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Emily Rosemary Goettsche
Yale University, emily.goettsche@gmail.com

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Evaluation of a U.S.-based Training Program to Promote Task-Sharing in Maternal Mental Health

Emily R. Goettsche

MPH Candidate

Yale School of Public Health

Social and Behavioral Sciences

Advisors: Megan Veenema Smith, PhD and Trace Kershaw, PhD

Abstract

Objective: This thesis evaluates the acceptability and feasibility of training community mental health workers in mental health in community settings. The specific aims of this study are:

(1) to determine whether community health worker trainings in mental health delivered in the community by non-researchers can be evaluated using a structured research protocol and

(2) to assess whether the community mental health worker training improves the knowledge, behaviors, and attitudes of the people who complete the training.

Background: Mental health task-sharing interventions targeting mothers in the United States have minimal research regarding efficacy and feasibility. This thesis describes the development and evaluation of a Community Mental Health Ambassador (CMHA) training to help improve mental health outcomes among mothers in New Haven, CT.

Methods: Data were derived from 5 CMHA training sessions with a total of 51 participants. Training participants completed pre- and post- training measures of communication skills and confidence in self-efficacy and perceived control in addition to a core competency assessment and satisfaction evaluation. Sensitivity analyses were conducted to determine differences between baseline and post-training scores by group characteristic. Data were stratified by education (high school or college/vocational tech) and role (parent/caretaker or provider). Bivariate analyses examined relationships between education and role with ability scores.

Results: High levels of satisfaction were reported among training participants. Participants agreed that the training sessions appropriately addressed the core competencies of the CMHA training. A trend was observed in the confidence score in ability to handle responsibilities (p=0.063). Improvement by one-point in median scores from pre-training to post-training was seen in the self-efficacy categories of ability to give advice or assistance on health issues (2.0, 3.0, p=0.6133) and ability to give advice or assistance on community issues (2.0, 3.0, p=0.5938). The sensitivity analysis revealed a significant effect of role on verbal communication ability (p=0.02).

Conclusions: The CMHA training as implemented by the MOMs Partnership is an effective and feasible means of training people in the community about maternal mental health issues. While more training sessions need to be conducted to increase sample size and power, the results of this thesis show promising potential to help increase access to community mental health resources for mothers.

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Introduction

Maternal depression is a significant public health problem that spans generations. Women are at the highest risk for depressive, anxiety, and addictive disorders during the childbearing years with lifetime rates of depression among women between 10-25%.[1,2 3] While depression is the leading cause of disability for both males and females, the burden of depression is 50% higher for females than for males.[4] The association between maternal depression and adverse child outcomes is well documented.[5] Research has shown that children's psychological development[6], intellectual capabilities[7], and social functioning[8] can be significantly impacted by maternal depression.

Although there are a number of effective treatments, women who suffer from depression are significantly undertreated.[9] Among mothers with depression, effects on daily functioning are greater for low-income mothers than those with higher income.[10] Only 33% of low-income women who need mental health services receive treatment and when the services are received, quality is often poor.[11,12] Barriers to care include: cost, lack of insurance, lack of transportation, long waits for treatment, previous bad experience with mental health care, and lack of knowledge about where to go for services.[13,14]

Public health responses to maternal depression have generally been limited to screening interventions and public awareness campaigns.[15,16] A new, novel approach to maternal depression is represented by the MOMs Partnership, a community-academic partnership in New Haven, CT between Yale University and seven community organizations. The MOMS Partnership utilizes a community-based participatory research approach (CBPR)[17,18] to transform mental health service delivery for mothers and

children through community and neighborhood-based resources.[19] Central to the MOMS Partnership's mission is training of community health workers called Community Mental Health Ambassadors (CMHAs). CMHAs are taught skills in mental health intervention with a focus on outreach skills to promote health, development, and family wellness. The overall purpose of the CMHA role is to increase the capacity of the mental health workforce specific to women and mothers to improve overall mental health outcomes among mothers.

Training women in the community to incorporate mental health knowledge and social support skills into their everyday lives as CMHAs may help improve maternal mental health outcomes in New Haven. By acting as community outreach workers and referral sources, mental health care will be more accessible to those women who need it. CMHAs can identify problems in the community, develop solutions, and bring care to the mental health of the people who need it most. The CMHA model is based on the idea of "task shifting" and "task sharing," defined by the World Health Organization as "the process of delegation whereby tasks are moved or shared, where appropriate, to less specialized health workers."[20] This allows for more efficient and widespread delivery of services to take place. CMHAs can increase access to care and facilitate use of health resources by providing outreach and cultural connection between communities and health resources.[21]

The field of peer-delivery health services is still developing. The majority of the work conducted to date has focused on chronic diseases in a global context. Use of peer-delivered health services in chronic disease has resulted in positive effects on multiple health outcomes including smoking cessation[22], asthma[23], and diabetes[24,25,26]. Specific to

the extant work in *mental health*, many of the peer-delivered services have centered on recovery, psychosis, and severe mental illness[27,28]; few have looked at mental health more broadly to encompass some of the most common mental illnesses such as depressive and anxiety disorders.[29] The majority of peer delivered services in maternal mental health have been implemented in global settings outside of the United States and have involved mental health screenings, parenting coaching, and Cognitive Behavioral Therapy (CBT).[30,31,32,33,34] To our knowledge, there are very few peer-delivered mental health services that have specifically focused on mothers in the United States, and even fewer that have focused on depression and trauma specifically.

The infrequent use of community health workers (CHWs) in mental health means that there are few, if any, examples of research studies and associated assessment instruments designed to evaluate the effectiveness of CHW trainings in metal health. Completed evaluations of CHW trainings revolve around health outcomes of clients served by CHWs and generally have not focused on the actual fidelity of the training programs or the impact of the training on knowledge, skills and attitudes of the CHWs. Thus, overall, there is limited research and an abbreviated literature on evaluation of peer-based training programs for changing knowledge, attitudes, and behaviors.[35]

To add to the scant literature in this area, this study evaluates the acceptability and feasibility of training community mental health workers in mental health in community settings. The specific aims of this study are:

(1) to determine whether community health worker trainings in mental health delivered in the community by non-researchers can be evaluated using a structured research protocol, and

(2) to assess whether the community mental health worker training improves the knowledge, behaviors, and attitudes of the people who complete the training.

We hypothesize that the CMHA training will be acceptable to 80% of women who complete the training. We also expect to see a one-point change in response from pre- to post- responses in questionnaires evaluating changes in abilities.[36]

Methods

Study Overview

Five CMHA "Essentials of Engagement" training sessions were held from January 2014 to February 2015 (n=51) as part of the MOMS Partnership Community Mental Health Ambassador training initiatives. These training sessions were held at various community locations in New Haven, CT such as the Department of Children and Families the MOMs Partnership office, and local schools and public housing complexes. The average training session lasted approximately 4 hours and was led by a MOMs Partnership-employed CMHA. Childcare and dinner were provided at the time of training. Sessions combined didactic techniques along with role-playing and group exercises. Training leaders were trained members of the MOMS Partnership staff. Each training series emphasized group involvement and discussion around the core competencies and included group activities.

The primary objectives of the training sessions involved: (1) familiarizing women in the community with the importance of mental health for well-being, working, and parenting; (2) teaching women skills to engage other women about mental health topics;

and (3) addressing the 13 core competencies around mental health engagement and outreach. The competencies include the ability to:

1. Provide information, resources and connection for mothers and caregivers in community locations where families live, learn, work, interact and play.
2. Establish trust and respect with mothers and caregivers
3. Build relationships with peers, organizations, and communities
4. Identify and build on existing strengths
5. Listen without judgment
6. Give reassurance and information regarding the impact of stress on mothers and caregivers
7. Encourage mothers and caregivers to get appropriate care and support
8. Understand that I am a resource
9. Trouble shoot and problem solve
10. Understand myself as a leader and advocate
11. Understand the impact of stress
12. Identify causes of stress
13. Help mothers and caregivers manage and cope with stress

Sample and Recruitment

Participants were recruited from public housing complexes and the eight MOMS Partnership organizations through use of emails, flyers, and outreach by MOMS Partnership staff. Eligibility was contingent upon ability to read and write in English. The table below shows the breakdown of training series by number of participants and location.

Assessment Procedures

At each training session, demographic information was collected and pre- and post- measures of communication skills, self-efficacy, and perceived control of community involvement were completed. Following each training session, participants were asked to complete an additional questionnaire addressing each competency and indicate how well it was addressed in the training session.

Measures

A literature review was conducted to examine the existence of current scales and measures in similar studies[37,38], but there was found to be a dearth of measures in the literature that specifically evaluated changes in community health workers before and after trainings. Where possible, questions and format of questionnaires was adapted from instruments in public domain, however, ultimately, after testing the instruments, new instruments were created for purposes of this evaluation. Because of the community-based participatory approach to research utilized by the MOMS Partnership, the process of the CMHA training was modified based on feedback from trainings. As such, versions of questionnaires were adjusted between trainings based on new suggestions from community collaborators and mothers themselves. Final questionnaires now exist, but the research presented herein incorporates the assessments and trainings done on the pilot measures and trainings.

Questionnaires were completed at the time of the training, just before and just after the training was held, as well as six-weeks post-training for follow-up. Each participant completed three measures before the training (Demographics Profile, Communication skills, and Self-Efficacy/Perceived Control forms) and 4 measures after the training (post measures of Communication skills and Self-Efficacy/Perceived Control, Post-Training questionnaire, and Core Competencies assessment). Abilities measures completed before and after the training focused on assessing communication skills, self-efficacy, and perceived control. The post-training questionnaire was composed of questions asking about ways to improve, most effective parts of the training, and whether they would recommend the training to a friend. The Core Competencies assessment

asked participants to assess whether the training addressed each of the core competencies set forth at the beginning of each training session. Further details are provided below. All questionnaires are included in Appendix 1.

Demographics

Participants completed the CMHA Profile, a form that asked basic demographic information such as age, gender, race, education level, and employment history. Self-reported helping behavior and social support information was also collected.

Feasibility and Acceptability

To measure the feasibility of evaluating a community health worker training in community-settings by community members, we examined the rate of response to questionnaires across training cohorts. More specifically, feasibility and success of the training was determined by looking at responses to the Core Competency assessment. Feasibility and acceptability of the training sessions was determined by endorsement of "agree or strongly agree" regarding the coverage of the core competencies in the training session.

Satisfaction

To examine satisfaction we examined responses from the post-training questionnaire. Satisfaction with the training was assessed with the questions "Would you recommend this training to a friend?", "Did this training provide you with skills to engage women in the community about stress and mental health?", and "Will you use the

information from this training in other places?”. Endorsement of “yes” to these questions constituted a measure of satisfaction.

Abilities

The communication skills questionnaire featured questions about ability to communicate verbally, nonverbally, with mothers, and as advocates for mothers. The self-efficacy questionnaire included questions about self-rated confidence with respect to participation in the areas of health issues, community issues, leadership, and family. Questions about ability to control what happens in one’s family or community were asked on the MOMs Partnership Perceived Control Questionnaire. Scales were traditional 4-point Likert scales for agreement (strongly disagree, disagree, agree, and strongly agree) and confidence (not confident, little confident, somewhat confident, very confident).

Statistical procedures

The questionnaire data from each training series were entered into a Microsoft Access database created uniquely for the data collected at the CMHA training sessions. All analyses were performed using SAS version 9.4 (SAS Institute, Cary, NC). Participant characteristics are presented as means (SD) for continuous variables and as n and percentages for categorical variables.

Tests for normality were conducted to determine if the distribution of data points were normal. The reported p-values were derived from the Wilcoxon ranked sum test (see Table 3). To determine change from pre-training to post-training in communication skills,

self-efficacy, and perceived control, scores were averaged to determine a raw score for pre and post categories in the total sample. Due to the evolution of the training sessions and lack of a full-time research assistant to ensure completion, not all participants completed a pre and post questionnaire of every skill measured. Therefore, the sample size for participants who completed all pre and post measures is n=14.

Sensitivity analyses were conducted to determine differences between baseline and post-training scores by group characteristic. Data were stratified by education (high school or college/vocational tech) and role (parent/caretaker or provider), with 14 participants. The relationship between these factors and communication skills, self-efficacy, and perceived control were examined through bivariate analyses and Fisher's exact test.

Results

Demographics

Descriptive characteristics for the sample (n=51) appear in Table 1. The average age for training participants was 37.7 years of age (SD=6.9). Thirty five percent (n=16) of participants considered themselves parents or caregivers and 62.22% (n=28) were service providers. The majority of the sample (73.9%, n=17) were African American. Over half (52.2%, n=12) of the sample completed college. All training participants reported having people who seek their advice on health issues on a regular basis. See Table 2 for additional demographic information.

Feasibility and Acceptability

Feasibility was measured by examining responses to the core competencies as addressed by each training session. Figure 1 outlines responses of agreement for each core competency. Participants endorsed "agree" or "strongly agree" for most of the core competencies of the CMHA training. Competencies that could be addressed further include how to give reassurance and information regarding the impact of stress on mothers and caregivers; how to troubleshoot and problem solve; how to identify causes of stress; and how to understand the impact of stress. All other competencies were endorsed (n=14, 100%) as agree or strongly agree that the CMHA training prepared participants in the remaining competencies.

Satisfaction

All participants who completed the training stated they would recommend the training to a friend. Additionally, all participants responded that the training provided skills to engage women in the community about stress and mental health, and that they will use the information from the CMHA training in other places. Most participants deemed the learning activities appropriate (88.37%, n=38), interesting (81.4%, n=35), and stimulating (88.4%, n=38). The teaching materials were helpful according to 84.8 (n=39) of participants and clearly written according to 47.8% (n=22) of CMHA training participants. 82.6% (n=38) agreed that the teaching materials could be improved. See Table 2 for details on satisfaction responses among CMHA training participants.

Abilities

Fourteen participants completed all ability questionnaires before and after the trainings. Within this sample, no significant differences from pre-training to post-training were observed. There was a trend observed in the confidence score in ability to handle responsibilities (p=0.063;Table 3). Median scores are presented in Table 5 to show changes in median score from pre-training to post-training. Improvement in median scores from pre-training to post-training was seen in the self-efficacy categories of ability to give advice or assistance on health issues (2.0, 3.0, p=0.6133) and ability to give advice or assistance on community issues (2.0, 3.0, p=0.5938). The sensitivity analysis revealed a significant effect of role on verbal communication ability (p=0.02). Other bivariate analyses between education or role and abilities were non-significant.

Of the participants who completed the post-training communication skills questionnaire (n=46), 91.3% felt somewhat or very confident in their verbal communication skills after the training. All of the participants (n=46) felt somewhat or very confident in their listening skills after the training. All but one of the participants (97.8%) experienced confidence in their ability to communicate well with other mothers and caregivers after their participation in the CMHA training. High confidence was recorded among 43 participants regarding their ability to be a voice for mothers and caregivers to other groups of people and leaders (93.5%).

Data from CMHA training participants (n=38) collected before the training indicated already high levels of self-efficacy. Of note, 97.37% of participants felt high levels of confidence with their ability to help solve problems that come up within a group and ability to handle leadership roles. Lower confidence ratings were seen in the pre-

training measures of “ability to discuss community issues with elected officials” (76.3%) and “ability to solve problems within your community” (86.8%). The entire sample felt somewhat or very confident in their ability to give their opinions or ideas to others as well as their ability to handle responsibilities (n=38, 100%). Similarly, highly confident scores were recorded for perceived control before the CMHA training (n=38). Of the 38 participants who completed the perceived control questionnaire, 100% felt highly confident that they have control over the decisions that affect their lives. High confidence was also reported for participants who felt confident that they are satisfied with the amount of control they have over decisions that affect their life (97.4%). However, lower perceived control scores were observed in the categories of “my community has influence over the decisions that affect my life,” of which 42.1% of the sample felt less confident. Similarly, 36.8% of the sample before the CMHA training felt little or no confidence about their satisfaction regarding the amount of influence they have over decisions affecting their communities.

Discussion

To our knowledge, this is the first community-based and community-partnered, peer-delivered mental health training targeting mothers in the United States. The high rates of satisfaction, acceptability, and feasibility as measured by the core competencies indicate that this is a successful training. The lack of significant differences in scores from pre- and post-training is largely due to a small sample size and missing data. More data need to be collected to examine changes in abilities as a result of this training.

We observed low responses to follow-up 6 weeks after the training sessions were conducted. A follow-up Core Competency Assessment was administered via Qualtrics online survey, mailings with pre-addressed and stamped return envelopes, and phone calls. The lack of incentive or reward for completion, transient housing and contact information of participants, and perhaps inconvenience of the survey resulted in low response rates. For future trainings, establishing a protocol with training participants, instituting a reward for the follow-up survey, and repeatedly contacting nonresponsive participants may accrue a higher response rate. Furthermore, the brevity and clarity of the Core Competency Assessment may lend itself well to a phone-call follow-up. Higher rates of response may be garnered through follow-up procedures with phone calls to training participants.

An interesting finding in the ability scores was a presence of lower post-training scores than recorded before the training. Higher rates of confidence in ability scores before the CMHA training might reflect a ceiling effect where participants could not score higher in the post-training assessment. This observation could be explained by the need for a larger sample, an improved scale with more options for response. It is possible that prior to the training, confident responses were given based on experience and current knowledge and attitudes, but after being presented with the content of the training and reassessing abilities, confidence was registered lower in the post-training period. Participants became aware of what they did not know during the training and thus responded with lower confidence. This may be explained in part by the idea that participation in an educational experience about mental health created a new self-awareness for participants, and led to critical thinking of their ability, and perhaps a lower

score after the training was completed. Paolo Freire has articulated this idea in his work, *Pedagogy of the Oppressed.*[39]

The success and acceptability of this training is a big step forward towards improving access to mental health resources. The impact of global mental illness is significant, with mental illness contributing 7.4% of the world's measurable burden of disease[40,41] In spite of this burden, mental illness remains neglected in terms of visibility, policy attention, and funding.[42] In the United States, only 2 out of 10 adults with common mental health problems receive care from a mental health specialist in any given year.[43] The lack of access to mental health services in urban areas with high stress and burden of mental illness can be improved by the presence of CMHAs trained through the MOMs Partnership in this task-sharing model.

Few published studies conducted in low-income, culturally diverse settings with evaluated treatments exist. Current models of mental health care delivery that rely on health professionals to deliver care to patients are not feasible for low- and middle-income areas due to the lacking number of health professionals.[44] Therefore, a shift in health care delivery to trained community health workers has been proposed as a potentially feasible and acceptable model of mental health care delivery in a public health framework. Task-shifting reshapes the landscape of mental health service delivery by increasing access to mental health services in the community as delivered through trained and supervised mental health community health workers.[45] This model of collaborative care[46] is exemplified in this study by providing informed training sessions to members of the community in mental health knowledge and community engagement. The public health significance of community mental health workers has been examined and

determined to be effective in low to middle income countries, especially in countries where close to 90% of people with mental disorders to not receive cost-effective treatments.[47] The training of CMHAs as detailed in this study adds to the literature and provides methods for further replication and evaluation for trainings of this kind in the United States. Key to replication of task-sharing models and task-shifting models of mental health care in the U.S. will be the ability for public health practitioners and researchers to evaluate the effectiveness of the impact of the trainings on community health workers and monitor the delivery of community health worker training specific to fidelity. This thesis provides a first step in enhancing the training of community health workers in mental health care through an evaluation of the acceptability and feasibility of the trainings.

Stigma remains a leading cause in people with mental illness not seeking care. Negative responses to people who have been identified as having a mental illness are seen as a major obstacle to recovery and help-seeking behavior.[48] By training CMHAs in mental illness and associated resources, the conversation about mental health and the need to seek help can become a community-based conversation, effectively minimizing stigma and increasing utilization of mental health resources.

This study is marked by limitations including lack of power and sample size, absence of external validity, and deficiency of long-term follow-up. From the beginning of this study, it has been an iterative process that has evolved through measures, participation, and follow-up. Data continues to be collected and training sessions are continuously being modified. Further research and evaluation will determine which structured protocol and measures are most acceptable and satisfactory to participants and

trainers alike. Future directions of this work include refining follow-up protocols as well as assessing the need for booster sessions and increased supervision of CMHAs post-training.

Policy recommendations to integrate community health workers such as CMHAs into the healthcare workforce are a step that would aid in the prevention of adverse health outcomes and improve community connectedness and awareness of resources. With further research and evaluation, CMHAs can be a vital element in efforts to restructure the delivery of mental health services in New Haven and elsewhere. Policy changes have been proposed as a way of stimulating comprehensive changes to the health care workforce by providing sustainable financing for CMHA services, workforce development resources such as training and career development, standards for training and certification, and also guidelines for common measures to be used in research and evaluation.[49]

Conclusion

The results from this study provide evidence of the feasibility, acceptability, and satisfaction of a community-based community mental health worker intervention in the United States. This study calls attention to the increased need and importance of community health workers in the field of mental health, especially targeting mothers. Further training sessions and evaluations need to be conducted, and follow-up procedures need to be refined. However, CMHA trainings are feasible and acceptable to over 80% of the participants who participate. A one-point increase in scores was observed for a few of the changes in abilities categories. Further training with more participants may elucidate

more about whether the training sessions have a direct effect on improvement of abilities. For mothers in New Haven, CMHAs prove to be a successful way to access mental health resources.

Tables

Table 1. Profile of training sessions			
Training series	Date	Number of Participants	Location
1	1/8/14	9	Department of Child Family Services, New Haven
2	7/7/14	19	Family Centered Services of Connecticut
3	9/18/14	9	New Haven Public Library
4	10/29/14	8	West Rocks Elementary School, New Haven
5	2/12/15	6	MOMS Partnership Office, New Haven

Table 2: Demographic characteristics and helping behavior of training participants.[1]

	Series 1 n=9	Series 2[2] n=19	Series 3[3] n=9	Series 4 n=8	Series 5 n=6	Total n=51
Age	37.7 (6.98)	----	----	36.1 (12.0)	39.7 (8.2)	37.7 (8.8)
Sex						
female	6 (66.67%)	15 (78.9%)	9 (100.0%)	8 (100.0%)	6 (100.0%)	20 (87.0%)
male	3 (33.3%)	4 (21.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (13.0%)
Role						
Parent/Caregiver	0 (0.0%)	0 (0.0%)	9 (100.0%)	7 (87.5%)	2 (40.0%)	16 (35.6%)
Provider	9 (100.0%)	19 (100.0%)	0 (0.0%)	1 (12.5%)	2 (40.0%)	28 (62.2%)
Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (2.2%)
Race						
White, non-Hispanic	2 (22.2%)	4 (21.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (8.7%)
Black or African American	3 (33.3%)	9 (47.4%)	3 (33.3%)	8 (100.0%)	6 (100.0%)	17 (73.9%)
White, Hispanic	4 (44.4%)	6 (31.6%)	6 (66.6%)	0 (0.0%)	0 (0.0%)	4 (17.4%)
Education completed						
Completed HS	1 (11.1%)	----	----	5 (62.5%)	1 (16.7%)	7 (30.4%)
Completed college	8 (88.9%)	----	----	0 (0.0%)	4 (66.7%)	12 (52.2%)
Completed Vocational Tech	0 (0.0%)	----	----	3 (37.5%)	1 (16.7%)	4 (17.4%)
Currently employed?						
Yes	9 (100.0%)	----	----	2 (25.0%)	6 (100.0%)	17 (73.9%)
No	0 (0.0%)	----	----	6 (75.0%)	0 (0.0%)	6 (26.1%)
Do people come to you for advice/talk about problems?						
Yes	9 (100.0%)	----	----	8 (100.0%)	6 (100.0%)	23 (100.0%)
No	0 (0.0%)	----	----	0 (0.0%)	0 (0.0%)	0 (0.0%)
Do people ever come to you with things you can't help with?						
Yes	1 (11.1%)	----	----	(62.5%)	5 (83.3%)	18 (78.3%)
No	8 (88.9%)	----	-----	(37.5%)	1 (16.7%)	5 (21.7%)
Do you ever ask someone for help for yourself?						
Yes	9 (100.0%)	----	----	6 (75.0%)	5 (83.3%)	20 (87.0%)
No	0 (0.0%)	----	----	2 (25.0%)	1 (16.7%)	3 (13.0)

Responded to follow-up	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (100.0%)	6 (11.8%)

[1] Mean (standard deviation) reported for continuous variables. n (%) reported for categorical variables.
[2, 3] Complete demographics questionnaire was not collected at series 2 or series 3. Only basic information was gathered. ----- indicates missing data

Figure 1. Percent of Participants that agree the training addressed the CMHA core competencies. *(n=21)*

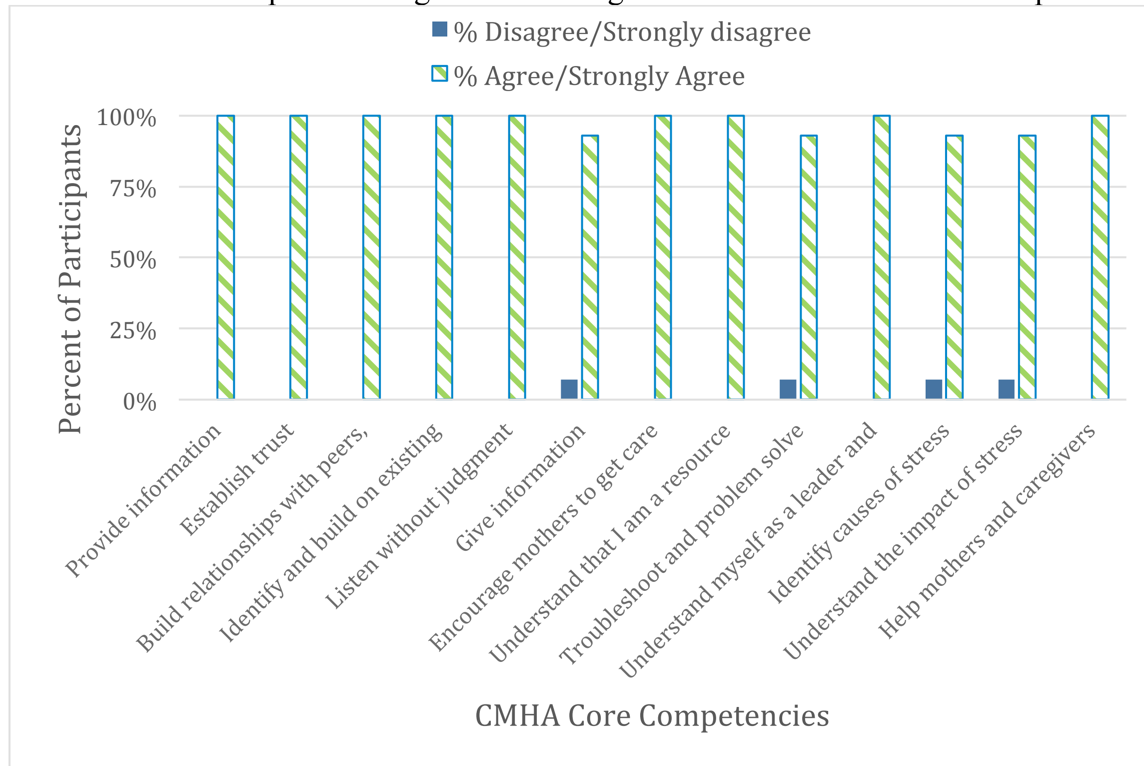

Table 3: Participants perspectives on CMHA training learning activities and teaching materials[4] (n=46)	
The learning activities were....	Agree/Strongly agree n (%)
Appropriate	38 (88.37%)
Interesting	35 (81.4%)
Stimulating	38 (88.37%)
The teaching materials were…..	Agree/Strongly agree n (%)
Helpful	39 (84.79%)
Clearly written	22 (47.82%)
Could be improved	38 (82.61%)

[4] Of the 46 that completed this questionnaire, only 43 responded to the questions regarding the learning activities.

Table 4: Pre- and Post-Training Ability scores.

	Pre-Training		Post-Training		Pre-Training	Post-Training	
Communication Skills	**Not/Little Confident n (%)**	**Somewhat/Very Confident n (%)**	**Not/Little Confident n (%)**	**Somewhat/Very Confident n (%)**	**Median score (q1, q3)**	**Median score (q1, q3)**	**p-value[5]**
Verbal Communication	0 (0.00%)	14 (100%)	2 (14.29%)	12 (85.71%)	3.0 (2.0, 3.0)	3.0 (2.0, 3.0)	1.0
Non-verbal communication	3 (21.43%)	11 (78.57%)	4 (28.57%)	10 (71.43%)	2.0 (2.0, 3.0)	2.0 (1.0, 3.0)	0.7656
The value of praise/encouragement	2 (14.29%)	12 (85.71%)	1 (7.14%)	13 (92.86%)	3.0 (2.0, 3.0)	3.0 (2.0, 3.0)	0.6250
The importance of feedback	0 (0.00%)	14 (100.00%)	1 (7.14%)	13 (92.86%)	3.0 (2.0, 3.0)	3.0 (2.0, 3.0)	1.0
Listening	1 (7.14%)	13 (92.86%)	0 (0.00%)	14 (100.00%)	3.0 (3.0, 3.0)	3.0 (3.0, 3.0)	1.0
Ability to communicate well with other mothers and caregivers	1 (7.14%)	13 (92.86%)	1 (7.145)	13 (92.86%)	3.0 (3.0, 3.0)	2.5 (2.0, 3.0)	0.125
Ability to be a voice for mothers and caregivers to other groups of people and leaders	3 (21.43%)	11 (78.57%)	2 (14.29%)	12 (85.71%)	3.0 (2.0, 3.0)	3.0 (2.0, 3.0)	1.0
Self-efficacy	**Not/Little Confident n (%)**	**Somewhat/Very Confident n (%)**	**Not/Little Confident n (%)**	**Somewhat/Very Confident n (%)**	**Median score (q1, q3)**	**Median score (q1, q3)**	**p-value**
Ability to give advice or assistance on health issues	3 (21.43%)	11 (78.57%)	2 (14.29%)	12 (85.71%)	2.0 (2.0, 3.0)	3.0 (2.0, 3.0)	0.6133
Ability to give advice or assistance on community issues	1 (7.14%)	13 (92.86%)	1 (7.14%)	13 (92.86%)	2.0 (2.0, 3.0)	3.0 (2.0, 3.0)	0.5938

Ability to help plan community projects	1 (7.14%)	13 (92.86%)	1 (7.14%)	13 (92.86%)	2.0 (2.0, 2.0)	2.0 (2.0, 2.0)	1.0
Ability to contact people within organizations to help clients or community	1 (7.14%)	13 (92.86%)	1 (7.14%)	13 (92.86%)	2.0 (2.0, 3.0)	2.0 (2.0, 2.0)	0.5
Ability to give your opinions or ideas to others	0 (0.00%)	14 (100.00%)	1 (7.14%)	13 (92.86%)	2.0 (2.0, 3.0)	2.0 (2.0, 2.0)	0.25
Ability to help solve problems that come up within a group	1 (7.14%)	13 (92.86%)	0 (0.00%)	14 (100.00%)	2.0 (2.0, 2.0)	2.0 (2.0, 2.0)	1.0
Ability to solve problems within your community	3 (21.43%)	11 (78.57%)	1 (7.14%)	13 (92.86%)	2.0 (2.0, 2.0)	2.0 (2.0, 2.0)	1.0
Ability to handle responsibilities	0 (0.00%)	14 (100.00%)	0 (0.00%)	14 (100.00%)	3.0 (2.0, 3.0)	2.0 (2.0, 2.0)	0.0625
Ability to handle leadership roles	1 (7.14%)	13 (92.86%)	3 (21.43%)	11 (78.57%)	2.0 (2.0, 3.0)	1.5 (1.0, 2.0)	0.25
Ability to discuss community issues with elected officials	4 (28.57%)	10 (71.43%)	1 (7.14%)	13 (92.86)%	1.5 (1.0, 2.0)	2.0 (2.0, 2.0)	0.5625
Perceived Control	**Not/Little Confident n (%)**	**Somewhat/Very Confident n (%)**	**Not/Little Confident n (%)**	**Somewhat/Very Confident n (%)**	**Median score (q1, q3)**	**Median post (q1, q3)**	**p-value**
I have control over the decisions that affect my life	0 (0.00%)	14 (100.00%)	0 (0.00%)	14 (100.00%)	3.0 (2.0, 3.0)	3.0 (2.0, 3.0)	1.0
My community has influence over the decisions that affect my life	10 (71.43%)	4 (28.57%)	7 (50.00%)	7 (50.00%)	1.0 (1.0, 2.0)	1.0 (1.0, 2.0)	0.5547

I am satisfied with the amount of control I have over decisions that affect my life	0 (0.00%)	14 (100.00%)	2 (14.29%)	12 (85.71%)	3.0 (2.0, 3.0)	2.0 (2.0, 3.0)	0.1563
I can influence decisions that my community makes	3 (21.43%)	11 (78.57%)	5 (35.71%)	9 (64.29%)	2.0 (2.0, 3.0)	2.0 (1.0, 2.0)	0.1250
People in my community work together to influence decisions on the state or national level	0 (0.00%)	14 (100.00%)	2 (14.29%)	12 (85.71%)	2.0 (2.0, 3.0)	2.0 (2.0, 3.0)	0.6250
I am satisfied with the amount of influence I have over decisions that affect my community	5 (35.71%)	9 (64.29%)	4 (28.57%)	10 (71.43%)	2.0 (1.0, 2.0)	2.0 (1.0, 2.0)	1.0

[5] Wilcoxon rank test p-value used for nonparametric comparison.

Appendix A. Pre-Training Questionnaires

A1. CMHA Profile

Tell Us About Yourself

A. Personal Information

1. Sex: ___Male
   ___Female

2. Race/ethnicity:___White, non-Hispanic
   ___Black or African American, non-Hispanic
   ___White, Hispanic
   ___Black or African American, Hispanic
   ___Asian
   ___Other:____________________

3. Years lived in the United States: _______ years

4. Date of Birth: Year______ Month__________

5. Education completed (number of years):

   Elementary ______ High School ______ College ______ Vo-Tech ______

6. Employment: Occupation # Years
   Now…______________________ _________
   Past…______________________ _________
   ______________________ _________

B. Community Activities

Groups you belong to	**Offices held, if any**	**Past community projects/activities**

1. What do you feel are the most important health problems in your community?

____
____
____

C. Helping Activities

1. Do people ever come to you for advice or just to talk about their problems? ___Yes
___No
If yes, about how many different people per week? ______

How are the people who ask for help connected to you (check as many as apply)?
___Neighbors ___Church ___Friends ___Acquaintances
___Strangers ___Family ___Co-Workers
___Other:____________________

2. Does the advising/helping ever take place (check as many as apply):
___By phone ___In person in your home ___In someone else's home
___At work ___At a meeting ___Other:___________________

3. Do people ever ask for help about (check as many as apply):
___Their own health ___Their children's health
___Using health or welfare services ___Family Problems
___Transportation ___Recreation
___Other:____________________

4. Do you ever (check as many as apply):
___Just listen (counsel them) ___Give information
___Recommend medicines or remedies ___Refer to other services
___Call someone for help ___Give or offer direct help
___Organize community projects ___Other:_____________________

5. Why do you think people turn to you for help?
____
____
____

6. Do people ever come to you with things you can't help with? ___Yes
___No
If yes, give examples:
____
____
____

7. Do you ever ask someone in particular for help for yourself? ___Yes
___No
If yes, is this person: ___A relative ___A friend ___Just an acquaintance
How do you know this person?
____
____

A2. Communication Skills

Communication Skills

How confident are you currently in the following areas:

Verbal communication	Not confident Little Somewhat Very confident
Non-verbal communication	Not confident Little Somewhat Very confident
The value of praise/encouragement	Not confident Little Somewhat Very confident
The importance of feedback	Not confident Little Somewhat Very confident
Listening	Not confident Little Somewhat Very confident
Ability to communicate well with other mothers and caregivers	Not confident Little Somewhat Very confident
Ability to be a voice for mothers and caregivers to other groups of people and leaders	Not confident Little Somewhat Very confident

A3. Self-Efficacy/Perceived Control

Perceptions of Abilities

All information is **confidential and intended to help with the training improvement**

Instructions: Please rate how confident you feel in the following abilities (answer only those that apply).

How confident are you in the following areas:

Item	Rating
1. Ability to give advice or assistance on **health issues.**	Not confident Little Somewhat Very confident
2. Ability to give advice or assistance on **community issues**.	Not confident Little Somewhat Very confident
3. Ability to help plan **community projects**.	Not confident Little Somewhat Very confident
4. Ability to **contact people** within organizations to help your clients or community.	Not confident Little Somewhat Very confident
5. Ability to **give your opinions** or ideas to others.	Not confident Little Somewhat Very confident
6. Ability to **help solve problems** that come up within a **group**.	Not confident Little Somewhat Very confident
7. Ability to **solve problems** within your **community.**	Not confident Little Somewhat Very confident
8. Ability to **handle responsibilities.**	Not confident Little Somewhat Very confident
9. Ability to handle **leadership roles**.	Not confident Little Somewhat Very confident
10. Ability to **discuss community issues** with elected officials.	Not confident Little Somewhat Very confident

How often have you done any of the following?

Item	Frequency
1. Given advice or assistance about health issues.	Never Rarely Sometimes Often
2. Given advice or assistance about community issues.	Never Rarely Sometimes Often
3. Given your opinions or ideas to others within a group.	Never Rarely Sometimes Often

Instructions: We'd like to know more about how you think about your role within the larger community. Please read the following statements and rate how much you **Agree** or **Disagree:**

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
1. I have control over the decisions that affect my life.	1	2	3	4
2. My community has influence over the decisions that affect my life.	1	2	3	4
3. I am satisfied with the amount of control I have over decisions that affect my life.	1	2	3	4
4. I can influence decisions that my community makes.	1	2	3	4
5. By working together, people in my community can influence decisions that affect my community.	1	2	3	4
6. People in my community work together to influence decisions on the state or national level.	1	2	3	4
7. I am satisfied with the amount of influence I have over decisions that affect my community.	1	2	3	4

Appendix B. Post-Training Questionnaires.

B1. Communication Skills

Communication Skills

1. How confident are you currently in the following areas:

Verbal communication	Not confident Little Somewhat Very confident
Non-verbal communication	Not confident Little Somewhat Very confident
The value of praise/encouragement	Not confident Little Somewhat Very confident
The importance of feedback	Not confident Little Somewhat Very confident
Listening	Not confident Little Somewhat Very confident
Ability to communicate well with other mothers and caregivers	Not confident Little Somewhat Very confident
Ability to be a voice for mothers and caregivers to other groups of people and leaders	Not confident Little Somewhat Very confident

1. **The teaching materials used in this session were:**

Helpful	Strongly disagree	Disagree	Agree	Strongly agree
Clearly written	Strongly disagree	Disagree	Agree	Strongly agree
Could be improved	Strongly disagree	Disagree	Agree	Strongly agree

Comments: Improvements? Suggestions? What worked especially well?

____

____

____

2. **The learning activities (exercises or group activities) in this session were:**

Appropriate	Strongly disagree	Disagree	Agree	Strongly agree
Interesting	Strongly disagree	Disagree	Agree	Strongly agree
Stimulating	Strongly disagree	Disagree	Agree	Strongly agree

Please share how:

____

____

B2. Self-Efficacy/Perceived Control

Perceptions of Abilities

All information is **confidential and intended to help with the training improvement**

Instructions: Please rate how confident you feel in the following abilities (answer only those that apply).

How confident are you in the following areas:

Item	Rating
11. Ability to give advice or assistance on **health issues.**	Not confident Little Somewhat Very confident
12. Ability to give advice or assistance on **community issues**.	Not confident Little Somewhat Very confident
13. Ability to help plan **community projects**.	Not confident Little Somewhat Very confident
14. Ability to **contact people** within organizations to help your clients or community.	Not confident Little Somewhat Very confident
15. Ability to **give your opinions** or ideas to others.	Not confident Little Somewhat Very confident
16. Ability to **help solve problems** that come up within a **group**.	Not confident Little Somewhat Very confident
17. Ability to **solve problems** within your **community.**	Not confident Little Somewhat Very confident
18. Ability to **handle responsibilities.**	Not confident Little Somewhat Very confident
19. Ability to handle **leadership roles**.	Not confident Little Somewhat Very confident
20. Ability to **discuss community issues** with elected officials.	Not confident Little Somewhat Very confident

How often have you done any of the following?

Item	Rating
4. Given advice or assistance about health issues.	Never Rarely Sometimes Often
5. Given advice or assistance about community issues.	Never Rarely Sometimes Often
6. Given your opinions or ideas to others within a group.	Never Rarely Sometimes Often

Instructions: We'd like to know more about how you think about your role within the larger community. Please read the following statements and rate how much you **Agree** or **Disagree:**

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
8. I have control over the decisions that affect my life.	1	2	3	4
9. My community has influence over the decisions that affect my life.	1	2	3	4
10. I am satisfied with the amount of control I have over decisions that affect my life.	1	2	3	4
11. I can influence decisions that my community makes.	1	2	3	4
12. By working together, people in my community can influence decisions that affect my community.	1	2	3	4
13. People in my community work together to influence decisions on the state or national level.	1	2	3	4
14. I am satisfied with the amount of influence I have over decisions that affect my community.	1	2	3	4

B3. Core Competency Assessment

MOMS Partnership Essentials of Engagement Core Competencies

Outreach Skills
- Provide information, resources and connection for mothers and caregivers in community locations where families live, learn, work, interact and play

Interpersonal Skills
- Establish trust and respect with mothers and caregivers
- Build relationships with peers, organizations, and communities
- Identify and build on existing strengths

Communication Skills
- Listen without judgment
- Give reassurance and information regarding the impact of stress on a mother and caregivers
- Encourage mothers to get appropriate care and support

Knowledge of Abilities
- Understand that I am a resource
- Troubleshoot and problem solve
- Understand myself as a leader and advocate

Understanding of Stress
- Identify causes of stress
- Understand the impact of stress
- Help mothers manage and cope with stress

Please circle how much you agree or disagree with the following statements:

Today's training prepared me to…..	**Disagree Strongly**	**Disagree**	**Agree**	**Agree Strongly**
Provide information, resources and connection for mothers and caregivers in community locations where families live, learn, work, interact and play	1	2	3	4
Establish trust and respect with mothers and caregivers	1	2	3	4
Build relationships with peers, organizations, and communities	1	2	3	4
Identify and build on existing strengths	1	2	3	4
Listen without judgment	1	2	3	4
Give reassurance and information regarding the impact of stress on mothers and caregivers	1	2	3	4
Encourage mothers and caregivers to get appropriate care and support	1	2	3	4
Understand that I am a resource	1	2	3	4
Troubleshoot and problem solve	1	2	3	4
Understand myself as a leader and advocate	1	2	3	4
Identify causes of stress	1	2	3	4
Understand the impact of stress	1	2	3	4
Help mothers and caregivers manage and cope with stress	1	2	3	4

B4. Post-Training Questionnaire

POST-TRAINING QUESTIONS

How would you describe yourself? Check all that apply

Parent/Caregiver _____
Provider _______
Other ______
If other, how ________________________

Did this training provide you with skills to engage women in the community about stress and mental health?

Yes_____
No______

Please share three things that you found helpful from this training.

1. ____

____

2. ____

____

3. ____

____

Which places would you use what was learned at this training (check all that apply)?

Work _

Home _

School __

Child's school__

Religious organization ___

Community organization___

Doctor's office__

Other (fill in) ___________________

Please share three things that could help us improve the training.

1. ____
____

2____
____

3____
____

Who else could benefit from this training (check all that apply)?

Other parents ___

Teachers/Principals ____

Social Workers/Case workers __

Resident Council leaders___

Housing Authority Staff____

Religious leaders ____

Community leaders___

Doctors/Medical Staff ___

Other (fill in) ______________________

What recommendations do you have for people who complete this training in the future?

1. ____
____

2. ____
____

3. ____

____

Would you recommend this training to a friend?

Yes ____

No ____

Other suggestions and feedback: ____

[1] Weissman MM, Bland RC, Canino GJ, et al. Cross-national epidemiology of major depression and bipolar disorder. JAMA. 1996; 276(4):293-299.
[1] Smith MV and Lincoln AK. "Integrating social epidemiology into public health research and practice: the case of maternal depression." *American Journal of Public Health*, Published Ahead of Print on April 14, 2011, as 10.2105/AJPH.2010.196576
[1] Prince M. Lancet 370: 859-877, 2007. Kessler RC. 2005 JAMA.
[1] WHO, 2008.
[1] Goodman, S. H. (2007). Depression in mothers. *Annual review of clinical psychology, 3*, 107-135.
[1] Weinberg, M. K. & Tronick, E. D. (1998) The impact of maternal psychiatric illness on infant development. *Journal of Clinical Psychiatry*, 59 (Suppl. 2), 53–61.
[1] Kaplan, B. J., Beardslee, W. R. & Keller, M. B. (1987) Intellectual competence in children of depressed parents. *Journal of Clinical Child Psychology*, 16, 158–163.
[1] Anderson, C. A. & Hammen, C. L. (1993) Psychosocial outcomes of children of unipolar depressed, bipolar, medically ill, and normal women: a longitudinal study. *Journal of Consulting and Clinical Psychology*, 61, 448–454.
[1] Smith M, Shao L, Howell H, Wang H, Poschman K, Yonkers K. Success of mental health referral among pregnant and postpartum women with psychiatric distress. Gen Hosp Psychiatry. 2009; 31(2): 155-62.
[1] National Survey of Drug Use and Health, 2008-2010.

[1] Smith MV. (2010) Do the PHQ-8 and the PHQ-2 accurately screen for depressive disorders in a sample of pregnant women? *Gen Hosp Psych*. 32(5):544-8.

[1] Turney, Kristin. "Prevalence and Correlates of Stability and Change in Maternal Depression: Evidence from the Fragile Families and Child Wellbeing Study." *PLOS ONE:* N.p., 20 Sept. 2012.
[1] Kopelman R, Moel J, Mertens C, Stuart S, Arndt S, O'Hara M. Barriers to care for antenatal depression. Psychol Serv. 2008; 59(4):429---432.
[1] Smith MV, Shao L, Howell H, Wang H, Poschman K, Yonkers KA. (2009). Success of mental health referral among pregnant and postpartum women with psychiatric distress. General Hospital Psychiatry, 31(2): 155-162. PMID: 19269536.
[1] Gaynes BN, Gavin N, Meltzer, Brody S, et al. *Perinatal Depression: Prevalence, Screening Accuracy, and Screening Outcomes*. Summary, Evidence Report/Technology Assessment: Number 119. AHRQ Publication Number 05E0061, February 2005. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/clinic/epcsums/peridepsum.htm
[1] Yonkers, KA. Onset and Persistenca of Postpartum Depressuion in an Inner-City Maternal Health Clinic System. 2001. American Journal of Psychiatry. Vol 158, Issue 11.
[1] Minkler M. (2008). Community Based Participatory Research for Health San Francisco, CA: Jossey Bass.
[1] Jagosh, J. (2012). Uncovering the benefits of participatory research: implications of a realist review for health research and practice. Millbank Quarterly, 90 (2).
[1] http://newhavenmomspartnership.org/about/index.aspx#page1
[1] WHO, Task-shifting to tackle health worker shortages. 2007. http://www.who.int/healthsystems/task_shifting_booklet.pdf
[1] Witmer, A. Community Health Workers: Integral Members of the Health Care Work Force. Amer Jounal of Public Health. August 1995. Vol 85, No. 8.
[1] Emmons, K, Puleo E., Park E., Gritz E. (2005). Peer-Delivered Smoking Counseling for Childhood Cancer Survivors Increases Rate of Cessation: The Partnership for Health Study. Journal of Clinical Oncology. ol. 23 no. 27 6516-6523.
[1] Krieger, J. (2005). The Seattle-King County Healthy Homes Project: A Randomized, Controlled Trial of a Community Health Worker Intervention to decrease exposure to indoor asthma triggers. Am J Public Health. 2005 April; 95(4): 652–659.
[1] Corkery, E. (1997). Effect of a Bicultural Community Health Worker on Completion of Diabetes Education in a Hispanic population. Diabetes Care March 1997 vol. 20 no. 3 254-257.
[1] Spencer, M. (2011). Effectiveness of a Community Health Worker Intervention Among African American and Latino adults with Type 2 Diabetes: A randomized controlled trial. Am J Public Health.; 101(12): 2253–2260.
[1] Policy Brief: Community Health Workers: What do we know about them? (2007). Geneva, World Health Organization.

[1] Davidson, L. (2012). Peer support among persons with severe mental illnesses: a review of evidence and experience. World Psychiatry; 11: 123-128.
[1] Chinman, M. (2014). Peer Support Services for Individuals with Serious Mental Illnesses: Assessing the Evidence. Psychiatric Services. Vol 65 No. 4.
[1] Clarke, K. (2013). Psychosocial interventions for perinatal common mental disorders delivered by providers who are not mental health specialists in low- and middle- income countries: A systematic review and meta-analysis. PLOS Medicine. Vol 10. Issue 10.
[1] Rahman A, Lovel H, Bunn J, Iqbal Z, Harrington R. (2004) Mothers' mental health and infant growth: a case-control study from Rawalpindi, Pakistan. Child Care Health Dev; 30: 21–27.
[1] Cooper PJ, Tomlinson M, Swartz L, Woolgar M, Murray L, Molteno C. Post-partum depression and the mother-infant relationship in a South African peri-urban settlement. (1999). Br J Psychiatry; 175: 554–58
[1] Rahman, A. (2008). Cognitive behavior therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomised controlled trial. Lancet; 372: 902-09.
[1] Futterman D. (2010). Mamekhaya: a pilot study combining a cognitive-behavioral intervention and mentor mothers with PMTCT services in South Africa. AIDS Care 22: 1093-1100.
[1] Mao H-J. (2012). Effectiveness of antenatal emotional self-management training program in prevention of postnatal depression in Chinese women. Perspect Psychiatr Care 48: 218-224.
[1] Viswanathan M, Kraschnewski J, Nishikawa B, Morgan LC, Thieda P, Honeycutt A, Lohr KN, Jonas D. (2007). Outcomes of Community Health Worker Interventions. Evidence Report/Technology Assessment No. 181 (Prepared by the RTI International–University of North Carolina Evidence-based Practice Center under Contract No. 290AHRQ Publication No. 09-E014. Rockville, MD:Agency for Healthcare Research and Quality.
[1] Megan V Smith, A. K.-A. (2010). Evaluation and Program Planning.
[1] Rahman, A. (2008). Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomised controlled trial. The Lancet. Volume 372, No 9642, p 902-909, 13 September 2008.
[1] Balcazar, H. Rush, C. (2011). Community Health Workers can be a public health force for change in the United States: Three Actions for a New Paradigm. Am J Public Health. 2011 December; 101(12): 2199–2203.
[1] Freire, Paulo. (1970). *Pedagogy of the oppressed*. [New York]: Herder and Herder.
[1] Becker, A. Kleinman, A. (2013) Mental Health and the Global Agenda. N Engl J Med 369; 1.
[1] Murray CJ, Vos T, Lozano R, et al. (2010). Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study.
[1] World Health Organization (2011). Mental health atlas 2011. Geneva: World Health Organization.
[1] Wang PS, Lane M, Olfson M, Pincus HA, Wells, KB, et al. (2005) Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. Arch Gen Psychiatry 62:629–640.
[1] Bruckner TA, Scheffler RM, Shen G, et al. (2011). The mental health workforce gap in low- and middle-income countries: a needsbased approach. Bull World Health Organ; 89:184-94.
[1] . Patel V. (2009). The future of psychiatry in low- and middle-income countries. Psychol Med; 39:1759-62.
[1] Becker, A. Kleinman, A. (2013) Mental Health and the Global Agenda. N Engl J Med 369; 1.
[1] Reynolds, Charles. (2012). Early Intervention to Reduce the Global Health and Economic Burden of Major Depression in Older Adults. Annu. Rev. Public Health 2012. 33:123-35.
[1] Wahl, O. (1999). Mental Health Consumers' Experience of Stigma. Schizophrenia Bulletin, Vo. 25, No.3.
[1] Rosenthal, E Lee, Brownstein, J Nell, Rush, Carl, Hirsch, Gail, Willaert, A. (2010). Community Health Workers: Part of the Solution. Health Affairs, 29, no. 7: 1338-1342.