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## **Title registration for a systematic review: Effectiveness of community health worker-led mental health promotion interventions in low- and middle-income countries**

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*Submitted to the Coordinating Group of:*

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## **Title of the review**

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Effectiveness of community health worker-led mental health promotion interventions in low- and middle-income countries: a systematic review

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## **Background**

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As defined by the World Health Organization (WHO) “Mental health is a state of well-being in which every individual realizes his or her potential, can cope with normal stresses of life, can work productively and fruitfully and is able to make contribution to his or her family (“WHO | Mental health,” 2014). Mental illness ranks third in global burden of diseases (Vigo et al, 2016) and the DALY associated with mental disorders is estimated as 13% while the years lost to disability (YLD) as 32.4% (Vigo et al., 2016). Review of studies in Low and Middle Income countries estimates the burden at 11.1% with an investment of less than 1% of the health budget in mental health in these countries (Patel, 2007) and a large gap in the resources needed to prevent and treat the illness (Stuart, 2016).

There are many structural difficulties which makes delivery of mental health services challenging. For example, there is a shortfall of human resources to cater to mental health in low and middle income countries (Kakuma et al., 2011). Often stigma in relation with being diagnosed with a mental illness also impedes the individual from seeking care. Evidence over the years supports mental health promotion as an approach for mental health improvement such that there can be lasting positive effects on the health and social outcomes (WHO |Mental health: 2016).

Mental Health Promotion (MHP) is situated within the larger field of health promotion and has been defined as action and advocacy to address the full range of potentially modifiable determinants of health (WHO 1998). MHP sits alongside the Mental Illness Prevention (MIP) (Das et.al 2016) which involves treatment and rehabilitation of people with mental illnesses and disabilities. Because the former is concerned with the determinants of health and the latter focuses on the causes of disease; promotion is sometimes used as an umbrella concept covering also the more specific activities of prevention (Lehtinen, Riihonen & Lahtinen 1997). These interventions are all required and are complementary; one is no substitute for the other (WHO, 2004).

A combined approach to health promotion and prevention of illness (Mrazek & Haggerty 1994; Eaton & Harrison 1996) categorizes interventions according to the levels of risk of illness - universal (all), selected (high risk) and indicated (high risk with minimal treatment). Mental health promotion interventions have also been classified as ‘Macro’, ‘Meso’ and ‘Micro’ interventions; where ‘Macro’ interventions are broad scale and have looked at improving housing, nutrition, access to education and community networks, violence prevention, etc. ‘Meso’ and ‘Micro’ interventions are focused across various determinants like age (early years interventions, school based interventions, social support for elderly, etc.); work and unemployment (employment initiatives - jobs, work places stress reduction programs).

To address the growing burden of mental illness and its treatment gap, multiple treatment approaches have been looked into. A purely facility-based approach by clinicians will not be able to cater to providing comprehensive mental health care due to resource constraints, rather there is a requirement to include community based mental health interventions to achieve favorable outcomes (Thornicroft & Tansella, 2013; Patel, Chowdhary, Rahman, & Verdell, 2011). Studies from higher income countries show that community mental health care can provide a greater engagement of mental health care services, better user satisfaction with flexibility and increased continuity of care (WHO, 2003). Previous studies show that community health worker led mental health interventions have proved successful and sustainable in LMICs as well (Barry, Clarke, Jenkins, & Patel, 2011). Kakuma et al. 2011 has documented that community based interventions using non-specialist workers by a brief training helped in detecting, diagnosis, treating patients under the supervision of a specialist and hence reduced the caregiver burden in resource-poor settings. A case study of a community-based intervention done in India reported a reduction in stigma related to mental illness following intervention (John, Muralidhar, Raman, & Gangadhar, 2015).

Community based care is presently provided only in 52% of low income countries and 97% of high income countries (Saxena, Thornicroft, Knapp, & Whiteford, 2007). In Nigeria, for example, the local government in partnership with non-governmental organizations (NGO) started community based interventions using community health workers, this led to an increased patient access of mental health services care and improved clinical outcomes (Eaton et al., 2017). Another intervention using community health workers to improve the mental health of economically underprivileged women in rural India reported a reduction in psychological distress, bodily aches, pain and an 86% improvement in quality of sleep (Rao, Vanguri, & Premchander, 2011).

Single studies that looking into community health worker intervention in mental health promotion exists, however there is lack of a systematic review study on effectiveness of community health worker led mental health promotion interventions in LMICs. This review attempts to fill the existing gap and provide evidence that could be used in shaping future policies to improve mental health outcomes.

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## **Policy relevance**

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The World Health Assembly in 2013 approved a Comprehensive Mental Health Action Plan for 2013-2020. This plan aims at promoting well-being, preventing mental disorders and reducing morbidity and mortality due to mental disorders. One of its key objectives is to provide comprehensive, integrated and responsive mental health and social care services in community-based settings (“WHO | Mental health,” 2016).

An evaluation of the mental health care in five countries belonging to the LMIC category (Ethiopia, Nepal, India, South Africa and Uganda) identified the existence of a mental health program and its implementation only in India and South Africa; however a separate mental health budget was available only for South Africa (Hanlon et al., 2014). The national health policy in one of the LMIC; India National Health Policy (2014), mentions the relative neglect both in policy and practice of the

promotion of Mental Health at the community level. It also has a section on mental health promotion (Section 5.2, pg. 21-22) that states that mental health should not become the prerogative or responsibility of the Mental Health Program.

This review aims to provide evidence in the mental health promotion at the community level using health worker led interventions. Hence this will facilitate in future evidence based decision making and policies for mental health promotion at a community level in LMICs.

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## Objectives

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The review will aim to answer the following questions:

1. What are the different types of community health worker led mental health promotion interventions in LMICs?
2. What is the effectiveness of community health worker led mental health promotion interventions in LMICs?

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## Existing reviews

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Barry, M., Clarke, A., Jenkins, R., & Patel, V. (2013). A systematic review of the effectiveness of mental health promotion interventions for young people in low and middle income countries. *BMC Public Health*, 13(1). <http://dx.doi.org/10.1186/1471-2458-13-835>

Wiley-Exley, E. (2007). Evaluations of community mental health care in low- and middle-income countries: A 10-year review of the literature. *Social Science & Medicine*, 64(6), 1231-1241. <http://dx.doi.org/10.1016/j.socscimed.2006.11.009>

Mutamba, B., van Ginneken, N., Smith Paintain, L., Wandiembe, S., & Schellenberg, D. (2013). Roles and effectiveness of lay community health workers in the prevention of mental, neurological and substance use disorders in low and middle income countries: a systematic review. *BMC Health Services Research*, 13(1). <http://dx.doi.org/10.1186/1472-6963-13-412>

Semrau, M., Lempp, H., Keynejad, R., Evans-Lacko, S., Mugisha, J., & Raja, S. et al. (2016). Service user and caregiver involvement in mental health system strengthening in low- and middle-income countries: systematic review. *BMC Health Services Research*, 16(1). <http://dx.doi.org/10.1186/s12913-016-1323-8>

Clarke, K., King, M., & Prost, A. (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*, 10(10), e1001541. <http://dx.doi.org/10.1371/journal.pmed.1001541>

Iemmi, V., Blanchet, K., Gibson, L., Kumar, K., Rath, S., & Hartley, S. et al. (2016). Community-based rehabilitation for people with physical and mental disabilities in low- and middle-income countries: a systematic review and meta-analysis. *Journal Of Development Effectiveness*, 8(3), 368-387. <http://dx.doi.org/10.1080/19439342.2016.1157623>

Thompson, P., Lang, L., & Annells, M. (2008). A systematic review of the effectiveness of in-home community nurse led interventions for the mental health of older persons. *Journal Of Clinical Nursing*, 17(11), 1419-1427. <http://dx.doi.org/10.1111/j.1365-2702.2008.02287.x>

- Van Citters, A., & Bartels, S. (2004). A Systematic Review of the Effectiveness of Community-Based Mental Health Outreach Services for Older Adults. *Psychiatric Services, 55*(11), 1237-1249. <http://dx.doi.org/10.1176/appi.ps.55.11.1237>
- Bruce, M., Van Citters, A., & Bartels, S. (2005). Evidence-Based Mental Health Services for Home and Community. *Psychiatric Clinics Of North America, 28*(4), 1039-1060. <http://dx.doi.org/10.1016/j.psc.2005.08.002>
- Roudini, J., Khankeh, H., & Witruk, E. (2017). Disaster mental health preparedness in the community: A systematic review study. *Health Psychology Open, 4*(1), 205510291771130. <http://dx.doi.org/10.1177/2055102917711307>
- Barnett, M., Gonzalez, A., Miranda, J., Chavira, D., & Lau, A. (2017). Mobilizing Community Health Workers to Address Mental Health Disparities for Underserved Populations: A Systematic Review. *Administration And Policy In Mental Health And Mental Health Services Research*. <http://dx.doi.org/10.1007/s10488-017-0815-0>
- Zechmeister, I., Kilian, R., & Mcdaid, D. (2008). Is it worth investing in mental health promotion and prevention of mental illness? A systematic review of the evidence from economic evaluations. *BMC Public Health, 8*(1). doi:10.1186/1471-2458-8-20
- Mehta, N., Clement, S., Marcus, E., Stona, A., Bezborodovs, N., & Evans-Lacko, S. et al. (2015). Evidence for effective interventions to reduce mental health-related stigma and discrimination in the medium and long term: Systematic review. *British Journal Of Psychiatry, 207*(05), 377-384. <http://dx.doi.org/10.1192/bjp.bp.114.151944>

### **Rapid review**

- Barry, M., Clarke, A., Jenkins, R., & Patel, V. (2011). Rapid review of the evidence on the effectiveness of mental health promotion interventions in low and middle income countries. *World Health Organisation*. Retrieved from [https://aran.library.nuigalway.ie/bitstream/handle/10379/4124/WHO\\_Rapid\\_Review\\_Mental\\_Health\\_Prom\\_2011.pdf?sequence=1&isAllowed=y](https://aran.library.nuigalway.ie/bitstream/handle/10379/4124/WHO_Rapid_Review_Mental_Health_Prom_2011.pdf?sequence=1&isAllowed=y)

Existing systematic reviews have looked into evaluating community mental health care for specific health conditions like depression, schizophrenia and bipolar disorder in the community (Wiley-Exley & Elizabeth, 2007), in a disaster situation (Roudini, Khankeh & Witruk, 2017), in specific age groups like youth (Barry, Clarke, Jenkins, & Patel, 2013), elderly (Van Citters, & Bartels, 2004; Bruce, Van Citters, & Bartels, 2005; Thompson, Lang, & Annells, 2008), or in high risk groups like mentally or physically disabled (Iemmi et al. 2016), maternity (Clarke, King, & Prost, 2013) or under-served population (Barnett, Gonzalez, Miranda, Chavira & Lau, 2017). Other reviews have further looked into the roles of community health workers in community based mental health programs (Mutamba, van Ginneken, Smith Paintain, Wandiembe & Schellenberg, 2013), reporting on the user or caregiver involvement and experiences (Semrau et al., 2016) and interventions to reduce stigma due to mental illness (Mehta et al., 2015). Review of economic evidence of community based mental health programs was conducted (Zechmeister, Kilian & Mcdaid, 2008); however not in low and middle income countries. There exists a rapid review that looked into all mental health promotion interventions in LMIC (Barry, Clarke, Jenkins, & Patel, 2011).

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## **Intervention**

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The proposed systematic review will focus on Community Health Worker (CHW) led mental health promotion interventions aimed at promoting mental health in low-and-middle income countries. The World Health Organization (WHO) defines a 'Community Health Worker' as members of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers. Interventions that are carried out by doctors or paramedical workforce will be excluded.

The setting for this review will be at the 'Community' setting where the intervention will be carried out and will include all platforms like a home visit, awareness classes conducted at a village ground/community hall/religious places/schools/out of school classes.

The review will also include those health promotion interventions which have included mental health promotion as a secondary outcome.

This review on 'community health worker led mental health promotion' will include all services/interventions which will be delivered by non-specialists in a community setting (including schools).

Studies identifying pure facility-based services will be excluded; settings such as health facility-based, for example primary health centres (PHC)/hospitals will be excluded.

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## **Population**

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Given a lifespan approach to the population, participants of such programs will be children, adolescents, adults, and the elderly.

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## **Outcomes**

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The primary outcomes of interest for this review are:

**1. Individual outcomes:**

- a. Knowledge (Awareness of Mental illness and local mental health services)
- b. Attitudes (Reduction of self-stigma, Reduction in discriminatory behavior, Increase in help seeking attitudes)
- c. Practices (Help seeking behavior, treatment acceptability, lifestyle changes-physical activity/exercise, continued school attendance, reduced suicidal ideation and attempts)
- d. Socio-emotional and well-being (Resilience, Social Skills, Problem solving, QOL, Substance use control, Coping skills, Life skills)
- e. Mental health outcomes (Symptom alleviation in Depression, Anxiety, Substance Abuse, Suicidality (ideation + attempts))

## **2. Intermediate outcomes**

- a. Enhanced self-esteem (self-determination, self-confidence, Goal oriented, purposeful thinking)
- b. Improved family interactions (Parent child bonding, reduced family conflict, better parenting)

## **3. Community outcomes**

- a. Community participation (Sense of belonging, social participation)
- b. Supportive environment (Safe space, Work place attendance)
- c. Reduced behavioral problems (conduct problems, vandalism - children; violence, criminal behavior - adults, elderly)

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## **Study designs**

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Eligible study designs for this review include:

All primary studies documenting community health worker led, mental health promotion interventions delivered to people across life span and based in LMIC's, with experimental (RCT and quasi-experimental and observational designs, with a control or comparator) will be included.

Single arm studies using pre- and post- designs would be included.

Mixed methods designs with control/comparator or pre- and post-test designs would be included. Qualitative study designs would be excluded.

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## References

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- WHO | Mental health: a state of well-being. (2014). WHO. Retrieved from [http://www.who.int/features/factfiles/mental\\_health/en/](http://www.who.int/features/factfiles/mental_health/en/)
- Vigo, D., Thornicroft, G., & Atun, R. (2016). Estimating the true global burden of mental illness. *The Lancet Psychiatry*, 3(2), 171–178. [https://doi.org/10.1016/S2215-0366\(15\)00505-2](https://doi.org/10.1016/S2215-0366(15)00505-2)
- Patel, V. (2007). Mental health in low- and middle-income countries. *British Medical Bulletin*, 81–82, 81–96. <https://doi.org/10.1093/bmb/ldm010>
- Stuart, H. (2016). Reducing the stigma of mental illness. *Global Mental Health*, 3. <https://doi.org/10.1017/gmh.2016.11>
- Thornicroft, G., & Tansella, M. (2013). The balanced care model: the case for both hospital- and community-based mental healthcare. *The British Journal of Psychiatry*, 202(4), 246–248. <https://doi.org/10.1192/bjp.bp.112.111377>
- Patel, V., Chowdhary, N., Rahman, A., & Verdeli, H. (2011). Improving access to psychological treatments: Lessons from developing countries. *Behaviour Research and Therapy*, 49(9), 523–528. <https://doi.org/10.1016/j.brat.2011.06.012>.
- Kakuma, R., Minas, H., van Ginneken, N., Dal Poz, M., Desiraju, K., & Morris, J. et al. (2011). Human resources for mental health care: current situation and strategies for action. *The Lancet*, 378(9803), 1654–1663. [http://dx.doi.org/10.1016/s0140-6736\(11\)61093-3](http://dx.doi.org/10.1016/s0140-6736(11)61093-3).
- Hanlon, C., Luitel, N., Kathree, T., Murhar, V., Shrivasta, S., & Medhin, G. et al. (2014). Challenges and Opportunities for Implementing Integrated Mental Health Care: A District Level Situation Analysis from Five Low- and Middle-Income Countries. *Plos ONE*, 9(2), e88437. <http://dx.doi.org/10.1371/journal.pone.0088437>
- Patel, V., Chowdhary, N., Rahman, A., & Verdeli, H. (2011). Improving access to psychological treatments: Lessons from developing countries. *Behaviour Research and Therapy*, 49(9), 523–528. <https://doi.org/10.1016/j.brat.2011.06.012>.
- Optimizing mental health services in low-income and middle-income countries. *Current Opinion in Psychiatry*, 24(4), 318.
- WHO. (2003). What are the arguments for community-based mental health care? Retrieved from <http://www.euro.who.int/en/data-and-evidence/evidence-informed-policy-making/publications/pre2009/what-are-the-arguments-for-community-based-mental-health-care>
- WHO | Mental health: strengthening our response. (2016). Retrieved from <http://www.who.int/mediacentre/factsheets/fs220/en/>

Eaton, J., Nwefoh, E., Okafor, G., Onyeonoro, U., Nwaubani, K., & Henderson, C. (2017). Interventions to increase use of services; Mental Health Awareness in Nigeria. *International Journal of Mental Health Systems*, 11. <https://doi.org/10.1186/s13033-017-0173-z>

Rao, K., Vanguri, P., & Premchander, S. (2011). Community-based mental health intervention for underprivileged women in rural India: an experiential report. *International Journal of Family Medicine*, 2011, 621426. <https://doi.org/10.1155/2011/621426>

John, S., Muralidhar, R., Raman, K. J., & Gangadhar, B. N. (2015). Addressing Stigma and Discrimination Towards Mental Illness: A Community-based Intervention Programme from India. *Journal of Psychosocial Rehabilitation and Mental Health*, 2(1), 79–85. <https://doi.org/10.1007/s40737-015-0028-3>

Saxena, S., Thornicroft, G., Knapp, M., & Whiteford, H. (2007). Resources for mental health: scarcity, inequity, and inefficiency. *The Lancet*, 370(9590), 878–889. [https://doi.org/10.1016/S0140-6736\(07\)61239-2](https://doi.org/10.1016/S0140-6736(07)61239-2)

McLeroy, K. R., Norton, B. L., Kegler, M. C., Burdine, J. N., & Sumaya, C. V. (2003). Thornicroft, G., Knapp, M., & Whiteford, H. (2007). Community-Based Interventions. *American Journal of Public Health*, 93(4), 529–533.

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### **Roles and responsibilities**

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  - Statistical analysis: Karishma Krishna, Anns Issac, Denny John, Mustafa Soomro
  - Information retrieval: Karishma Krishna, Denny John, Mustafa Soomro
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No funding is being received for the development of this systematic review.

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### **Potential conflicts of interest**

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No potential conflicts of interest have been identified.

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### **Preliminary timeframe**

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Date you plan to submit a draft protocol: February 2019

Date you plan to submit a draft review: December 2019