is within the range of scores found in other studies performed with women with abnormal Pap smears, but much higher than that found among women with normal Pap smears (mean STAI
score $= 36.4$). The mean anxiety score dropped to 36.8 at the post-MBSR time period, and 3 months after the program, it still remained low at 36. There have been two other intervention studies that have successfully measured a reduction in state anxiety using the STAI among women with abnormal Pap smears. One used an educational video with a leaflet to decrease anxiety among women attending a “see and treat” clinic. Another study used music to decrease anxiety during colposcopy. Because our sample size was small, further studies are needed to confirm our findings.

We were unable to demonstrate a significant change in self-compassion in this study, though the trend was toward improved self-compassion. There are a number of issues to consider. For instance, the sample size could have been too small to detect changes. There may have been literacy issues that affected both the English- and Spanish-speaking participants’ ability to conceptualize and then accurately respond to the items on the questionnaire. We had a team of 3 bilingual women experienced at translation and familiar with the dialects of our clinic population to translate the instrument into Spanish. In future studies, it will be important to test the Spanish version of the Self-Compassion Scale for validity.

The MBSR classes were rated very favorably by the women who completed them. In addition, the focus groups revealed how the women had integrated mindfulness into many aspects of their lives. Although most of the women did not talk about having a regular formal meditation practice, they gave many examples of practicing mindfulness informally. They gave examples of using mindfulness in stressful life situations such as during an argument or to relieve the pain of a migraine headache. One participant brought a tape player and the MBSR audiotape from class to her gynecological appointment to help her feel less anxious during her repeat Pap smear. The women spoke of the importance of the social support that they received from the members of the group and wanted the programs to continue. These qualitative data, coupled with the quantitative data obtained from the written evaluation, underline the broad impact that mindfulness made on the lives of the women who participated in this program.

**Lessons learned**

This discussion would not be complete without addressing the recruitment and retention issues that we faced during this study. We recruited 51 women to participate in the programs and only 8 (16%) from the original recruitment group completed the study. We made a number of efforts to retain women in the study including weekly reminder phone calls. Reasons women gave for not attending the classes were illness, changing work hours, or shifting obligations. For instance, the women were juggling a myriad of responsibilities such as attending substance abuse groups, court appointments, housing appointments, and medical appointments. Other reasons women may have dropped out of the study include the time commitment involved, the meeting time was inconvenient, the program was unconventional, or they may not have gotten along with other group members or the teacher. From our experience working with this population, it seems more likely that the women’s hectic and unpredictable lives interfered with their ability to participate in the study. For instance, the participants told us that they relied on our reminder calls to help them remember to attend study appointments. Other studies have found practical issues such as time conflicts, working multiple jobs, transportation, lack of financial resources, and lack of childcare as barriers to research participation. Although we anticipated the need for child care in our study, the participants did not bring their children to the free childcare offered, and they told us in the evaluation that childcare was not a barrier to participating in the MBSR program. It is difficult to anticipate the needs of each unique study population.

There are a number of strategies that can be implemented to counter the difficulties in recruiting and retaining economically underserved research participants. A group recruiting for a cervical cancer prevention trial found that offering clinic visits during off hours improved recruitment. In addition, they developed phone contact lists that included every possible means to contact participants and they obtained permission to leave messages with relatives when needed. Phone calls were made in evenings and on weekends when participants were more likely to be found at home. The nurse practitioner played a critical role in developing a trusting relationship with the participant, offering comprehensive education about abnormal Pap smears and the research study protocol, and facilitating participant-specific problem solving to improve study appointment attendance. Creative strategies are needed to improve recruitment and retention of research participants from underserved populations.
communities, and nurses have many of the skills needed to develop these strategies.

Offering incentives is an important aspect of retention efforts for studies involving low-income ethnic minorities.\textsuperscript{55,57} The majority of our participants used the bus to get to the clinic, so we offered bus tokens and taxi vouchers as incentives. In addition, we offered $10 for each session attended and refreshments during the classes. In the MBSR written evaluation, the participants “somewhat agreed” that they would be unlikely to attend classes in the future if they were not offered money. Therefore, it appears that the incentives did play a part in their attendance. To find out which incentives would work best with our study population, we talked with other researchers who had conducted research with our population and we discussed incentives in the focus groups as well.

The Agency for Healthcare Research and Quality has identified understanding health disparities among women and minorities as a research priority.\textsuperscript{58} In our attempt to investigate these disparities, it is important for researchers to consider some of the underlying social political issues that ethnic minority communities face. For instance, African Americans have a long history of distrust of the medical community.\textsuperscript{55} This distrust comes from a legacy of negative healthcare experiences such as the Tuskegee Syphilis Study, ongoing racial discrimination, and reduced access to quality care. In fact, it has been postulated by the Office of Minority Health that the high rates of cervical cancer among minority women are a marker for reduced access to care in poor communities.\textsuperscript{59} For immigrant communities, fear of deportation and lack of information about health or research are barriers to care.\textsuperscript{54} To counter distrust and fear, it is essential to forge trusting relationships\textsuperscript{60} and to engage in face-to-face interactions with study participants.\textsuperscript{61} It is helpful to recruit from sites where participants have established positive relationships with staff and where the staff would endorse study recruitment. Researchers should be aware of the issues of racism, classism, and sexism that exist in healthcare and do their utmost to promote respectful collaborative relationships where individuals feel valued for their contributions.

While working with multiethnic groups, it is important to be aware of the diversity of cultural practices, values, and languages that exist. For instance, the cultural values of \textit{familismo} (family is valued and male consulted), \textit{respected} (respect toward males, elders, and professionals), and \textit{simpatía} (warm interpersonal interactions) should be acknowledged and integrated into encounters with Latino study participants.\textsuperscript{62} Other ethnic groups will have other needs. For example, in our study, we were advised to delay recruitment of Asian participants until after the Chinese New Year celebration when it would be more appropriate to discuss issues such as cervical cancer prevention. In one study, lay Vietnamese health workers who knew the language and culture successfully educated and recruited Vietnamese women for cancer screening.\textsuperscript{63} Our study was particularly challenging because we did not focus on recruiting one specific ethnic group but instead recruited women from a number of ethnic groups to capture the diversity of San Francisco. As a result, it was necessary for us to show competency in understanding and working with a number of different ethnic groups. We sought advice from our multiethnic clinic staff, gleaned information from the literature, formed a multiethnic research team, and reflected upon on our years of clinical experience working with a multiethnic population to guide us in developing a culturally appropriate research program. In future studies, we would like to expand our efforts to hire more multiethnic women from the community into the research staff.

It is imperative that ethnic minority communities be involved from the study’s inception, beginning with the development of the research questions through to the dissemination of study findings.\textsuperscript{55,64,65} An example of a research methodology that fosters the involvement of ethnic communities in all aspects of research is participatory action research, the methodology we used for this study. Partnering with churches, community clinics, schools, and other community groups are great ways to involve the community. We attempted to partner with community clinics in our study but found that they lacked the resources and staff time needed to take part in the study. In retrospect, we would have benefited from putting more emphasis on developing partnerships with a variety of community-based organizations. In large well-funded studies, community-based organizations can be reimbursed for their participation and receive other benefits such as offering services they could not normally afford. Community-based organizations can be excellent resources for evaluating research materials to ensure that they are culturally appropriate and that translations accurately reflect the language and dialect of the target population. The participation of ethnic minority communities in research does not only contribute to the integrity of the research but
could play a vital role in improving the communities’ confidence in the quality of health research.

**IMPLICATIONS FOR NURSING PRACTICE**

Nurses play a vital role in caring for women with abnormal Pap smears. In addition to tending to the physical and informational needs of women, holistic nurses also care for their psychological and spiritual needs. Many nurses employ mind/body interventions such as MBSR in the patient care setting because they find these interventions clinically successful. For instance, nurses find these interventions reduce stress and anxiety and improve patient satisfaction. Yet, in our current resource-depleted “evidence-based” healthcare environment, it is imperative that we have research to support our interventions. Unfortunately, many of the mind/body interventions that we use are not well studied, especially among low-income ethnic minority women, thus we have little evidence for their clinical effectiveness. Providing this evidence will help us secure reimbursement for mind/body interventions in the clinical setting and grant legitimacy to holistic nursing care in this very skeptical healthcare environment. For these reasons, it is essential that holistic nurses conduct and participate in research that is relevant to their clinical practice.

**CONCLUSION**

We conducted a pilot study to evaluate the acceptability and feasibility of providing MBSR among multiethnic low-income women with abnormal Pap smears. We found a significant decrease in anxiety and a trend toward improved self-compassion in this small study. The MBSR classes were positively evaluated, and the focus groups illuminated the ways women had integrated MBSR into many aspects of their lives. The high attrition rate highlights the need to develop innovative recruitment and retention strategies tailored for multiethnic populations. We have discussed these strategies in the context of the lessons we have learned from conducting this study. Further studies with larger samples of multiethnic women are needed to confirm our study findings.

**REFERENCES**