Pilot Test of Cooperative Learning Format for Training Mental Health Researchers and Black Community Leaders in Partnership Skills

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To support reduction of racial disparities in mental health diagnosis and treatment, mental health researchers and black community-based organization (CBO) leaders need training on how to engage in collaborative research partnerships. In this study, we pilot tested a series of partnership skills training modules for researchers and CBO leaders in a collaborative learning format. Two different sets of three modules, designed for separate training of researchers and CBO leaders, covered considering, establishing and managing mental health research partnerships and included instructions for self-directed activities and discussions. Eight CBO leaders participated in 10 sessions, and six researchers participated in eight sessions. The effectiveness of the training content and format was evaluated through standardized observations, focus group discussions, participant evaluation forms and retrospective pre-/posttests to measure perceived gains in knowledge. Participants generally were satisfied with the training experience and gained new partnership knowledge and skills. Although the CBO leaders were more engaged in the cooperative learning process, this training format appealed to both audiences. Pilot testing demonstrated that: 1) our modules can equip researchers and CBO leaders with new partnership knowledge and skills and 2) the cooperative learning format is a well-received and suitable option for mental health research partnership training.

Key words: minority health ■ physician careers ■ healthcare workers ■ research

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INTRODUCTION

To address and reduce racial and ethnic mental health disparities in the United States, the National Institute of Mental Health has emphasized the need for mental health researchers to receive training in working with culturally diverse populations.[1] For mental health research in black communities, success in generating valid data and in benefiting the community depends upon the ability to establish linkages with community-based organizations (CBOs).[2,3] Among CBOs we include formal (e.g., churches, civic, recreational and social clubs or associations) as well as informal groups sharing geographic, economic, political or social interest. CBOs are not only located within communities but are most often committed to advocacy and assisting their members in obtaining specific services. However, partnerships between researchers and minority communities often face barriers and constraints.[4] Collaborative mental health research in black communities can be especially challenging because it can raise sensitive issues and must overcome the legacy of past breaches of ethical principles.[5,6]

Mental health researchers typically seek the assistance of CBOs in implementing their field studies and/or recruiting research participants. Successful mental health researchers realize that these alliances can provide more than logistical vehicles and that black CBOs have extensive experience with and sensitivity to the culture and needs of their constituents.[7-9] The CBO leaders bring a unique perspective to research due to their knowledge of the history of their neighborhoods and its relevance to their own lives. However, although these complementary CBO leader assets are increasingly recognized and used by researchers, CBOs desire more equitable involvement in the research process.[8] As CBOs take on more active roles in community-based studies, researchers and CBO leaders need to develop an understanding of how their values and perspectives can affect cross-cultural collaboration on mental health topics of mutual concern. The challenges confronted by researcher–community alliances can be addressed through training in developing, operating and sustaining mutually beneficial partnerships.[10]

BENEFITS OF PARTNERSHIPS

Virtually all areas of mental health research can benefit from effective partnerships in black communities. Such partnerships provide real-life approaches to answering crucial questions about the effectiveness of treatments and interventions and the roles of access and environmental factors.[11] Certain areas of mental health, such as affective disorders of children, adolescent depression and drug abuse, may be effectively researched through partnerships with communities in which the most vulnerable can be reached. Mental health research partnerships can ensure that clinical trials recruit the required numbers of participants to identify whether treatment outcomes apply to members of black communities. In addition, community input can improve the validity of data obtained through questionnaires and psychological instruments.

LACK OF CROSS-CULTURAL PARTNERSHIP PREPARATION

Engaging and sustaining collaboration with black communities requires a mindset and sensitivity not easily acquired in graduate or research training. Mental health researchers need special training and orientation to acquire cultural competency, appreciate different reservoirs of knowledge and widen the application of advances in mental health. Despite the recent focus on community-based research, there is no comprehensive practice model to guide mental health researcher–black community partnerships.[12] There is growing concern over the lack of research training in psychiatry, especially in the areas of diagnosis, etiology and treatment among patients from different ethnic backgrounds.[13] Most mental health researchers who collaborate with communities obtain their skills after residency. In 1994, King et al. conducted a national survey of 142 psychiatry residency training directors to appraise the adequacy of residency training in ethnicity issues. The majority of respondents stated that having teaching materials on ethnicity available for residents would be very helpful, and no more than a third felt that their residents had been adequately trained on ethnicity issues.[14] Similar findings were reported from a study of psychologist training conducted in 1994,[15] and a 2000 survey of research training strategies in departments of psychiatry found that only a third offered a research track, demonstrating a national need for more diverse research training opportunities in mental health.[16] Although psychiatry residency programs have tried to fill this void through cultural sensitivity training, few have been effective in changing knowledge and attitudes relevant to conducting mental health research in black communities.[17]

Black CBO leaders vary greatly in their experience with and preparation for collaborative mental health research. Many of those with previous research experience have felt exploited, with little to show for their contributions, and are concerned about the prevailing power imbalances between communities and researchers.[18] Negative aspects of black CBO collaborative research experiences need to be addressed in order to ensure continued engagement and recruitment of black community members. Ensuring success requires that potential partners approach each other from an intercultural perspective and master skills for bridging cultural gaps before selecting and engaging a partner. Having a better understanding of the research process, academic culture and mental health conditions can allow black CBO lead-

Table 1. Demographic characteristics of training participants (North Carolina, 2006)

Parameter	CBO Leaders	Researchers
Gender		
Female	5	5
Male	3	1
Self-Identified Race		
Black	8	3
White	0	3
Age		
31–40	1	3
41–50	2	1
51–60	4	2
>60	1	0
Education		
High school	0	0
College degree	1	0
Graduate degree	6	4
Medical degree	0	2
Years of Experience in Community Research		
Range	0–25	0–35
Average	5.6*	9.5

* Only two individuals had experience (3 and 25 years, respectively)

ers to better negotiate and navigate partnerships with researchers.

MENTAL HEALTH RESEARCHER–BLACK CBO LEADER PARTNERSHIP TRAINING

To meet the challenges of conducting mental health research in black communities, researchers and black CBO leaders need special preparation and a mechanism for successful collaboration. In response to this need, Health and Education Research, Management training and Epidemiologic Services, LLC (HERMES) has developed, pilot tested and revised a series of modules designed to train researchers and black CBO leaders in how to prepare for and engage in mental health research partnerships.

During the pilot-testing phase of our research, we tested three teaching formats with researchers and CBO leaders to determine which formats were most effective for delivering our training content. The cooperative learning format, in contrast to traditional instructor-led methods, is a learner-led teaching strategy that involves interactive problem-solving and discussion. Optimal learning occurs when adults take an active, rather than passive, role in the learning process through transactions and dialogue.[19] In addition, the most effective adult education strategies incorporate methods that encourage adults to relate and apply past experience to new knowledge.[20] The positive, interactive learning process also allows adult learners to enhance their collaboration and partnership skills.[21] Following these principles, we structured a series of cooperative learning course activities to facilitate participant leadership and control by allowing participants to lead all sessions, activities and discussions. Our objectives were to: 1) pilot test our training module content and the presentation format for acceptability to our target audiences and 2) to refine the modules and presentation based on the results of pilot-testing. The results reported here were gathered during pilot-testing of the cooperative learning training format.

MATERIALS AND METHODS

Training Materials

The cooperative training consisted of three modules designed for separate cooperative learning sessions for mental health researchers and black CBO leaders and covering the following topics:

1. Module 1—Considering Partnerships
- Features of research partnerships with black communities
- Advantages of partnership
- Demands of partnership
- Identification of goals and reasons for partnering
- Selecting a partner
- Mental health issues in black communities

2. Module 2—Establishing the Partnership Groundwork
- Joint Planning and Partnership Agreements
- Challenges and Strategies

3. Module 3—Managing Collaborative Research
- Project initiation and planning
- Project implementation
- Monitoring and evaluation

The researcher and CBO leader module topic sections are the same, but the content is written from com-

Table 2. Responses to open-ended questions on the participant profile form

Item	CBO Leaders	Researchers
Reasons for partnering	• learning more about research methods • learning how to help black communities accept mental health services • learning how to improve relationships between researchers and communities	• interest in learning about collaboration • learning how to develop mutual goals • learning about effective communication • learning about best partnership practices • learning how to effectively recruit underrepresented individuals into studies • learning how to sustain commitment and involvement
Prior experience	• prior experience participating in or conducting research studies • 1 participant had experience with a partnership	• prior experience with community research • no prior experience with partnerships
Anticipated obstacles	• trust • safety issues for community • beneficence of research • fear of how the information will be used	• trust • identifying appropriate partners • administration changes • safety issues for community • beneficence of research • communication barriers

plementary perspectives, so that each group learns about working with their potential partners. Training in these three modules is meant to be followed by joint training, in three additional modules, of researchers and CBOs who have initiated partnerships.

Training Format

The cooperative learning format was implemented in 90-minute sessions over eight weeks for the researchers and 10 weeks for the black CBO leaders. In this format, participants rotate through different roles (notetaker, facilitator, timekeeper) to complete activities and facilitate discussions. This method allows participants to learn more in a shorter time while developing collective thinking skills and cooperation, both of which are crucial for building successful partnerships.

Participant Recruitment

We recruited two groups in late 2005 and spring 2006, according to the following criteria:

Black CBO leaders. An individual currently directing an organization serving primarily members of a black community, whose activities included or potentially included addressing mental health problems and who was available to complete the training sessions.

Mental health researchers. A mental health professional engaged in (or strongly interested in engaging in) collaborative research partnerships with members of the black community and who was available to complete the training sessions.

Incentives included $500, three continuing education credits, and mileage reimbursement for completion of the training and evaluation forms and participation in a debriefing focus group discussion at the end of each module. We also provided refreshments and allowed the participants to keep their copies of the training materials.

To recruit researchers, we presented our project to the chairs of psychiatry at Duke University, the University of North Carolina at Chapel Hill, North Carolina Central University and the Medical University of South Carolina. Each chair provided us with a list of potential participants, including fellows, faculty and residents. We contacted all interested people and held a meeting to further explain the project and their participation. To recruit CBO leaders, we contacted individuals from community and church organizations working in Durham, Raleigh, Chapel Hill and surrounding areas of North Carolina, and held a recruiting meeting similar to that for the researchers. Potential participants received information packets that included informed-consent forms. The data collection instruments and protocol were approved by the University of North Carolina at Chapel Hill institutional review board.

Data Collection

Participant profiles. Upon signing informed consent, each participant completed a profile form providing demographic information, reasons they were interested in partnership training, what they hoped to learn, any prior experience with partnerships and what obstacles they thought they might face in the partnership process.

Observation. At least one study team member observed each training session and used a standardized form to document the class's engagement, flow of interaction, communication, pace and problems in self-direction.

Focus groups. We conducted a focus group discussion with each group of participants after they finished each module. Our discussion guide elicited the participants' overall reactions to the training exercises and format. The moderator took notes, and the discussions were either audio- or videotaped.

Evaluation forms. Participants completed an evaluation form at the end of each training session and on completion of each module. These evaluations covered content utility, whether the modules met the training objectives and how participants felt about the learning activities. Participants rated a number of items on a Likert scale of 1 (strongly disagree) to 5 (strongly agree). They also completed an overall course evaluation consisting of similar items ranking their impressions and opinions of the cooperative learning format and open-ended items for comments and suggestions concerning the training.

Posttest. At the end of the course, participants completed a posttest that included multiple-choice items testing their knowledge of partnership skills and a "then-to-now" retrospective pre-/posttest requiring them to rate their knowledge of module topics before the training and

Table 3. Average scores[1] on multiple-choice posttest items reflecting knowledge gained after completing each training module

Module	CBO Leaders	Researchers	All Participants
1 : Introduction to Partnerships	88	50	71
2 : Engaging in Partnerships	92	94	93
3 : Managing Partnerships	75	100	86
Over all modules	85	82	83

1: Percent of answers correct

after the training by responding to these instructions: "Think about your knowledge before and after taking this course. Please rate yourself in the following areas, with 5 having the most knowledge and 1 having the least knowledge." Participants in cooperative learning tend to change their perceptions of their initial level of understanding as a result of completing the course; if asked before training, they tend to overestimate their pretraining knowledge.[22,23] The retrospective pre-/posttest eliminates overestimation of pretraining status, reducing the effect of response-shift bias.

Data Analysis

All quantitative data were entered, stored and managed in Microsoft® Access® and imported into SAS® for analysis. For analysis of the pre-/posttest data, the Mann-Whitney U test was used to compare frequency distributions of pretraining and posttraining ratings by participant group. We also calculated mean pretest and posttest ratings for each training objective by participant group and the pretest to posttest differences. For analysis of course evaluation forms, we calculated mean ratings for each module and across all three modules by participant group.

The audio recordings of the focus group discussions were transcribed and, with the observer notes, imported into NVivo version 2.0 to aid the coding, sorting and retrieval of data. We developed a preliminary codebook based on the focus group discussion guide questions and looked for themes, commonalities and patterns in the transcripts and observation notes using a constant comparative method of the grounded theory approach.[24,25] This involved studying the transcripts, piecing together the similar phrases and grouping them according to themes and examining their differences between the two participant groups. We used the same approach to examine behaviors captured on the videotapes of focus group discussions. The thematic results of qualitative analyses were compared and combined by consensus in study team meetings.

RESULTS

Demographics and Baseline Profiles

Of 10 mental health researchers and 22 black CBO leaders contacted, eight researchers and nine CBO leaders agreed to participate; two researchers and one CBO leader dropped out because of time constraints. The final group of researchers consisted of two psychiatrists, two psychologists and two nurses. The final group of CBO leaders represented two religious organizations and one organization serving youth, one serving the elderly, one providing HIV/AIDS prevention and care services, and one promoting maternal and child health. Demographic characteristics suggest that the participant groups were diverse and representative of the target audience (Table 1).

According to their baseline profiles (Table 2), both researchers and CBO leaders were interested in learning partnership-building skills, and none of the participants had been involved in a researcher–community partnership, although a few in both groups had engaged in collaborative research projects. Participants in both groups cited trust and community safety as anticipated barriers to effective partnerships. Two of the researchers had several years' experience leading collaborative research in minority communities.

Posttest

The results of the multiple-choice section of the module posttests (Table 3) indicate that CBO leaders retained more of the material on principles of partnerships presented in module 1 than did the researchers. The researchers more often missed the items on definition of cultural competency and the most common cultural barriers to mental health research or service in black communities (results not shown). As might be expected, the researchers fared better after completion of module 3, which covers more technical topics such as project management and evaluation. The overall scores between and across groups indicate that the participants increased their knowledge of collaborative mental health research partnerships.

Table 4 shows the frequency distributions (and percentages) of ratings on the retrospective pre-/posttest by

Table 4. Frequency distributions (and percentages) of knowledge ratings on retrospective pre-test/post-tests by participant group across all learning objectives*

	Pretest		Posttest	
Rating	CBO Leaders (N=72)	Researchers (N=54)	CBO Leaders (N=72)	Researchers (N=54) (N=54)
1: Least knowledge	11 (15.3)	4 (7.4)	0 (0.0)	0 (0.0)
2	23 (31.9)	8 (14.8)	0 (0.0)	0 (0.0)
3	21 (29.2)	22 (40.7)	2 (5.6)	3 (5.6)
4	14 (19.4)	14 (25.9)	24 (66.7)	25 (42.2)
5: Most knowledge	3 (4.2)	6 (11.1)	10 (27.8)	26 (52.2)

participant group. Both groups reported a shift from less knowledge to more knowledge after training across all learning objectives. The researchers rated themselves as having more knowledge of partnership topics before exposure to the training than did the CBO leaders ($p=0.008$, two-tailed test), but the two groups did not differ significantly in their ratings of knowledge gained from the modules. The mean pretest ratings (Table 5) were significantly higher for the researchers than for the CBO leaders ($p=0.008$, two-tailed test), indicating that researchers believed their initial knowledge levels to have been higher. In comparisons of mean pretest and posttest ratings, none of the average differences were negative, indicating that the participants believed they had gained knowledge. The average difference between overall mean pretest and posttest ratings was slightly larger for the CBO leaders than for the researchers, but the overall mean posttest ratings were similar for the two groups, indicating that both groups' self-reported knowledge levels were similar at the end of the training.

Course Evaluations

As shown in Table 6, the mean ratings were above the neutral rating for most evaluation questions in all modules, indicating that, on average, the participants felt that the modules contained useful and clear information, relevant objectives and exercises that enhanced learning. Participants most often agreed that the content was useful, the training objectives were relevant to the module topics, the information was presented clearly, and they would recommend this training to a colleague. The only question that both groups consistently felt neutral about was whether a training facilitator was necessary for the class. When the evaluation ratings were averaged across all modules by participant group (Table 7), the CBO ratings were significantly higher than the researcher ratings for all but two evaluation questions (the training objectives were relevant to the module topics, and it is not necessary to have a training facilitator). Although both groups of participants were least likely to agree that a facilitator was not necessary, both groups still were in overall agreement with this statement. None of the evaluation ratings by individual participants indicated dissatisfaction with the training components.

Observations, Focus Group Discussions and Videotape Reviews

We divided the combined results of qualitative analyses of observer notes, focus group discussion transcripts and videotape reviews into domains describing the acceptability of the nonfacilitated cooperative learning training format.

Nonfacilitated cooperative learning format. Overall, both researchers and CBO leaders gave positive feedback on the cooperative learning format. CBO leaders stated that they appreciated the entire group learning process because it helped expand their knowledge of issues that their communities may face and how to better deal with them. The researchers felt that the cooperative format was a great method for their group in particular because all members were so enthusiastic and eager to participate. However, researchers indicated that the success of the cooperative learning format may depend on the individual participants and their ability to adopt the self-directed process. Both groups stated that the cooperative learning format was challenging initially because of the absence of a leader, but that this allowed them to develop a shared leadership for working through the material and exercises presented in the modules.

Group process and participation. All participants showed respect for members of their groups and seemed comfortable sharing their experiences and participating in the module learning activities. From the beginning, the CBO leaders were open, connected and willing to accommodate the individual styles of others in their group. The CBO leader training sessions typically were preceded by informal socializing and did not begin until everyone had arrived, and the participants took time to ensure that everyone understood the content before moving on. The researchers worked well together, but it

Table 5. Mean pretest/post-post ratings* of learning objectives by participant group

	CBO Leaders			Researchers		
Learning Objectives	**Pre**	**Post**	**Diff**	**Pre**	**Post**	**Diff**
Knowledge of mental health research partnerships	2.57	4.43	2.13	2.83	4.33	1.50
Knowledge of mental health research methods	2.93	4.57	1.75	3.33	4.83	1.50
Knowledge of mental health issues in black communities	3.71	4.43	1.00	4.00	4.33	.033
How to locate potential MHR/CBO partners	2.71	4.07	1.88	3.50	4.17	0.67
How to create guiding principles	2.57	4.50	1.88	2.50	4.50	2.00
How to address cultural barriers in the partnership	3.57	4.71	1.13	3.50	4.67	1.17
Managing project initiation	2.71	4.29	1.88	2.83	4.00	1.17
Strategies for effective time management	2.89	4.43	2.00	3.50	4.50	1.00
How to perform a partnership evaluation	2.29	4.14	1.88	2.67	4.50	1.83
Overall	2.88	4.40	1.72	3.18	4.43	1.24

* Rating scale: 1 = least knowledge; 5 = most knowledge

took until the second and third sessions for them to start letting their guard down in sharing their views and arguments, and they never developed the same group cohesion the CBO leaders displayed by the end of the first session.

Both groups adjusted the activities to fit their own learning styles. Mental health researchers followed the specific instructions in the modules more closely than did the CBO leaders. Although both groups created their own rules for the learning activities, the researchers appointed timekeepers and facilitators as instructed in the modules, while the CBO leaders seldom designated a facilitator or timekeeper. Both researchers and CBO leaders often opted to work as a large group rather than breaking out into smaller work groups, in order to save time and because they wanted to hear the input from other members. However, we noted some differences in how researchers and CBO leaders covered the exercises in a large group. The CBO leaders encouraged all participants to contribute as much as they wanted to every question, so they took considerably more time than the researchers to complete an exercise, especially when one person offered input more than once. CBO leaders disregarded the time limits for activities, because they considered it to be part of their culture to work and discuss until everyone felt they were finished. The CBO leaders' iterative brainstorming discussions were consistent with the cooperative learning format. In contrast, the researchers chose to sequentially allow one or two people to provide an answer to a given question and went around the group until they completed the exercise. Whenever the researchers fell behind schedule for completing an exercise, the group limited the time spent on the next activities. It should be noted that the researchers attended during their lunch hours, which limited the time that they could devote to discussions.

Leadership. Over the course of the sessions, natural leaders emerged, and their leadership role was accepted even if they were not the designated facilitator or timekeeper. Two CBO leaders regularly guided the group through activities, brought small groups back together and suggested moving to another activity. One CBO leader was eventually nicknamed the "teacher," because she often clarified and summarized the session activities for the others. Although the researchers were more evenly forthright during sessions, one participant tended to regularly initiate the sessions and pace the group, ensuring that all the exercises were completed.

Problems. The CBO leaders consistently had problems starting their sessions on time. They often socialized for up to an hour without anyone suggesting that they start the cooperative learning exercises. Sometimes the group learning started only after the observer suggested that it start. Once the group initiated the session, all participants began working. Contributing to delays were many instances when individual CBO leaders arrived very late.

In some instances, participants in the researcher and CBO leader groups had not done the homework required for the scheduled exercises. Some researchers stepped in

Table 6. Mean evaluation ratings by module and participant group

	Module 1		Module 2		Module 3	
Evaluation Questions	**CBO**	**MHR**	**CBO**	**MHR**	**CBO**	**MHR**
The content was useful	4.46	4.24	4.67	4.17	4.80	4.09
The objectives were relevant to module topic	4.33	4.40	4.67	4.44	4.68	4.13
The information provided was clearly presented	4.40	4.29	4.58	4.28	4.61	4.26
The exercises enhanced my learning the objectives	4.21	4.06	4.42	3.89	4.52	4.15
It is not necessary to have a training facilitator	3.46	3.27	3.50	3.50	3.90	3.83
I acquired new knowledge from this training	4.09	3.76	4.50	3.94	4.48	4.25
I would recommend this training to colleague	4.32	4.07	4.62	4.17	4.58	4.08

CBO: CBO leaders; MHR: mental health researchers; 1 = strongly disagree, 2 = agree, 3 = neutral, 4 = agree, 5 = strongly agree

Table 7. Mean evaluation ratings across all three modules by participant group†

Evaluation Questions	**CBO Leaders**	**Researchers**	**P Value**
The content was useful	4.60	4.18	0.0002*
The objectives were relevant to module topic	4.50	4.34	0.1194
The information provided was clearly presented	4.50	4.28	0.0385*
The exercises enhanced my learning the objectives	4.34	4.04	0.0354*
It is not necessary to have a training facilitator	3.59	3.48	0.5273
I acquired new knowledge from this training	4.29	3.94	0.0197*
I would recommend this training to colleague	4.45	4.10	0.0044*

† 1 = strongly disagree, 2 = agree, 3 = neutral, 4 = agree, 5 = strongly agree; * Significant difference at $p<0.05$

and out of class to take telephone calls, which distracted the other group members. In order to accommodate the absence of a researcher from one session, the individual was allowed to participate via teleconference; however, the teleconferencing limited the flow of activities and prevented the present participants from working through the exercises scheduled for the session.

Some participants in both groups did not follow the schedule for turning in course evaluations and had to be asked repeatedly. During the last class, two CBO leaders filled out the evaluations for all sessions at once, which could have introduced recall bias.

Module-Specific Results

Qualitative feedback on individual module content and exercises were analyzed; participants' comments and suggestions are summarized below.

Module 1: Considering Partnerships. The CBO leaders enthusiastically discussed the issues covered in the exercises in module 1, which introduced the features of partnerships. They highlighted the need to emphasize sustainability of community partnerships. From their perspective, researchers all too often come into black communities to gather data and leave nothing behind. One participant said, "They are tired of people coming in raping them, in our communities," referring to researchers who take what they want and then leave. CBO leaders concurred with the module's stress on the principle that before agreeing to serve as a gateway to the community, a CBO leader should expect researchers to commit to meeting community needs. CBO leaders often reiterated the need for true collaboration and not just token community participation. Speaking for community members, one participant said, "They don't care how much you know, until they know how much you care."

Mental health researchers appreciated exploring the definitions of various types of black CBOs and examining the benefits and barriers to partnerships from the CBO leader's perspective. They suggested adding more explicit direction for the cooperative learning process, including references for further reading. Researchers also expressed interest in exploring more of the contextual issues of mental illness in black communities, such as expanding the section "Mental Health in Black Communities" to include information on working with black families and recruiting black men into research studies.

Module 2: Managing Collaborative Research. The CBO leaders discussed the issue of community readiness for partnering in great depth and seemed to greatly appreciate an exercise that included viewing a video interview of a renowned black researcher. The activities in this module stimulated much exchange of ideas for the future, as well as concerns about past research collaborations. The CBO leaders mentioned that this module helped them see how they could contribute to mental health research as active partners because of their diversity. One participant said, "We are a colorful people in our expressions, and that can easily be misunderstood," underscoring how their input might improve understanding of mental health conditions among black Americans. The CBO leaders talked at length about the value of having self-awareness discussions to prepare for their roles in research partnerships.

The researchers reported that the brainstorming exercises enhanced their understanding of the partnership process from the CBO leader's point of view, as well as that of black communities. They agreed that having an opportunity to sit down and work through potential concerns of CBO leaders really opened their eyes to issues they would not have otherwise considered. The researcher group included clinical psychologists, psychiatrists and nurses. The exercises in the second module brought to the surface interdisciplinary differences in mental health research perspectives, cross-cultural competencies and values that could affect black community partnerships. For example, the issues of involving CBO leaders in study design and sharing research tasks with community members were more problematic for the clinical psychiatrists than for other participants. Although the researchers felt that module 2 gave them practical skills for initiating collaborative research in black communities, they expressed the need for more scenarios focused on addressing cultural barriers and power dynamics, because of the importance of these issues. They felt that the biggest lesson they learned from module 2 was the importance of, and ways of, meeting the community and not making assumptions about the community's expectations and mental health priorities.

The researchers felt that enough time was allotted to complete all the exercises; however, they suggested that it be stressed up front that participants should stay within the suggested time limits, as it otherwise would be very easy to fall behind. They said that the thought-provoking nature of the topics made it essential to keep track of time, to avoid getting lost in the discussion.

Module 3: Managing Collaborative Research. CBO leaders stated that working through the toolbox-like exercises in this module exposed them to how research projects should be approached and conducted. They wanted more information on the process of evaluation and more specifically what types of roles they could play in the process. Of all the activities in this module, CBO leaders appreciated the activity on budgeting the most because they were "very happy" to get that practice.

In general, researchers felt that module 3 provided them with practical tools to use when managing collaborative research. They specifically mentioned the budgeting and a "work breakdown structure" exercise as being particularly helpful. One researcher commented on how this module challenged her assumptions about what aspects of the research process CBO leaders might be interested in. Mental health researchers suggested

that the last section of module 3 (Project Closeout) be expanded and include information that would be specifically relevant to working with black CBO leaders.

Overall course. Both groups were initially surprised by the cooperative learning process, because they had never used this approach. Although they all felt that the cooperative learning format was beneficial to the learning process, everyone agreed that more information and/or facilitation would be useful in the first session. One suggestion was to expand the introduction to the course with information on cooperative learning theory and all that it entails.

The common constraint for both groups during the training was time—to prepare for class, to come to class and to finish activities. Mental health researchers said that reading assignments of >15 pages per week would be too taxing on their schedules. Although CBO leaders said that enough time was allotted to complete the activities, they consistently took more time than their researcher counterparts.

DISCUSSION

Overall, our results indicate that the cooperative learning format is an effective method for delivering our mental health research partnership training materials. The participants' posttest knowledge ratings were higher than the pretest ratings, indicating that they believed their knowledge had increased. All participants rated the training highly for meeting the learning objectives, presenting useful information and exercises, and contributing to their skills for engaging in mental health research partnerships. Qualitative results indicated that participants agreed on the benefits of the cooperative learning format. Cooperative learning allowed both researchers and CBO leaders to share experiences and mutual concerns, work through exercises as a team and identify issues pertinent to preparing for mental health research partnerships. The participants highly rated the cooperative activities, such as role-playing and discussion of case studies. All agreed that the content of the first three training modules provided an orientation to partnership concepts and preparation for cross-cultural collaboration between researchers and black CBO partners.

Participant input on the training content and format has contributed to iterative revisions of our training materials. We have edited the content of these modules and modified the presentation of sections accordingly. During the pilot-testing, each group modified some aspect of the training to better suit their needs and time constraints. However, this only confirmed that the training is flexible and can be adapted to the preferences of each target audience.

Limitations of the Study

Because group interaction is key to the cooperative learning process, attendance at weekly sessions was necessary. Therefore, lapses in attendance and preparation for class may have affected the completeness and accuracy of our data. Missing part of a class limited a participant's ability to evaluate the session's activities. Absences could also have affected the observations of group dynamics, communication efficiency and problem-solving strategies. Realizing this, the participants did take it upon themselves to candidly address the responsibilities of participation and the problems caused by tardiness, and took the time necessary to cover the material in each session.

Cooperative learning is defined by its learner-directed activities. Participants in both groups had difficulty grasping this concept initially and often turned to the observer as an authority for the class. Although the modules were designed to be stand-alone, nonfacilitated instruction materials, there were instances when the observed intervened to initiate the CBO learning sessions. Both groups of participants indicated that they wanted more direction and explanation of cooperative learning in the introduction to the course, and this may be a valid way of addressing this problem.

Implications for the Cooperative Learning Format

As a teaching method derived from the principles of adult education, cooperative learning has great potential as a method for professional development of mental health researchers and black CBO leaders. The CBO leaders, although having diverse backgrounds and interests, were naturals at this process and not as constrained as the researchers, who took longer to feel comfortable to speak freely; this difference in behavior probably reflected differences in organizational culture. Once the group process began to take hold, both groups enjoyed sharing this self-directed learning experience. Because it does not require a trained facilitator to lead the sessions, cooperative learning may be more accessible to groups that lack the resources to hire a leader. Also, because the training is group directed, the training sessions can be structured to best fit the needs and preferences of participants. This in itself could enhance attendance, cooperation and participation.

Implications for Prepartnership Training

The growing interest in conducting community-based mental health research and the numbers of partnerships conducted by trial and error indicate a need for a prepartnership training model. Our participants had the opportunity to do their "homework" on cross-cultural collaborations. In addition, the cooperative learning format allowed participants to challenge each other's values within their respective groups and gain self-awareness about their motivations and expectations. This experiential model may help alleviate clashes

that can halt the researcher partnership process. What remains to be studied is whether the preparation leads to more successful partnerships. We are currently testing a facilitated course format and the next series of these modules, which guide newly formed partners through the first year of their collaboration.

CONCLUSIONS

The cooperative learning format is a novel approach well suited for mental health researchers and black CBO leaders. The different styles of adapting to the training format reflect the differing backgrounds of researchers and CBO leaders. The black CBO leaders' immediate adoption and enjoyment of the collective effort may stem from their desire to be altruistic and from the collective approach to problem-solving characteristic of black communities. The researchers, who were accustomed to more structured classroom settings, nonetheless adapted well to the cooperative learning format. They recognized and valued the cognitive psychological aspects of free-flowing knowledge construction. The process of learning skills together and being challenged by the exercises helped the participants to see issues through a new lens. Once the cooperative learning format was understood, participants recognized the crucial role of the group and face-to-face interactions that ensued.

Based upon participant feedback, we have revised the course material to include more orientation to the cooperative learning process. We are also comparing this method with other training formats. Regardless, this pilot test has established cooperative learning as a method for delivering our mental health research partnership training materials effectively to a broad section of our intended audience. The course's innovation, versatility and flexibility should ensure its attractiveness to future participants. With additional ethnographic formative research, we hope to tailor these modules to guide the development of partnerships between researchers and other minority groups.

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REFERENCES

1. National Advisory Mental Health Council. Bridging Science and Service. *National Advisory Mental Health Council's Clinical Treatment and Services Research Workgroup Report*. Department of Health and Human Services National Institutes of Health; 2002.

2. National Advisory Mental Health Council. The road ahead: research partnerships to transform services. *Workgroup on Services and Clinical Epidemiology Research*. Department of Health and Human Services National Institutes of Health; 2006.

3. Schensul JJ, Robison J, Reyes C, et al. Building interdisciplinary/intersectoral research partnerships for community-based mental health research with older minority adults. *Am J Community Psychol.* 2006;38:79-93.

4. Taylor RJ, Ellison CG, Chatters LM, et al. Mental health services in faith communities: the role of clergy in black churches. *Soc Work.* 2000;45:73-87.

5. Reich SM, Reich JA. Cultural competence in interdisciplinary collaborations: a method for respecting diversity in research partnerships. *Am J Community Psychol.* 2006;38:51-62.

6. Keating F, Robertson D. Fear, black people and mental illness: a vicious circle? *Health Soc Care Community.* 2004;12:439-447.

7. Sandman L, Baker-Clark C. Characteristics and principles of university-community partnerships: a Delphi study. Paper presented at: Midwest Research-to-Practice Conference and Community Education. Michigan State University; 1997.

8. Axel-Lute M. Making Research Serve Communities' Needs. *Shelterforce Magazine*. 1997.

9. Israel B, Schulz AJ, Parker EA. Community-Based Participatory Research: Engaging Communities as Partners in Health Research. Paper presented at: Community-Campus Partnerships for Health 4th Annual Conference. Washington DC; 2000.

10. Williams A, Labonte R, Randall J. Establishing and sustaining community-university partnerships: A case study of quality of life research. *Crit Public Health.* 2005;15:291-302.

11. Snowden LR. Racial, cultural and ethnic disparities in health and mental health: toward theory and research at community levels. *Am J Community Psychol.* 2005;35:1-8.

12. Harris G. Practicing HIV/AIDS community-based research. *AIDS Care.* 2006;18:731-738.

13. Lefley HP, Bestman EW. Public-academic linkages for culturally sensitive community mental health. *Community Ment Health J.* 1991;27:473-488.

14. King R, Koopman C, Millis D. Training on Ethnic and Gender Issues in Psychiatry Residency Programs: A National Survey of Residency Training Directors. *Acad Psychiatry.* 1999;23:20-29.

15. Allison KW, Crawford I, Echemendia R, et al. Human diversity and professional competence. Training in clinical and counseling psychology revisited. *Am Psychol.* 1994;49:792-796.

16. Balon R, Singh S. Status of Research Training in Psychiatry. *Acad Psychiatry.* 2001;25:34-41.

17. Loboprabhu S, King C, Albucher A. A Cultural Sensitivity Training Workshop for Psychiatry Residents. *Acad Psychiatry.* 2000;24:77-84.

18. Lantz PM, Viruell-Fuentes E, Israel BA, et al. Can communities and academia work together on public health research? Evaluation results from a community-based participatory research partnership in Detroit. *J Urban Health.* 2001;78:495-507.

19. Brody CM, Davidson N. Introduction: professional development and cooperative learning. In: Brody CM, Davidson N, eds. Professional Development for Cooperative Learning. Issues and Approaches. Ithaca, NY: State University of New York; 1998:3-24.

20. National Institutes of Health National Cancer Institute. Trainer's Guide for Cancer Education; 2001.

21. Sorensen EK, Tackle E. Investigating knowledge building dialogues in networked communities of practice. A collaborative learning endeavor across cultures. *Interactive Educational Multimedia.* 2005;10:50-60.

22. Levinson W, Gordon G, Skeff K. Retrospective versus actual pre-course self-assessments. *Eval Health Prof.* 1990;13:445-452.

23. Dixon N. The relationship between trainee responses on participant reaction forms and posttest scores. *Human Resource Development Quarterly.* 1990;1:129-137.

24. Eaves YD. A synthesis technique for grounded theory data analysis. *J Adv Nurs.* 2001;35:654-663.

25. Charmaz K. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London, UK: Sage Publications Ltd.; 2006. ■