

## MAANASI - a Sustained, Innovative, Integrated Mental Healthcare Model in South India

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### ABSTRACT

*Studies in low and middle-income countries (LMICs) point to a significant association of common mental disorders with female gender, low education, and poverty. Depression and anxiety are frequently complicated by lack of disease awareness and non-adherence, the absence of care and provider resources, low value given to mental health by policy-makers, stigma, and discrimination towards the mentally ill. This paper aims to show that female village leaders/ community health and outreach workers (CHWs) can be used to overcome the lack of psychiatric resources for treatment of common mental disorders in rural areas.*

*A multidisciplinary team was set up to evaluate and treat potential patients in the villages surrounding Mugalur, a primary health care center in rural South India. A programme of care delivery was planned, developed and implemented by: (a) targeting indigent women in the region; (b) integrating mental health care with primary care; (c) making care affordable and accessible by training local women as CHWs with ongoing continued supervision; and (d) sustaining the programme long-term. Indigenous CHWs served as a link between the center and the community. They received hands-on training, ongoing supervision, and were taught using an abridged but focused training module to identify common mental disorders, help treatment compliance, networking, illness literacy and community support for villages by outreach workers. They used assessment tools translated into the local language, and conducted focus groups and patient training programmes. As a result, mental healthcare was provided to patients from as many as 150 villages in South India. Currently the services are utilized on a regular basis by about 50 villages around the central project site.*

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*The current active caseload of registered patients is 1930. Empowerment of treated patients is the final outcome, assisting them in self-employment. Rural mental healthcare must be culturally congruent, and must integrate primary care, using local CHWs for success. Training, supervision, ongoing teaching of CHWs, on-site resident medical officers, research and outreach are essential to the continued success over two decades.*

**Key words:** *global mental health, psychiatric care, integrated care, rural mental health, community health care workers, caseworkers*

## INTRODUCTION

Determinants of mental health and mental disorders include not only individual attributes such as the ability to manage one's thoughts, emotions, behaviors, personality traits and interactions with others, but also social, cultural, economic, political and environmental factors such as national policies, social stressors, standards of living, working conditions, and community support, particularly applicable to LMICs. That services for persons with mental disorders in low- and middle- income countries (LMICs) is grossly deficient and that the extra cost to increase coverage will amount to an investment of \$2-4 per person has been demonstrated (Chisholm et al, 2017).

Benedetto and Jayaram note significant barriers that must be overcome to implement effective mental health services in LMICs (Lancet Global Mental Health Group, 2007; Saraceno et al, 2007; Jayaram et al, 2011). The Lancet group also emphasized both methods and goals for scaling up of mental health services, as well as challenges in implementing goals in LMICs. Additionally, the World Health Organization (WHO) urged countries to scale up services by integrating mental healthcare into primary care worldwide, as did others (Greenhalgh, 2009). Integration depends on the following factors:

- Funding,
- Clear delineation of mental disorders,
- Human resource training and competencies,
- Recruitment and training of new primary healthcare staff to identify and prescribe psychotropic medications
- Availability of medications

- Teaching, mentoring and supervision of primary care staff members
- Effective referrals by and coordination with a collaborative network including government agencies
- Inter-sectoral approaches and links with existing community services, both formal and informal
- Recording systems for evaluation and continued monitoring.

In India, as in other LMICs, psychiatrists are unevenly distributed geographically. In LMICs, patients often have to travel long distances to avail themselves of services. As awareness increases, the need for, and shortage of, psychiatric care increases as well. Although disorder severity is correlated with probability of treatment in almost all countries, 35.5% to 50.3% of serious cases in developed countries and 76.3% to 85.4% in less-developed countries received no treatment in the 12 months before the interview (Lancet Global Mental Health Group, 2007). Among the Alma Ata characteristics of primary healthcare examined by authors are the relevance of providing an array of health services with maximum community and individual self-reliance and planning, and the inclusion of all levels of practitioners of healthcare in the community, trained to work as a team (Gillam, 2008).

In order to implement such a programme for the mentally ill, considering the mandates of the World Health Organization and epidemiologists, several issues should be considered. The first is the scarcity of psychiatric resources. The second is recognition of the impact of the global disease burden of depression, the most frequently occurring disorder among patients. Third, the absence of government-driven and committed policy changes, funding and lack of public health expertise among leaders, is also a concern which is, hopefully, now changing in India (Reddy et al, 2011). Fourth, care providers in LMICs have not uniformly addressed the lack of training of public health workers or community workers, with locally-driven solutions to care rather than a centrally driven goal or method.

Fifth, innovative solutions require experts coming together to make a plan to render it feasible to implement. Sixth, an economic solution to the problem is to train community workers and primary health care providers, update their training to recognize depression and other common mental disorders and treat it, rather than seeking to place a specialist in rural areas. Finally, combating stigma and discrimination is paramount.

In participating in a worldwide study on stigma, it was found that much of it hampers treatment and employment because of both experienced and anticipated discrimination. To overcome these concerns, integrated care for psychiatry is proposed to be added to primary care as the most economical and feasible solution (WHO, 2008; Lasalvia et al, 2015; Kverno, 2016). With almost one-fifth of the world's population living in India, the health status and the drivers of health loss vary between different parts of the country and between the states. Accordingly, effective effort to improve population health in each state requires systematic knowledge of the local health status and trends. The burden of mood disorders and suicides is an extraordinary untreated burden (Behere et al, 2015).

## PROJECT DESCRIPTION

Rotary International<sup>1</sup> is a worldwide humanitarian service organization that has built successful partnerships in Polio Eradication, providing clean water and sanitation, fighting disease and assisting mothers and children to lead healthy and productive lives (Isaacs et al, 2006; Srinivasan, 2006). In 2002, the Maanasi (meaning 'of sound mind or strong-minded woman') clinic was formally established through a partnership among 3 entities: The Rotary Clubs of Howard West (and of Columbia, MD), the Midtown Rotary Club of Bangalore, and the St. John's Academy of Health Sciences in Bangalore, India. The first author primarily drove the effort. The group obtained numerous grants from Rotary International<sup>2</sup>. Funding was also received through teaching grants, philanthropy and fundraisers. Viable partnerships were established, goals were set, and the need for efficiencies of scale was recognized. An integrated care model for the mentally ill was planned, dovetailing psychiatric care with primary care at a Community Health Training Centre of St. John's Medical College in Mugalur, a village situated 33 kilometers away from Bangalore city ([www.projectmaanasi.org](http://www.projectmaanasi.org); Agrawal, 2013). The group, consisting of leaders from all three entities, worked on identifying needs and conducting a door-to-door epidemiological survey in Mugalur.

Through the survey, Major Depression was identified as the primary disorder among women, followed by alcoholism among men. Capable women from the villages, who had a high school level of education, were selected and trained as health workers (CHWs) to screen and identify psychiatric disorders. They were

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1 [www.rotary.org](http://www.rotary.org)

2 2000 Carl P Miller Discovery Grant

also cross-trained in the treatment of common medical conditions prevalent in the area. The group then conducted several outcome studies, recognizing that adherence to appointments and medications needed teaching, repeated learning and family education, to be resolved. The CHWs and community medicine doctors taught in local schools, at village festivals, and in women's monthly cooperatives called "Mahila Mandals". The team also adopted culturally relevant educational methods such as street-plays to address stigma attached to mental illness.

The aim was to provide medications, transportation, and care at the local primary healthcare center (CHTC, Mugalur). However, it was found that adherence needed outreach due to several care barriers described elsewhere (Jayaram, 2011). Care continuity, successful treatment, and addressing concerns about side effects and village myths about medications, helped to spread the word of successful treatment among villagers. Restrooms were built for patients travelling long distances. Primary care resident medical officers were supervised and trained. Residents and nurses were taught and supervised during their community medicine rotations. Supervision of the CHWs on a weekly basis or more often, by medical social workers and psychiatry faculty, was arranged. Additional health problems such as low vision and hearing screening and treatment, geriatric care and perinatal care were all simultaneously addressed. An Electrocardiogram machine and lab services were provided. Medications for common mental disorders and psychoses are regularly updated, inventoried and dispensed as needed. Tertiary care is facilitated at the St. John's Medical College hospital when needed.

From 2002 onwards, patients from villages as far as 60 kilometers away started registering themselves at the clinic. Currently patients come from over 150 villages, but primarily from a core group of 50 villages surrounding the center. There are part-time female community health workers, 4 female psychiatrically trained CHWs, a female data entry operator, and female social workers. In 2014, a total of 45 weekly clinics were held and 1900 patients were treated. Community workers made 504 village visits and 3795 patient/ family contacts, with outreach covering 12737 kms. In 2018, a total of 1150 consultations were logged with 100 new cases registered. CHWs made 639 village visits and 3140 follow-up visits by travelling 7320 kms.

The group has also worked towards empowering treated patients by assisting in job training and procuring work. For example, one woman was helped to become a tailor; she now runs a tailoring center for village women. Others have

been placed as workers in local day cares, schools and nurseries, and families have a better understanding about care of the severely mentally ill (Isaacs et al, 2006; Srinivasan, 2006; Agrawal, 2013). Two case examples illustrate the results achieved.

### **Example 1**

Mr. A, a single Asian Indian male patient with a history of behavioral disturbances, was brought to the 'Maanasi' community mental health clinic by his father, for 1 year. The father noted that there was a progressive decline in his interaction with his peers and family members, little concern about his appearance, personal care and social pursuits. He was often seen muttering to himself, responding to the voices of a few men who were constantly discussing among themselves that Mr. A was a bad person. He believed that he was the victim of black magic and that there was an organized group of people trying to harm him. For the preceding few weeks, he had avoided eating, citing a suspicion that somebody was poisoning his food. A diagnosis of Paranoid Schizophrenia was made and the patient was started on an atypical anti-psychotic. The caregivers were educated and their expressed emotions were addressed. Non-adherence to medications was noted, and a social worker was delegated for a home visit. During the visit the team discovered that Mr. A's younger brother, Mr. V, also had a significant social decline in the preceding few months. He had wandered away from home on a couple of occasions. So he too was referred to the clinic for a detailed evaluation. It was noted that Mr. V also had third person auditory hallucinations, poor personal care and alogia. He was started on an anti-psychotic.

Both the brothers made significant symptomatic recovery over the course of the next 3 months but had limited functional recovery. To address this, both were supported with psychotherapy sessions designed to improve physical activity, achieve life milestones, and to build a positive sense of self. Strategies to foster their vocational and economic inclusion and productivity in the community were addressed.

These strategies were discussed in the context of their psychosocial premise, their educational background vis-à-vis their strengths and weaknesses.

They were motivated and encouraged to start work alongside, and under the supervision of their father in weaving handloom silks. Gradually their hours of work and productivity increased longitudinally, and the booster sessions

were continued at regular follow-ups at the clinic. The multifaceted treatment approach provided fiscal support and a revenue stream for the brothers. They began earning Rs.10000 per month through silk sales and have plans to expand their business in the near future.

### **Example 2**

Mrs. SHM, an Asian Indian woman who lived locally, was successfully treated at Maanasi for Major Depression in early 2016. SHM's husband abused alcohol and was not involved in family affairs and in the raising of their young daughter who is bright and attends a school run by a Non-Government organization via a scholarship. SHM was encouraged by the Maanasi team to make efforts towards some vocational training, so she learnt tailoring at the Mugalur tailoring center attached to the local Community Health Training Center (CHTC). SHM received guidance from social workers at the clinic in an ongoing manner. SHM successfully completed training and progressed to teaching other village women at that center. She showed a keen interest in starting her own tailoring center at her village. Donations of sewing machines enabled the start of a sewing school which is ongoing in its economic empowerment of local young rural women. In this endeavor, the treatment team worked with SHM, village elders and other community members including the local women's cooperative. Continued efforts to support and expand Mrs. SHM's business resulted in the establishment of a sewing center with basic furniture and refurbished and donated sewing machines, through the Women's Federation and the Bangalore Midtown Rotary club. Visits by Rotarians from Bangalore and the US helped in expressing support and solidarity for her efforts. All aspects of community psychiatry including a thorough assessment, family visits and education, village outreach, involvement of village leadership, recognition of rehabilitation needs and social empowerment are the hallmarks of the Maanasi programme.

### **CURRENT STATUS**

The Maanasi clinic has an active caseload of 1900+ patients, and the CHWs have logged hundreds of visits using donated mopeds, over 2 decades, to provide outreach and teaching to hundreds of households. A programme that would cost around 3.2 million dollars to run in the United States, costs \$62,175 in India today for all comprehensive activities including the development of a cloud based data base of records.

Several focus groups (FGs) were conducted that revealed the vital role of the CHWs in addressing issues such as adherence to treatment. Villagers, primarily females, reported that the CWs were concerned, compassionate and empathic concerning patients' illnesses and well-being. Patients reported that the CHWs' supportive therapy with family members had changed attitudes and created an enabling home environment. All the FGs revealed that the CHWs cleared myths and misconceptions about illnesses and medications, leading to reduced stigma. Social workers hold women's educational and personal therapy groups, enable empowerment through job placements, and diffuse conflicts among family members (See case examples above). The team also adopted culturally relevant educational methods such as street-plays to address stigma related to mental illness.

The partnerships of the Maanasi clinic are now developing a cloud-based data base to help organize data, assess outcomes and evaluate progress by employing evaluation tools used worldwide in quantifying symptoms and ascertaining progress. The data base will be the first of its kind in village settings, used and supported by women who are local residents, and coordinated by the use of hand-held tablets by the CHWs. This task is not without its hardships, such as difficulty with internet access in remote areas. The goal is to develop and sustain a model that can be deployed through Rotary-driven partnerships worldwide in LMICs. Requests have come in from Lithuania and Kenya to support such a model of care. Work is in progress in those countries.

## CONCLUSION

Both the World Health Organization and the Lancet group for psychiatry speak to the concerns of lack of resources and problems with implementation of care, despite policy changes that governments might make to address population needs for mental health.

One innovative out-of-the-box solution such as the Maanasi programme, combines the efforts of philanthropists, medical personnel, and local leaders to identify and tap resources, and volunteer their efforts to implement care using female residents of the villages. Over 2 decades it has been noted that these trained and supported CHWs are able to successfully identify needs and help treat patients, since the dire need is to assist depressed women in the world. The programme also addressed treatment of male patients with alcohol abuse, and children with

epilepsy and neurological difficulties.

Viable partnerships across continents are not easy to create and establish. However, the Rotary International World and St. John's Medical College have demonstrated that volunteer efforts, vision, and sustained support can accomplish more than what individuals, institutions or governments are able to, in rendering mental healthcare to the neediest. To date, the authors of this study are not aware of any other Trans-Atlantic pioneering model of integrated mental healthcare, teaching, and research that has sustained over 2 decades of service, and humanitarian efforts involving academia, non-profit organizations, and government-funded centers.

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## REFERENCES

- Agrawal GJ (2013). Burden among caregivers of mentally-ill patients: A rural community-based study. *Int J Res Dev Health*; 1(2): 29-34.
- Behere P, Bhise M, Behere A (2015). Suicide studies in India. In: *Developments in Psychiatry in India*. Springer: 201-12. [https://doi.org/10.1007/978-81-322-1674-2\\_11](https://doi.org/10.1007/978-81-322-1674-2_11)
- Chisholm D, Heslin M, Docrat S, Nanda S, Shidhaye R, Upadhaya N, Jordans M, Abdulmalik J, Gureje O, Kizza D, Mugisha J, Kigozi F, Hanlon C, Adugna M, Sanders R, Pretorius C, Thornicroft G, Lund C (2017). Scaling up services for psychosis, depression and epilepsy in sub-Saharan Africa and South Asia: Development and application of a mental health systems planning tool (One Health). *Epidemiol Psychiatr Sci*; 26(3): 234-44. <https://doi.org/10.1017/S2045796016000408>. PMID:27641074
- Gillam S (2008). Is the declaration of Alma Ata still relevant to primary health care? *BMJ*; 336(7643): 536-8. <https://doi.org/10.1136/bmj.39469.432118.AD>. PMID:18325964 PMCID:PMC2265356

Greenhalgh T (2009). WHO/WONCA report - Integrating Mental Health in Primary Care: A Global Perspective. *London J Prim Care (Abingdon)*; 2(1): 81-2. <https://doi.org/10.1080/17571472.2009.11493254>. PMID:26042178 PMCID:PMC4453694

Isaacs A, Srinivasan K, Neerakkal I, Jayaram G (2006). Initiating a community mental health programme in rural Karnataka. *Indian J Community Med*; 31(2): 86-7.

Jayaram G, Goud R, Srinivasan K (2011). Overcoming cultural barriers to deliver comprehensive rural community mental healthcare in Southern India. *Asian J Psychiatr*; 4(4): 261-5. <https://doi.org/10.1016/j.ajp.2011.08.005>. PMID:23051159

Kverno K (2016). Promoting Access Through Integrated Mental Health Care Education. *Open Nurs J*; 10: 73-7. <https://doi.org/10.2174/187443460160101073>. PMID:27347257 PMCID:PMC4895028

Lancet Global Mental Health Group, Chisholm D, Flisher AJ, Lund C, Patel V, Saxena S, Thornicroft G, Tomlinson M (2007). Scale up services for mental disorders: A call for action. *Lancet*; 370(9594): 1241-52. [https://doi.org/10.1016/S0140-6736\(07\)61242-2](https://doi.org/10.1016/S0140-6736(07)61242-2)

Lasalvia A, Van Bortel T, Bonetto C, Jayaram G, van Weeghel J, Zoppei S, Knifton L, Quinn N, Wahlbeck K, Cristofalo D, Lanfredi M, Sartorius N, Thornicroft G (2015). Cross-national variations in reported discrimination among people treated for major depression worldwide: The ASPEN/INDIGO international study. *Br J Psychiatry*.; 207(6): 507-14. <https://doi.org/10.1192/bjp.bp.114.156992>. PMID:26382952

Reddy KS, Patel V, Jha P, Paul VK, Kumar AS, Dandona L (2011). Towards achievement of universal health care in India by 2020: a call to action. *The Lancet*; 377: 760-8. [https://doi.org/10.1016/S0140-6736\(10\)61960-5](https://doi.org/10.1016/S0140-6736(10)61960-5)

Saraceno B, van Ommeren M, Batniji R, Cohen A, Gureje O, Mahoney J, Sridhar D, Underhill C (2007). Barriers to improvement of mental health services in low-income and middle-income countries. *Lancet*; 370(9593): 1164-74. [https://doi.org/10.1016/S0140-6736\(07\)61263-X](https://doi.org/10.1016/S0140-6736(07)61263-X)

Srinivasan K (2006). Outcomes of common mental disorders in southern rural India. *Indian J. Soc. Psychiatry*; 22: 110-5.

World Health Organization, World Organization of National Colleges, Academies, Academic Associations of General Practitioners/Family Physicians (2008). Integrating mental health into primary care: A Global perspective. World Health Organization.