

# Building a Case for Addressing the Issue of Mental Health in Rural Tamil Nadu

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## Introduction

Mental health is “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (WHO 2009). While it may seem like a factor that is often taken for granted, good mental health influences the outcome of an individual's life. Consequently, a mental illness can not only compromise these indicators of well-being, but it can also jeopardize her or his quality of life. Worldwide, 10% of individuals are living with a mental disorder, and 25% of individuals develop one or more mental or behavioral disorders at some point in their lifetime. Two-thirds of these people never seek help from a health professional due to stigma, discrimination or neglect. However, these individuals may not always have access to the proper resources and facilities. Over 40% of countries do not have a mental health policy, over 30% have no mental health program, and 25% have no mental health legislation (WHO Report 2001).

There are attainable and inexpensive treatments available for many mental illnesses, but they are not being used effectively. Limitations in monetary allocations devoted to mental health care and shortages in psychiatric professionals exist in many developing countries today (Saxena *et al.* 2007). While many ideas have been offered to resolve this issue, providing community-based health care seems like a promising option. The entire concept of community-based health care focuses on using members from villages or small communities for health purposes. These methods are effective in serving individuals within the community directly. Community-based health care involves diagnosing different diseases, educating and raising awareness about different disorders, and providing supportive counseling to patients and their families. Especially when considering the prevalence of mental disorders within rural communities and the lack of resources provided to these low-income and middle income areas, community health care may prove to be an effective method for providing preventative and primary mental health care (Chatterjee *et al.* 2008).

This paper will review the current status of mental health care, with a focus on the situation in India and will illustrate the gaps in the system. It will also provide details of the mental health in particular demographic groups in India, and examine successful programs and initiatives that have made an improvement in mental health. Through this, it will attempt to build a case for establishing basic primary facilities for mental health care at the community level, which are currently nonexistent in the Indian health system.

## Etiology of mental disorders

Causes of health and disease are generally a product of the *interaction* between biological, psychological, and socio-cultural factors. Stressful life events, affect (mood and level of arousal), personality, and gender are prominent psychological influences. Social influences include parents, socioeconomic status, racial, cultural, and religious background, and interpersonal relationships.

### Genetic factors

Schizophrenia is linked strongly to genetic factors. Since 1980, 11 major family studies of schizophrenia have been reported that used blind diagnoses, control groups, personalized interviews, and operationalized diagnostic criteria. Every study showed that the risk of schizophrenia was higher in first-degree relatives of schizophrenic patients than in matched controls. The mean risk for schizophrenia in these 11 studies was 0.5% in relatives of control and 5.9% in the relatives of schizophrenics. Modern studies suggest that, on average, parents, siblings, and offspring of individuals with schizophrenia have a risk of illness about 12 times greater than that of the general population (Evans, *et al.*, 2005).

But this does not mean that genetic factors completely fix the nature of the disorder and that psychological and social factors are unimportant. Social factors modify expression and outcome of disorders. Some mental disorders, such as post-traumatic stress disorder (PTSD), are clearly caused by exposure to an extremely stressful event, such as rape, combat, natural disaster, or concentration camp (Yehuda 1999). Yet not everyone develops PTSD after such exposure. On average, about 9 per cent do (Breslau *et al.*, 1998), but estimates are higher for particular types of trauma. For women who are victims of crime, one study found the prevalence of PTSD in a representative sample of women to be 26 per cent (Resnick *et al.* 1993). The likelihood of developing PTSD is related to pretrauma vulnerability (in the form of genetic, biological, and personality factors), magnitude of the stressful event, preparedness for the event, and the quality of care after the event (Shalev, 1996). The relative roles of biological, psychological, or social factors also may vary across individuals and across stages of the life span. In some people, for example, depression arises primarily as a result of exposure to stressful life events, whereas in others the foremost cause of depression is genetic predisposition.

### Social factors

Research in both developed and developing countries has shown the link between poverty and poor health status. Poverty and its associated psychosocial stressors, such as violence, unemployment, and insecurity, are correlated with the onset of adult mental disorder (GMH 2). Children born into poverty face various risk factors for mental and physical illness. Risk factors in poor children's families and communities combine with scarcity of protective factors to increase the likelihood of mental health problems and developmental disabilities. A review of 11 community

studies in six low income and middle-income countries in Africa, Asia, and Latin America, reported a consistent association between poor education and high rates of mental disorders.

Sex is also an important determinant of mental disorders, help seeking, and the need for services. In many countries, more women than men meet criteria for common mental disorders such as anxiety and depression. Patel *et al.* (2006) showed that nearly half of the people who attended primary care in India had common mental disorders, and that disorders were associated with poverty and female sex, after controlling for other social and demographic variables.

## Classification and diagnosis of mental illness

There are two principal methods used to classify mental illnesses. The **Diagnostic Statistical Manual of Mental Disorders, Fourth Edition, (DSM-IV)** is published by the American Psychiatric Association and is the main source of psychiatric diagnosis in the United States as well as many other countries. It covers all mental disorders and includes information about causes of the disorders, gender statistics, age at onset, prognosis, and current research being done. The DSM-IV organizes the diagnosis process in the form of broad Axes, as summarized in Appendix Figure A. Under Axis I, diagnosis, is a list of specific mental disorders, included in Appendix Figure B, along with general summaries of each. The **International Classification of Diseases, Version 10 (ICD-10)**, published by the World Health Organization is a comprehensive classification of disease, with a chapter (Chapter V) devoted to mental and behavioral disorders. Appendix Figure C shows the organization of topics under ICD-10, and the general descriptions of the mental disorders listed in the DSM-IV Appendix Figure B can be applied to the ICD-10 categories as well.

The two systems have many similarities, as well as important differences. They share many similarities in diagnosis of diseases such as depression, dysthymia, substance dependence, and generalized anxiety disorder. However, there are lower concordance levels for a number of other diseases. For example, according to one study by Andrews *et al.* (1999), the ICD-10 system of diagnosis tended to indicate a larger percentage of social phobias, panic disorder, and post-traumatic stress disorder. The opposite was true for agoraphobia and obsessive-compulsive disorder, for which the DSM-IV indicated a higher prevalence. In general, the ICD-10 was shown to have a lower threshold for diagnosing mental disorder than the DSM-IV (Andrews *et al.* 1999). There have been arguments that the ICD-10 structure is inflexible, and does not provide the full range of choices for doctors to diagnose certain illnesses. For example, among the F2 disorders listed, the diagnosis is based strongly on duration of symptoms. A diagnosis may change depending on persistence of symptoms, and often the time of remission required can delay a diagnosis, or the change in diagnosis after treatment can cause the patient to stop taking proper medications and relapse (Bertelsen 1998).

The Axis structure of the DSM-IV often allows more flexibility in diagnosis, which in some cases makes it a better option. The World Health Organization uses the ICD-10 system for diagnosis. This review will compile data from studies that use both, and will specify which system was used.

Many studies also use more specific surveys or diagnostic methods for research as well. These are questionnaires or criteria specifically tailored to a certain disease. Often, they offer a more in-depth diagnostic criteria or a way to quantify the extent or severity of a certain disease. Common examples in the literature include the Hamilton Rating Scale of Depression, The Panic Disorder Severity Scale, The Positive and Negative Symptoms Scale, The Beck Depression Inventory, and The WHO Quality of Life Assessment (Wiley-Exley 2007, Manjula *et al.* 2009).

The term **Common Mental Disorders (CMDs)** is commonly used by mental health professionals. CMD was a term coined by Goldberg and Huxley (1992) to describe “disorders which are commonly encountered in community settings, and whose occurrence signals a breakdown in normal functioning” (Patel *et al.*, 1999). Depressive and anxiety disorders are classified as separate diagnostic categories in the ICD 10. The concept of CMDs, which are basically depressive and anxiety disorders, is valid in community settings because of the high degree of comorbidity between these categories and the similarity in their epidemiological profiles and treatment responsiveness (Patel *et al.*, 2006).

## Global burden of mental illness

Mental illness is a nontrivial contribution to the global burden of disease. The burden of illness is analyzed quantitatively by disability-adjusted life years (DALYs). It is the sum of the years of life lost (YLL) and the years lived with disability (YLD) due to the illness or injury. The YLL value is calculated by the number of deaths at each age multiplied by the global standard life expectancy for each age. The YLD value is calculated by multiplying the number of incident cases of a disease or injury in one year, by the average duration of the disease, and a weight factor between 0 (perfect health) and 1 (death), that reflects the severity of the disease. In this way, the DALY is a measurement that combines morbidity and mortality in one value, estimating the chronic effects of an illness not just by deaths that are caused but also by time spent disabled by the disease. Neuropsychiatric conditions comprise 13.1% of the total global DALYs. They also contribute to over a quarter of the DALYs due to non-communicable diseases, both globally and for low income countries. Currently, unipolar depressive disorders are the third leading cause of burden of disease, and it is projected that by 2030, they will be the leading cause of burden of disease, comprising 6.2% of the total DALYs (Global Burden of Disease Report 2004).

How does mental illness compare with other global health concerns? For developing countries, particularly, the prevalence of infectious diseases and maternal health gaps seem like more pressing issues, and in the face of these issues how important can a topic like mental health really be? It is true that infectious disease, and maternal, child,

and reproductive illnesses are issues that account for a large portion of the years of life lost (YLL). Lower respiratory infections were the number one cause of YLL in low-income countries, according to the WHO Global Burden of Disease Report (2005). Neglected, however, are the conditions that produce the most years lost due to disability (YLD), such as mental disorders, dementia, and stroke (Prince *et al.* 2007). Neuropsychiatric conditions make up one third of all YLD for adults aged 15 years and over, and unipolar depressive disorders alone are the leading cause of YLD in low and middle-income countries, as well as in high-income countries (GBD Report 2004). The argument that mental illnesses are more prevalent in developed countries has been shown to be invalid; mental illness is a global concern that is prevalent in developing countries as well as in developed countries, and is a problem that is often not well addressed in developing countries (Das *et al.* 2005, Saxena *et al.* 2007).

In addition, studies have shown a correlation between mental illness and comorbidities with other physical illnesses. An article entitled “No Health Without Mental Health”, published in 2007 by the Lancet as part of a series on global mental health, reviews comorbidities of mental illness and many other illnesses. These include non-communicable diseases such as cardiovascular diseases and diabetes, as well as communicable diseases such as HIV/AIDS, tuberculosis, and malaria (Prince *et al.* 2007, Coehlo *et al.* 2009, Lacovides and Siamouli 2008). A study of a rural population in Tamil Nadu found that body pains were the most frequently reported symptoms of the mentally ill, representing a major somatic manifestation of mental illness (Badrakalimuthu 2009). A mental illness can make it more difficult for a person to recover from a somatic illness; for example a depressed person may show lower adherence to a treatment plan than a mentally healthy person, as has been seen with adherence to HIV and tuberculosis (Prince *et al.* 2007).

With all of these factors to consider, it is evident that mental illness is a pressing global issue, for developed and developing countries alike. The next section will review the burden of mental illness in India.

## An Indian perspective

### Prevalence of mental illnesses in India

According to the Mental Health Atlas, published by the WHO in 2005, the estimated prevalence of mental illness in India is about 5.8% of the total population. This includes psychosis, alcohol and drug dependence, schizophrenia, affective disorders, neurotic disorders, mental retardation, and epilepsy (WHO Mental Health Atlas). This figure has been supported by a number of other national studies (Nandi *et al.* 1997, Ganguli 2000, Reddy and Chandrashekar 1998). The suicide rate alone, 17.38 suicides per 100,000 people, is greater than many other South Asian nations (Pakistan at 10.47, Nepal at 10.32, Bangladesh at 12.2), as well as the global median of 6.55 per 100,000 (Jacob *et al.* 2007). Substance and alcohol abuse is also a major problem; the National Household Survey found that 12.2% of men smoke more than 10 cigarettes in one day, and 3.2% of men drink

alcohol every day (National Family Health Survey 2005). Across all ages and sexes, the prevalence of alcohol dependency comes out to 1% (Gururaj *et al.* 2005). In a compilation of data from 15 studies, the prevalence of affective disorders was found to be 34 per 1000 population (Ganguli 2000), though in a compilation of major meta-studies the prevalence was found to be 16 per 1000

population (Gururaj *et al.* 2005). The variation is most likely due to differences in data collection or analysis. Not only do these figures reveal that a large portion of the population suffers from mental illness; they also demonstrate the need for more thorough and up-to-date research. **Table 1** summarizes the prevalence of different mental diseases in India, as compiled from previous data.

**Table 1:** Prevalence of mental disorders in India

Prevalence of mental disorders in India		
Disorder	Prevalence Rates	Source
Mental Illness	5.80%	WHO Mental Health Atlas 2005
	6%	Gururaj <i>et al.</i> 2005, compilation of the existing data.
Mood Disorders	Range: 1.2% to 2.1%, final accepted is 16 per 1000 (1.6%)	Gururaj <i>et al.</i> 2005, compilation of the existing data.
Organic Psychosis	0.04%	WHO Mental Health Atlas 2005
	3.4% found in compilation of 15 community studies	Ganguli <i>et al.</i> 2000, compilation of community studies
Mental Retardation	1%	Gururaj <i>et al.</i> 2005, compilation of the existing data.
	0.69%	WHO Mental Health Atlas 2005
Dementia	0.15%	Gururaj <i>et al.</i> 2005, compilation of the existing data.
	1.9% in population over 65	Gururaj <i>et al.</i> 2005, compilation of the existing data.
	1% for a DSM-IV Diagnosis, 10.6% found in rural Vellore and 7.5% found in Chennai using tailored 10/66 Dementia Group Diagnosis	Prince 2009, based on data gathered by the 10/66 Dementia Research Group
Epilepsy	1%	Gururaj <i>et al.</i> 2005, compilation of the existing data.
	0.44%	WHO Mental Health Atlas 2005
Geriatric mental disorders	35-49% in population over 60	Ramachandran <i>et al.</i> 1979, Tiple <i>et al.</i> 2006, Sood <i>et al.</i> 2006
Schizophrenia	0.27%	WHO Mental Health Atlas 2005, Gururaj <i>et al.</i> 2005
Substance Abuse	12.2% of men smoke more than 10 cigarettes in one day, and 3.2% of men drink alcohol every day	National Family Health Survey 2005
	Alcohol dependency: total prevalence is 1% of population	Gururaj <i>et al.</i> 2005, compilation of the existing data.
	0.69%	WHO Mental Health Atlas 2005
Suicide	17.38 Suicides per 100,000 population	Jacob <i>et al.</i> 2007, compilation of WHO data

### Stigma and discrimination

“Sadly, for all the medical help available, many depression patients remain untreated thanks to the stigma that still persists in India about mental disorders.” This quote from *The Hindu*, a popular publication, reflects the ever-present effect of the stigma surrounding mental health. In the same issue, Dr. Vijay Nagaswami, a practising psychiatrist in Chennai, emphasizes the importance of realizing that depression is not simply a naturally occurring sadness, but rather an illness that needs treatment. He points out that “most Indian languages do not have a word for ‘depression’

[...] and when we say it in English, it ends up sounding like a Western import or a disease related to ‘decadent’ lifestyles.” This type of stigma, combined with lack of awareness of mental illness, is still common in India today.

The mentally ill are often mistreated and abused by society as well as by their families. Families are reluctant to admit a mentally ill member to a hospital. Both the family and the patient risk stigmatization by admitting a mental illness often because of a lack of understanding in the community. A major study of stigma in the National Institute of Mental Health and Neurosciences in Bangalore found that greater

levels of stigma were associated with more severe depressive disorders. The study hypothesizes that stigmatization can influence the severity of mental illness, and their result supports this (Raguram *et al.* 1996). Another study published in the *Indian Journal of Psychiatry* studies stigma in rural and urban populations. They found that there was greater stigma in the rural populations, contradicting the initial hypothesis that an industrial lifestyle sponsors greater intolerance. Particularly, there was a marked difference in personal interaction with the mentally ill, including sharing food, allowing marriages, and allowing the subject to be enrolled in an educational role.

Saravanan *et al.* (2008) surveyed community members in Vellore, Tamil Nadu, on their perceptions of psychosis and psychiatric services. Participants were more likely to invoke spiritual or lifestyle beliefs about causation and avoided

mentioning psychosis as a “disease.” While environmental stresses do contribute to mental illness, it is important to recognize the biological and genetic connections of the disease as well. In these situations, much blame is placed on the patient and their personal situation which drastically effects how these patients are viewed in society. Relatives of patients were often unaware about the course or outcomes associated with mental illness. Those with no mentally ill relatives often saw their “mad” neighbors as a nuisance or concern. While the hospital was seen as the first place to seek care, complaints about the lack of results or understanding were common. Often people wanted to learn more but the resources to do so were simply unavailable. Studies such as these offer a keen insight into the problems stigma, discrimination and lack of awareness present to the mentally ill.

**Table 2:** Selected quotes from Saravanan *et al.* (2008)

Selected quotes from Saravanan <i>et al.</i> (2008)	
Stigma	“...he is like this for many years. He does not talk to anyone but asks for money from whoever comes. At times even beg...must have done something in the past to have such a terrible life.”
Discrimination	“...it’s also from problems at home...maybe he is not married and no one to look after him...lack of care, when they are young, plays a role.”
Lack of Awareness	“We are also interested in knowing [the cause of the mental illness]. We want to know the exact cause for the problem and treatment modalities. We have heard that this is because of a disease but we continue to have doubts...We still believe ‘situation’ and ‘predicament’ can cause this.”

### Economic burden of mental illness in India

With all of these estimated prevalences, it is difficult to calculate a definite total cost of mental illness in India. The rate of DALYs due to neuropsychotic conditions in India is 3,112.41 per 100,000 (Jacob *et al.* 2007). The median calculated globally was 2,964 DALYs per 100,000. Roughly calculating the monetary value of these DALYs in India, with a population of 1.17 billion, and a per capita income of Rs. 35,198.32 per year, the total value comes to be Rs. 1.28 billion, about 2% of the nation’s GDP. Of course this doesn’t take into account the enormous disparity between the upper class and the lower agricultural classes, or costs due to health care itself, but the figure does put into perspective the amount of manpower lost per year due to neuropsychiatric conditions. Currently India spends about 4.8% of its GDP on health, and only 2% of the health expenditure goes to *mental illnesses* (Jacob *et al.* 2007). For an added perspective, it was estimated that it takes Rs. 500 per day to support a patient in a mental hospital, but India only spends Rs. 200 per capita on health (Goel *et al.* 2003).

A large portion of the costs associated with health care, particularly for mental illness, is due to lost days of work and travel expenses to be able to reach adequate treatment (Thomas *et al.* 2001, Chisholm *et al.* 2005, Saxena *et al.* 2007). A study done by S.V. Thomas *et al.* (2001) made an estimate of the total economic burden of epilepsy in India. They found that the annual cost per patient was Rs. 13,755, which is a measurement that incorporates both the direct

costs (medical treatment, travel to hospital, and other non-medical expenditures) and indirect costs (due to lost productivity). There are about 5 million people in India with epilepsy, bringing the total economic burden to approximately Rs. 68.75 billion, which constitutes 0.5% of the GNP of India. The study also found that 72.9% of this burden was from indirect costs, particularly because often patients had to travel long distances and take more time away from work in order to get adequate care.

Another study, done in Bangalore and Pakistan, demonstrates the cost-outcome methods in evaluation of mental health, screening four rural populations for prevalence of mental illness, diagnosing the illness (using ICD-10), and inviting the individuals to seek treatment. The researchers then followed up with an assessment of the costs and effectiveness of the program. An important result that they found was the economic burden of depression and anxiety in the field sites that they examined. In Bangalore, the combined health costs and patient family costs amounted to Indian Rs. 700 a month, and in Pakistan the value was Pakistani Rs. 3000 a month. To put this in perspective, they compare the first amount to between 7 and 14 days of an agricultural worker’s wages, and the latter amount to about 20 days. Emphasized is the fact that costs of informal care giving, traveling, and lost days of work were as much as three times greater than formal health care costs. After the follow up assessment, the group noted that these total costs had fallen appreciably in most of the sites (Chisholm *et al.* 2000). This study illustrates the economical

advantage gained in the implementation of community-level mental health care in India and other developing countries, and once again points out the large costs incurred by travel and days lost from work, illustrating the need for more easily accessible care.

### Resources available for mentally ill in India

Unfortunately, there is a severe shortage of manpower and resources to care for the mentally ill in India. In the entire country, there are only 42 mental hospitals, with an estimated 20,000 beds (Murthy *et al.* 2003). There are about 3,000 psychiatrists in the country, approximately 1 psychiatrist for every 500,000 people. There are also severe shortages in neurosurgeons (0.06 per 100,000 population), psychiatric nurses (0.05 per 100,000), neurologists (0.05 per 100,000), psychologists (0.03 per 100,000), and social workers (0.03 per 100,000) (WHO 2005, Jacob *et al.* 2007). In 2000-2001, only 66 new psychiatrists were trained in the country (Goel *et al.* 2003). Not only is there a lack of psychiatrists, but also the systems for education and improvement of care are not often put to practice. Clinical practice guidelines (CPGs) are used to incorporate new knowledge into the daily practice of psychiatry, and a study carried out by the Indian Psychiatric Society (IPS) found that 35% of psychiatrists never used CPGs, did not have access to them, or were not aware of them. Psychiatrists argue that the CPGs do not focus on an Indian perspective, but rather are based off of Western practices (Grover and Avasthi 2009). The inconsistencies within the psychiatric field indicate that even when a psychiatrist is available, the care that is received by patients may not be the most effective.

In Tamil Nadu, there is one psychiatrist at every government district hospital, and the fact that the infamous Erwadi incident took place in this state further illustrates the lack of resources available. Tamil Nadu is considered to be progressive in its health reforms, with mortality rates that are lower than the national averages. However, even in this state there are enormous shortages in required health care professionals. At an ideal rate of one psychiatrist per 100,000 population, Tamil Nadu (with 262 registered psychiatrists) has a deficit of 539 psychiatrists (Goel *et al.* 2003).

The state of mental hospitals and asylums reveals the public and government opinion of the mentally ill. The burning down of an asylum in Erwadi, Tamil Nadu, on August 6, 2001 is a case in point, in which twenty-five people chained to a pillar at the asylum were burnt alive. The victims of this fire suffered from a variety of mental disorders and were undergoing spiritual treatments. They were brought by their families who paid fees for them to be healed in the nearby *dargah*, a faith healing center. All of the inmates were put in fetters, also known as "divine chains", within the asylum. Hence, when the fire spread, the patients could not escape. Erwadi was no different than many other asylums within India that were made up of makeshift huts with no sanitation or electricity. This unfortunate incident directed negative media attention towards the practices of magico-religious treatment of mental disorders, questioning the humanity of these facilities and prompted an investigation of asylums in Tamil Nadu (Kumar 2001b).

After the incident, the Tamil Nadu government ordered the immediate closing of all asylums in Erwadi. The 571 patients there had little choice of where to go. Some were returned to families that did not have the resources to take care of them, others were brought to the Institute of Mental Health, Tamil Nadu's only psychiatric hospital, where the conditions were hardly better than in the asylums. An article in *Frontline* at the time remarks that for these patients, "Nothing has changed [...] they continue to live in misery, stripped of dignity and shunned by their families and society." (Krishnakumar 2002). A psychiatrist at the IMH remarked that "The IMH follows the 18th century concept of the mental asylum. It is like a concentration camp. Patients are checked once in 15 days. They are paraded outside their wards while a psychiatrist checks each one quickly. There are no doctors. Patients with physical complications are referred to other government hospitals. Some of the 21 wards do not have toilets." (Krishnakumar 2002).

The state of other psychiatric hospitals in India is not much different, and reflects the public view of the mentally ill. In a national survey of mental hospitals, published in 2002, it was found that the facilities in the hospital were severely lacking, particularly in facilities that encouraged anything but basic survival. Most facilities had little in the way of recreation or rehabilitation efforts, and the hospitals operated for mostly long-term patients (Agarwal *et al.* 2003). Patients brought to mental hospitals were not expected to recover enough to contribute to society, or be returned to their families.

### Disorders in specific populations

Mental illness is present in all demographics of any population. The next sections will discuss the prevalence of mental illnesses organized by three key demographic groups: children, women, and the elderly. Children's mental health is an area that has not been deeply researched, but is important to consider, particularly as a major preventative care opportunity. Women's mental health has been an important issue, one that has also been overlooked. The WHO Global Burden of Disease reports that unipolar depressive disorder in women accounts for 4% of all DALYs in low income countries, whereas for men it accounts for only 2% (WHO Global Burden of Disease 2004). Similarly, the geriatric population suffers high rates of illness, in the population over 70 it was found that more than 50% suffer from chronic conditions (Ingle 2008), and mental illnesses also place a heavy burden on the geriatric population. The following paragraphs will expand on the details for each demographic, discussing the prevalences of mental illnesses and presenting studies targeted to each population.

### Pediatric disorders

"One in every five children has a mental health issue" (Shastri 2009). The prevalence of mental disorders among children has been reported to be 14% to 20% in various studies, and according to a world health report, 20% of children and adolescents suffer from a disabling mental illness worldwide.

The World Health Organization reported in 2001 that the most common mental health disorders that affect children between the ages of nine and seventeen are anxiety disorders (13.0%), disruptive behavioral disorders (10.3%), mood disorders (6.2%), and substance use disorders (2.0%). Major Depressive Disorder (MDD) and other mental illnesses often have an onset in adolescence, across diverse countries, and are associated with substantial psycho-social impairment and risk of suicide (Weissman, 1999).

### Prevalence of mental illness in pediatric populations

Out of the worldwide population, 35% to 50% of all children and adolescents live in low and middle-income countries (LAMIC) (Patel *et al.* 2007c). In these LAMICs, the majority of the population lives in rural areas where access to health care, especially mental health care, is particularly sparse. Thus, a focus is placed studying and monitoring physical mortality and morbidity such as infection, nutrition and

injury. However, emotional, behavioral and psychiatric problems in children and adolescents remain a substantial public health problem in developing nations. According to Patel *et al.* 2007c, the gap between the “needs” of child and adolescent mental health care (CAMH) and the “availability” of these CAMH resources continues to widen as the developing countries experience rapid urbanization. Essentially, pediatric mental disorders receive less that adequate attention due to the stigma mental illnesses hold, the lack of knowledge about these mental disorders, and a lack of services provided at the primary health care level in low and middle income countries.

A series of the priority mental disorders for children have been compiled based on the higher frequency of occurrence, degree of associated impairment, therapeutic possibilities particularly at the PHC level, and the long-term care consequences. Some of these priority disorders found in pediatric mental health are:

Table 3:

Early Childhood	<b>Learning disorders and hyperkinetic disorders.</b> Attention Deficit Hyperactivity Disorder (ADHD), has a high incidence.
Middle Childhood	<b>Tics (Tourette’s Syndrome).</b> This particular disorder has a high degree of stigmatization and social isolation.
Adolescence	<b>Depression and associated suicide and psychosis.</b> The combination of depression with substance abuse puts children and adolescents at a higher risk for suicide.

The overall rates of child and adolescent mental disorders (CAMDs) in India and other LAMICs range between 6%-15%. Most CAMDs have typical ages for development and presentation. These tend to continue to adulthood and exacerbate several adult mental disorders. Therefore it is extremely important that the incidence and context of CAMDs are studied to identify and to undertake preventive intervention early in the course of illness. In India, these preventative measures should be taken at the primary health center level. Unfortunately, the government and non-governmental organizations have performed very little research in regards to pediatric mental health in India, thus making it difficult to accurately create a method in which the public can be well informed about the multitude of mental illnesses that children face. Nonetheless, a series of studies have been performed in the field of children’s psychology in developing countries.

A study performed by Patel *et al.* 2007c outlines the major risk factors that contribute to a mental disorder in adolescent children, a time when most mental illnesses are unveiled. There are three main categories that can trigger a disorder in children and adolescents. Biologically, a child who is genetically prone to a psychological disorder, has a physiological disease or has a substance and toxin abuse problem may be a potential candidate for a neurological illness. Psychologically, a child or adolescent with learning disabilities or mood and temperament disabilities may be prone to a mental illness. And socially, problems with family, at school or within the community can contribute to a mental illness during childhood or adolescence. The importance of recognizing these risk factors of a potential mental disorder is integral to preventing pediatric mental disorders.

In 1980, a study was conducted in four developing countries, Sudan, Philippines, Colombia, and India. The purpose of this study was to follow 925 children who attended “primary health care facilities” in their regions and understand how the children were diagnosed by their own families and by their healthcare providers (Giel *et al.* 1981). To do this, a ten-question survey was given to the children’s parents. In this questionnaire, most parents displayed that they recognized that their children had a mental disorder. However, when these same children were taken to the primary health centers, the health workers were only able to detect 10%-22% of the mental disorders, suggesting that there is an inadequate amount of training provided to the average health worker. These results support the claim that creating awareness in rural communities about pediatric mental health issues and specifically reconfiguring the training procedures for primary health workers are necessary steps for prevention.

There is a consensus among many sources that the ability of the primary health care workers to diagnose a child patient with a mental illness is weak. Because of this, there have been difficulties recording an accurate number on the prevalence of mental illnesses within the youth of India. One attempted to provide a better prediction of the number of children in India who suffer from a mental disorder. In Bangalore, India, a sampling of about 2000 children between the ages of 0 and 16 was selected to participate in this study. These children came from one of three places: the rural areas, the urban slum, or the middle-class urban areas. The children were given a manipulated version of the Child Behavioral Checklist (CBCL) that followed the ICD-10 diagnosis. The 0-16-year-olds were put through a *screening*

phase, and those who were diagnosed with a mental problem were put through the *detailed evaluation phase*, in which a final diagnosis could be made. Of 2064 children, 13.8% of the children between the ages of 0 and 3 had some form of a mental disorder, but this result may have suffered from a small sample size. Within 4-16 age group, a total of 5.3% of the population was reported to have some type of mental disorder, ranging from isolated phobias to hyperkinetic disorders to epilepsy. According to Srinath *et al.* (2005), it is important to guarantee early recognition of these developmental disorders at the primary health level for children to ensure that these mental illnesses are not aggravated beyond a treatable and manageable point. This study showed that it is necessary for policy, clinical training, and practice to be improved in the pediatric psychology field within the Indian health system.

Another prevalence study was conducted in the Calicut District in the state of Kerala, South India. A total of 1403 children between the ages of eight and twelve were selected and put into random clusters within two villages on the outskirts of Calicut. A Malayalam speaking psychiatrist observed the daily activities of each child and conducted screening interviews, and then followed up with ICD-10 assessment diagnostic tests. The results of the observations showed that 9.4% of the sample population of children had some type of mental disorder. The report found that a greater portion of the males had mental disorders, specifically, socialized conduct disorder. Other associations with mental disorders were less parental education, lower socio-economic class, school difficulties, and the Muslim religion. It was concluded that nutrition and perinatal climate did not affect the potential to develop mental illnesses in children. Both malnutrition and perinatal problems are dilemmas that are found in the rural and developing areas, but this study provided more evidence that the physical living area may not be a leading cause for mental health issues in children. This test also provided an insight into the common mental illnesses that can be found in rural areas, though. Hyperkinetic disorders, conduct disorders, socialized conduct disorders, and emotional disorders were all noted as mental illnesses with the highest frequency in the Calicut district. Only more studies conducted in pediatric mental health can give a full view of its epidemiology (Hackett *et al.* 1999).

### Study: Substance abuse in pediatric populations

Among the many different types of mental disorders that are prevalent in children, substance abuse and addiction represent a continuously rising number. Specifically, tobacco and alcohol use by children and adolescents can lead to adverse health problems in their adulthood and senescence (Gururaj *et al.* 2005). In a study, students between the ages of thirteen and fifteen in sixty randomly selected schools in Karnataka, India, were given a survey regarding their use of tobacco. A total of 4.9% of the students were tobacco users, with a dominance of males who used the smokeless variety of tobacco. However, 80.6%-82.0% believed that smoking and chewing were harmful to health. Karnataka's numbers were well below the national average of 17.6%, but it still

calls for the concern of the public health systems in rural areas, the government, and the anti-substance use organizations. According to several health sources, substance use is one of the fastest growing health issues, and it is a health hazard that can greatly contribute to mental illnesses (Gururaj *et al.* 2005). The most effective strategy in reducing the number of substance users is to directly educate the youth about the associated health and mental health issues that can arise from abuse.

### Suicide associated with pediatric mental disorders

There is a wide range of mental disorders that affects the youth on a global scale. Many of these disorders can lead to manifestations of another, more severe disorder. Specifically, many mental illnesses can be associated with eventual suicide. Suicide is the "leading cause of death in young people in countries such as China and India" (Patel *et al.* 2007c). In a study conducted in India over a ten-year period, the deaths of 108,000 people were recorded. Of these deaths, children between the ages of ten and nineteen were most likely dead due to suicide. 25% of the boys between this age group died from suicide, while 50%-75% of the girls in this age group committed suicide. According to several sources, the rates of suicides among adolescents have significantly increased due to factors like depression, exposure to alcohol and drugs, and increased individuality (Patel *et al.* 2007c). A majority of these suicides probably begin with a minor mental disorder that escalates due to stress and various other factors. Thus, by creating a strong primary health care system that can recognize and diagnose different mental health issues in children, the percentage of suicides in India, and around the world, can be decreased.

Ultimately, educating the public about the prevalence of mental diseases in the youth, tackling the stigma associated with these diseases, creating policy that directly addresses the mental health care issues, and providing services to those who suffer from these mental disorders are the most effective method for preventing mental health problems in children and adolescents.

### Women's disorders

Many studies have demonstrated that women are disproportionately affected by mental health problems (Patel *et al.* 1999). In the Global Burden of disease, Murray and Lopez estimate that by 2020, unipolar depression will be the second largest cause of disability burden in the world. Women in developed and developing countries alike are almost twice as likely as men to experience depression (Astbury and Cabral, 2000). Another two of the 15 leading causes of disease burden estimated for 2020, violence and self-inflicted injuries, have particular relevance to women's mental health. The three most common health problems affecting women in developing countries are anemia, reproductive tract infections and depressive disorders (Patel *et al.* 2007b).

Patel *et al.* (2007b) stressed that if researchers working on gender and health issues were more aware of the powerful

linkages with mental health, a more complete picture of health could be achieved by integrating mental health concerns into their study designs. The area of maternal and reproductive health, one of the Millennium Development Goals, provides a good example of the potential offered by adopting such an approach.

### Social position, poverty and mental health

Women's mental health is strongly influenced by social, cultural and economic factors. A strong inverse relationship exists between social position and physical and mental health outcomes.

According to Stein, women's health outcomes are inextricably linked with their low social status. "Perceptions of equity and equality directly affect health [...] there is a direct effect on health where one stands in the scale of things in society [...] it is no longer physical causes but social and cognitively mediated processes."

Adverse health outcomes are two to two-and-a-half times higher amongst people in the most disadvantaged social position compared with those in the highest (Astbury and Cabral 2000). Two major factors contribute towards the low social position of women. One of them is poverty. As UNDP (1997) states, "In today's world, a poor person is more likely to be African, to be a child, a woman or an elderly person in an urban area, to be landless, to live in an environmentally fragile area and to be a refugee or a displaced person." The link between mental health and low income among urban women has been documented in Bombay, Olinga and Santiago (Blue *et al.* 1995). Patel *et al.* (1999) undertook an analysis of mental health as indicated by common mental disorders such as depression, anxiety, and somatic symptoms in four restructuring societies. Data was obtained from primary care providers in Goa, India, Harare, Zimbabwe, and Santiago, Chile and community samples from Pelotas and Olinda, both in Brazil. Strong associations were found across these data sets between female gender, low education, poverty, and common mental disorders. The study reveals strong linkages between gender inequality, economic inequality, and rising income disparities, all of which increase the risk for mental disorders in women. The inter-linkages between gender, mental health, social position and barely sustainable income levels despite heavy work have also been illustrated in a study in the Volta region of Ghana, West Africa. Avotri & Walters (1999) found that the combination of financial insecurity and financial and emotional responsibility for children, together with heavy workloads, a sense of work being compulsory and a gender division of labor, exacted a heavy toll on women's emotional health.

Patriarchy puts women at a disadvantageous position in family and work places. Recent reviews on the risks associated with women's health, and more specifically mental health, highlight the important role of gender disadvantage. The most likely explanation for the association is that gender disadvantage increases the likelihood of experiencing adverse life events, a well established risk factor for CMDs. There is also established evidence linking domestic violence with an adverse effect on women's mental health in both rich and poor countries.

### Common mental disorders in women

From the perspective of women and mental health, the key epidemiological finding is the much-replicated association of female gender and Common Mental Disorders (CMD) such as depression and anxiety (Thara and Patel 2006). Both community-based studies and studies of treatment seekers indicate that women are, on average, two to three times at greater risk to be affected by CMD (*ibid*).

There are a number of potential factors, which may make women more vulnerable to depression. Davar (1999) has reviewed this issue in detail in a recent book on the mental health of women in India. Some of the implications of the greater vulnerability of women to suffer CMD are considered below: There is considerable evidence demonstrating that stressful life events are closely associated with depression and such events are more common in the lives of women. Thus, women are far more likely to be victims of violence in their homes. The multiple roles played by women such as child-bearing and child-rearing, running the family home, caring for sick relatives and, in an increasing proportion of families, earning income, may lead to considerable stress (Patel *et al.* 2006). The reproductive roles of women, such as their expected role of bearing children, the consequences of infertility and the failure to produce a male child and postnatal depression (this has special significance in India), are examples of mechanisms which make women vulnerable to CMDs (*ibid*).

About 10-15 % of women in industrial societies and between 20-40% of women in developing countries experience depression during pregnancy or/and after childbirth (WHO, 2009). Post-partum depression is another common health problem faced by women. In a study done on 270 mothers from Goa, India, Patel *et al.* (2002) found that depressive disorder was detected in 23% of the women at 6-8 weeks after childbirth; 78% of these patients had had clinically substantial psychological morbidity in their antenatal period. Economic deprivation, poor marital relationships and the gender of the infant (a daughter is born when a son is desired) were important risk factors for the occurrence and chronicity of depression.

### Linkages between physical health and mental health

Psychological factors play a role in a lot of physical health problems in women. A population-based cohort study in Goa by Patel *et al.* (2006) sought to investigate the contribution of psychosocial and infectious factors in common genital complaints in women. The researchers concluded that the complaint of abnormal vaginal discharge had a multifactorial etiology with both infectious factors, principally bacterial vaginosis, and psychosocial factors, notably social disadvantage and poor mental health contributing to the risk. The researchers suggest that the presence of gynecological problems lead to CMDs and also those gynecological complaints are somatic idioms for CMDs. All the above literature strongly indicates the need to incorporate mental health into existing health programs for women.

## Geriatric disorders

The increasing life expectancy and decline in mortality have led to an increase in the elderly population in India. The 1981 census reported that the elderly comprised 6.5% of the population, compared to 8% in 2001. With this demographic shift, it is becoming more important to properly treat the medical problems of the elderly.

### Prevalence of mental illness in geriatric populations

A variety of surveys have demonstrated that there is a high percentage of mental illness in the elderly population. One carried out by Ramachandran *et al.* (1980) in Poonamallee found that psychiatric disorders were present in 35% of the elderly population. Of this, the rate of depression was found to be 240 per 1000 population, and schizophrenia was 10 per 1000.

Not only are psychiatric disorders highly prevalent among the elderly, but also they often contribute to the other somatic illnesses that the elderly face. These psychiatric comorbidities often go undiagnosed. Recently, a study by Sood *et al.* (2006) at the Government Medical College in Amritsar looked at the mental health of 528 non-psychiatric patients aged 65 years and above, using the psychogeriatric assessment scale (PAS), which is a standardized interview for dementia, depression, and related disorders in the geriatric population. They found that 49% of the patients interviewed had a psychiatric co-morbidity. Depression was the most common (25.9%), followed by adjustment disorders (11%), anxiety disorders (4.54%), dementias (3.6%), delirium (3%), bipolar disorders (0.8%), and substance-related disorders (0.4%). The high prevalence of psychiatric disorders that were undiagnosed and untreated prior to this study indicates tremendous gaps in the mental health care available to the geriatric population.

### Study: Community support

The question is how to remedy this situation by providing geriatric patients with proper support for their illnesses. A 2006 study provides findings of examining an old age home, Mumukshu Bhavan in Varanasi as well as the psychiatric outpatients of the Institute of Medical Sciences (Tiple *et al.* 2006). Based on a DSM-IV diagnosis, the prevalence of mental illness in Mumukshu Bhavan was found to be 37.8%, with depressive disorders comprising about 35% of cases. For the psychiatric patients, depressive disorders comprised 21.42% of cases. Importantly, the study also measured the level of objective and perceived social support that patients received. The objective level of support was measured by surveying the number of close friends or relatives each patient felt they had. Those in the old age home perceived a greater level of good support than the objective survey reported (47.05% vs. 22.61%), while those in the outpatient clinics perceived a level of social support that was less than the objective level reported (2.38% vs. 35.9%) (Tiple *et al.* 2006). This indicates that the community aspect of Mumukshu Bhavan, where prayers and other spiritual discourses were a part of daily life, plays a role in providing support and care for the mentally ill, particularly the elderly.

## Dementias

While senile dementia is not the most prominent of geriatric mental health disorders in India, it is estimated by research surveys that approximately 16 million people suffer from this memory behavior, and personality disorder in the low and middle-income countries around the world. According to Patel *et al.* (2001), dementia accounts for one-quarter of the DALYs while depression accounts for one-sixth of the geriatric population around the world. Within India certain case studies have found that there might be over three million people with various types of dementia (Mishra 2009). However, a large number of the cases of dementia go unreported due to ignorance or stigma, thus an accurate figure has not been reached and numbers can only be derived from sample studies and surveys.

Unfortunately, the stigma associated with the forms of dementia is one of the leading reasons why treatment for this senile personality and memory degenerative disease can be scarce in rural areas. The lack of education in these lower-income areas has allowed these populations to believe that cases of dementia are irrelevant or just a normal behavioral change related to the process of aging. In some cases, people with dementia will not consult a doctor at all. In fact, a study conducted in Kerala showed that when caregivers were consulted, they misinterpreted dementia as "deliberate misbehavior by the [elderly] person" (Prince *et al.* 2007). Furthermore, the unawareness about the causes and the symptoms of this mental illness encourages hospitals to dismiss cases or provide very minimal treatment.

Despite this general lack of knowledge about dementia, the stigma placed with the disease has restricted the outreach of more education. While dementia and Alzheimer's are widely recognized as social disorders, the public continues to regard them negatively. In Kerala, the word used to describe dementia, *Chinnan*, literally translates to "childishness", and in other parts of India terms like "weak-brained" or "tired-brained" are given to elders who have this mental disorder (Prince *et al.* 2007). Perhaps this stigma is largely due to the fact that the families of the affected people feel embarrassed and ashamed to reveal any imperfections to the public. But the reality is that the stigma surrounding dementia can only be defeated through education of the public and strict government policies regarding the treatment of mental illnesses. Hence, a large responsibility has been placed on private organizations and research industries to understand the cases of dementia on a global scale as well as within India.

In 1998, the 10/66 Dementia Research Group was founded in Cochin, India, and has since sought to further the epidemiological research and survey various developing countries about dementia in order to suggest practical healthcare methods for dealing with this geriatric mental issue. The name 10/66 is derived from the demographic information about dementia. It refers to the fact that only 10% or less of the population-based research on dementia has been carried out in low to middle-income nations when 66% of the world's population of people with dementia live in those countries. In 26 centers located around the world,

the 10/66 Dementia Research Group found that the Geriatric Mental State, the Community Screening Instrument for Dementia and the CERAD 10 were all viable education-fair diagnostic tests that could be used to detect dementia. The typical DSM-IV diagnostic criteria have a lower threshold than the 10/66 diagnostic criteria, due to cultural differences. After collecting data in seven different locations in India, the study showed that out of the 2,000 residents in each testing site (age 65 and over), a DSM-IV diagnosis showed a prevalence rate of 1% while the 10/66 diagnoses showed a rate of 10.6% (Prince 2009). The organization explains that there may be biases in the cognitive tests, inconsistencies in the number of people in the different testing locations, issues with the DSM-IV diagnostic criteria or other problems that may have caused the large range of percentages. While this is just one survey that the 10/66 Dementia Research Group has performed, there are hopes to improve the methodology and create a “multi-centric prevalence survey” in India that could prove to be a more thorough survey of the entire population (Prince 2009).

A qualitative study was conducted by Patel and Prince (2001) in Goa, India, concerning geriatric mental health in developing countries. The study used focus group discussions (FGD) in which interviewers and researchers facilitated and recorded the proceedings of the discussions. Older persons were brought into one of the five groups of 37 people in the FGD. Each group was asked a series of questions related to the health problems and services their community provided. In regards to dementia, participants stated that it was typically associated with a stigma and that by educating family members about dementia, the affected could receive a higher level of care. Similarly, a participant mentioned that senile depression was fairly common. The participant assumed that about “five out of 10 families” had this “social” problem (Patel and Prince 2001). It was also found that primary health care doctors did not have adequate training in the field of mental health disorders, making it difficult for the elderly to find support.

According to many sources, the lack of recognition of mental disorders, the stigma placed on these disorders, and the lack of awareness about mental health in general are some of the major dilemmas that the elderly continually face in rural India. But it is consoling that many private organizations and research foundations are seeking to assist in the process of bettering the outreach of information that is given to the public about mental health and providing more resources at the primary healthcare level for the treatment of geriatric mental health disorders.

## Conclusions about disorders in specific populations

The review of these populations serves to illustrate the ubiquitous nature of mental illnesses in the Indian population. The prevalence of mental disorders in children illustrates the need for early intervention and preventive strategies, particularly for substance abuse and suicide prevention. For women, social poverty is an important factor in mental health, as well as living in patriarchal societies.

The geriatric population is often ignored and mental illness is mostly not recognized in the first place. In all three populations, it is important to address the problems of stigma and discrimination. Mental illness is by no means a ‘disease of the affluent,’ but rather affects all demographics within a population, as has been discussed.

## Addressing the issue

Understanding the prevalence of mental illness as well as details of the existing systems in India, we will now review the strategies that have been taken to treat mental illness in the population, and how each initiative has been successful or has failed.

## Government initiatives

### The National Mental Health Program

During the 1970s and 1980s, numerous national studies of mental illness evaluated the systems that existed in India as well as gathered epidemiological data. The influx of data also brought to light the cultural considerations of mental illness, The National Mental Health program was launched in 1982 with the following objectives:

1. To ensure availability and accessibility of minimum mental health care for all in the foreseeable future, particularly to the most vulnerable and underprivileged sections of population.
2. To encourage application of mental health knowledge in general health care and in social development.
3. To promote community participation in the mental health services development and to stimulate efforts towards self-help in the community.

The NMHP hoped to integrate mental health with primary care, as well as secondary and tertiary care. The program has directed state level programs as well as workshops for mental health professionals and voluntary organizations. The NMHP developed the model for the District Mental Health Program, and embarked to create better mental health care facilities in every state. In the years since the program was launched, there has been improvement: the number of psychiatrists tripled from 1,000 to nearly 3,000 within the last twenty years. A number of legislations were passed to bring mental healthcare into primary care, such as the Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985, the Mental Health Act of 1987, and the Persons with Disability Act 1995. For the first time, mental illness was included as one of the disabilities in the Persons with Disability Act of 1995 (Murthy 2003). These acts, particularly the Mental Health Act, were progressive in nature, providing definitions and nomenclature for a psychiatrist, a psychiatric nursing home, and a psychiatric hospital. The term “asylum” was eliminated, aiming for more progressive terminology. The acts also gave the patients more rights, for example preventing them from being detained in a mental facility without consent or a commitment order (Ganju 2000). A number of other changes have improved mental health care

significantly over the past twenty years. Second generation drugs became cheaper and more easily available, families of caregivers have increased their support for the mentally ill in a growing number of community-based self-help groups, the growing number of voluntary organizations has found effective ways of community-based rehabilitation in many areas of the country, and stigma and discrimination of the mentally ill have been recognized by medical professionals (Murthy 2003).

The NMHP does have shortcomings. The main tenants and goals of the NMHP are on primary care, with little emphasis on rehabilitation or preventive-promotive care. Also, although the NMHP encourages proper community care along with its recommended medical care, it does not actually give a description of what is "proper." Therapies such as Electro-Convulsive therapy (ECT) have become more popular within the past twenty years, though this has been a controversial form of treatment, and though the NMHP encourages non-invasive therapy it is silent on specific recommendations. Additionally, a criticism of the NMHP has been that it prioritizes only severe mental illnesses, of mental retardation, epilepsy, and psychoses, when the majority of mental illnesses include a much wider range of psychological problems (Davar 1996). The NMHP nominally encourages community-based non-invasive therapy, but very rarely is this reflected in its programs. The Ministry of Health blames the shortcomings of the program on the lack of well defined models to be put into place (Jain and Jadhav 2008). Additionally, the goals stated by the NMHP have yet to be reached in all states, even today (Murthy 2003).

### The District Mental Health Program

One of the accomplishments of the NMHP was to establish the District Mental Health Program (DMHP) project. In each district, there would be a psychiatrist in charge of overseeing the DMHP, creating a mental health team responsible for visiting different Taluks, providing mental health diagnosis, care, consultation, treatment, and spreading awareness of mental illness. The program was piloted in 1984 in Bellary district, Karnataka, hoping to integrate mental health care into the existing system. The pilot was not successful due to lack of public support and difficulty in taking over the local health staff's activities. Outcomes and adherence to treatment were poor, and community awareness activities were not effective. The model was revised, to include education, investment in hospitals, training and research. Pharmacotherapy was heavily adopted by this program, as the treatment garnered more public support. The program was able to emphasize the "treatability" of mental illness in a way that was more effective than just offering psychotherapy. It was also supported by a budgetary increase (Jain and Jadhav 2008). The DMHP has been successful in select districts, such as in Trichy district, Tamil Nadu, where the authors were able to interview the managing psychiatrist. The DMHP team at the Annal Gandhi Memorial Hospital has sponsored many awareness programs, and it works to provide care for five Taluks in the area. However, even in this district, each Taluk visit is attended by many times more patients than the doctors are

able to see in the limited time that they have available. In this, the DMHP has failed to provide adequate accessible care for the rural areas they serve.

The NMHP programs maintained the insistence on using the health systems already in place and incorporate mental health care, rather than creating new systems (Ganju 2000, Jain and Jadhav 2008). Union Health Minister, Dr. A. Ramadoss, has recently declared the re-strategized NMHP a "failure," and announced that a new, improved program will soon be implemented, to run in all districts within five years.

## Community Mental Health

Adopting a model of care based around the community is being seen as an increasingly "appropriate method of care for mentally ill individuals" (Wiley-Exley 2007). A community-based model moves the care out of an institutional setting and onto the ground floor (Chisolm *et al.* 2007). While many government programs are floundering in the face of dealing with mental health, a renewed approach based on community psychiatry could offer an exciting opportunity in the developing world. Jacob (2001) identifies important issues to consider in a move towards community mental health. The shift in focus to a local context that focuses on achievable goals surrounding identification and treatment of priority disease is essential. Only after these initial priorities are reached should future, more progressive, goals be set. Also, building up skills and partnerships with community health workers and other health professionals in the community, be they modern or traditionally based, is critical.

In a review of the literature, Wiley-Exley (2007) sees the drive towards community mental health as the result of "a human right approach to mental illness, an international effort to integrate community and primary care methods of health services into mental health care and research that has provided evidence of community mental health services facilitating more clinically cost-effective care." All but one of twenty studies covering fourteen developing nations, four major illness categories and a number of varied community based interventions showed positive effects on at least one outcome including positive cost-outcome results. Only three studies noted any negative outcomes from the interventions. This paper also emphasized the importance of adapting any of these techniques to the local context and not simply replicating them without modification.

Many developing countries are beginning to use these community-based models for mental health with varying degrees of success. In Kenya, 1994 marked a switch of decentralisation of mental health care to all levels of the health care system along with an emphasis of treatment by a health staff rather than simply mental health specialists. Muga and Jenkins (2008) compare the attitudes of district health workers on mental health three years after the switch in policy. The study found an interesting contrast in responses. 146 of the 148 participants agreed with the underlying philosophy of a decentralised mental health policy. They admitted the importance of non-health

professionals as well as lay people; however, they also emphasized specialist care, a focus on technology and pharmacology as well as some disdain for the difficulty of diagnosing and caring for the mentally ill. The workers largely wanted to adhere to a medical model of care rather than the biopsychosocial model the government tried to implement. This disconnect compromised the primary health care concept of the health policy and made it difficult to perform effectively.

Nigeria had more success with their grass-roots awareness program in increasing use of community-based mental health services (Eaton and Agomoh 2008). Nigeria has large levels of stigma and magico-religious belief and treatment surrounding mental illness, the largest population in Africa and a shortage of mental health professionals. Mental health was adapted as a part of the local care structure in 1991 but this has led to little action. Through the efforts of the Amaudo Itumbauzo, an NGO, and the government, 57 community psychiatric nurses have been placed throughout three southern states in recent years. These nurses conduct home visits, basic prescribing, referral, and other treatments. Continuing this type of outreach, 2310 village-based health workers (VHWs, similar to community health workers) from three states were trained over four years to conduct mental health promotion, monitoring and education. The result of this grass-roots community campaign was a statistically significant increase in the number of patients attending psychiatric clinics in the two months following the campaign with sustained results through the following year.

Nigeria offers a great example of how a community-based intervention can be successful in face of the many problems of the developing world. The structure of the Nigerian health system, its large population and lack of mental health resources invoke many parallels to the Indian situation. The Nigerian results offer hope for success of similar models in an Indian context. The literature surrounding community-based interventions supports this as well. Chatterjee *et al.* (2003) worked with an NGO, Ashagram, in the Barwani district of Madhya Pradesh, to conduct a community-based rehabilitation program for schizophrenic patients. The model consisted of "first tier" out-patient clinical services with monthly follow-ups that reviewed drug treatment, educated the family and offered rehabilitation strategies. The control received just out-patient care while the intervention group received out-patient as well as second and third tier interventions. The second tier consisted of locally selected mental health workers who provided services to patients in the community setting. The third-tier included family members and key community members who were made to form local village health groups to address proper rehabilitation and stigma reduction practices. After 12 months, participants in the intervention group were more compliant with their medications (63% v. 46%), had better clinical and disability outcomes. This engagement of the community leads to better outcomes but also takes up considerably more resources.

The MANAS intervention in Goa, India, conducted by Chatterjee *et al.* (2008) also showed the success a community-based program can have in India. This

intervention was geared towards addressing common mental disorders in low and middle income countries. The interventions used by MANAS were all based on published, evidence-based research and included psychoeducation, pharmacotherapy and group interpersonal therapy. Essentially the intervention was a reconfiguration of the human resources and the principles of treatment delivery at the primary care level. An emphasis was made on individualizing treatment. Details of the program were worked out through consultation with local, national and international stakeholders (ex: education must be kept short, drugs must be free, evening meetings, inclusion of yoga, etc.). The intervention was refined and fixed through multiple phases and issues like addressing non-adherence and shifting responsibilities amongst staff were undertaken. Health outcomes were not assessed in this study but rather the feasibility of the model. Though there were problems with adherence and the group therapy sessions, yoga classes and provision of drugs were both successful. The best lesson learned from this study, however, was the effectiveness of evaluation, flexibility, adaptability and an open mind to the community you are serving.

These studies show the effectiveness, but also the potential obstacles to implementing community-based care. A constantly evolving model is needed to address unforeseen problems in the system. If a model fails to adapt, those within the system will also fail to fully adhere to the desired goals. The MANAS program is based on this constant input of feedback and an open evaluation. The situation in Kenya offers the opposite side. A directive was broadly proclaimed but not followed up. Because of this, no one truly changed in practice and the old system persisted. For the mental health programs to be successful in India it is key to incorporate the community model. It is within this community scope that rest of the paper should be viewed.

## NGO initiatives

Private organizations have contributed significantly to making health care more accessible to the public, and improving the quality of mental health care. Here, three organizations that have been successful in providing primary care using limited resources will be discussed. For more details on each organization, see Appendix D-F.

### The Banyan

The Banyan is a private organization, founded in 1993 by two Master's students, Vandana Gopika and Vaishnava Jayakumar, with the primary goal to rescue and rehabilitate mentally ill homeless women. The organization is unique, in being one of the first to provide care for the wandering mentally ill, and striving to return them to their families, as well as educate the families on proper care of the patients. The organization also runs a health center, the equivalent of a PHC that incorporates mental health care with primary care. They train community health workers to recognize mental illness, educate families about the treatment of mental illness, and lead the rehabilitation programs. Vocational training, as well as community self-help groups, have proven successful in helping even chronically ill

patients to become more independent. In addition, the organization cooperates with faith healers and a dargah, providing outpatient care and allowing patients to stay in the dargah. This allows patients to maintain their community support while at the same time getting treated for their illness.

### **The Schizophrenia Research Foundation (India)**

The Schizophrenia Research Foundation (SCARF) which was founded in 1984 by Dr. M. Sarada Menon provides an excellent example of another NGO that has made an impact in delivering mental health care to the public. The organization is centered in Chennai, Tamil Nadu, and from this center they reach out to urban slums and have set up clinics in various cities in Tamil Nadu. Research and evidence based interventions form the basis of the programs that the NGO sponsors. Among these programs are vocational training, rehabilitation, outpatient and inpatient care, and training community workers to diagnose and provide access to mental health treatment, as well as spread awareness of mental illness in the community. The organization also spreads awareness through skits and entertainment that are targeted for a wide audience. Similar to The Banyan, SCARF has residential centers as well as outpatient clinics and a day-care center for mentally ill patients. Daily activities and vocational training have helped these patients build independence and are important to their recovery. This organization has been successful in providing treatments to the community, as well as performing numerous research studies in mental illness and the society, particularly in uncovering stigma, discrimination, and other factors that prevent adequate treatment of mental illness.

### **Sangath**

Sangath is an organization initiated in Goa in 1996, devoted to promoting health in all aspects, with a focus on child development, adolescent health, and adult mental health. They have grown since then to be one of the largest NGOs in the state. The organization specializes in reaching out to the public to deliver health care, particularly to disseminate awareness materials and multi-disciplinary interventions. Evidence-based research is considered of utmost importance to the interventions. The organization provides clinical services, treating a total of 300 new clients during 2006-2008. Sangath has developed training programs using lay people to spread awareness and perform various outreach activities to the community, including diagnosing and treating mental illnesses in adults, cooperating with special needs schools to further child development. Their program MANAS focuses on integrating mental care with the primary care services offered at PHCs. The program has been implemented in 12 PHCs in Goa, and is currently being evaluated. Sangath has been successful in evidence-based research and tailoring interventions to provide the greatest impact to the community.

## **Conclusions about addressing the issue**

Government initiatives and private initiatives have both striven to treat mental illness in the population. The government programs were not successful, primarily because of overreliance on pharmacotreatment, and lack of resources being allocated to effectively provide treatment to the population. Private organizations have been effective in many states, and have successfully provided treatments and access to community support to many patients in disadvantaged areas. However, while numerous and motivated to provide aid, private organizations cannot cater to large populations effectively, without a partnership with government organizations.

## **Treatment options**

People can treat mental illness in a number of ways. A multitude of both ancient and modern techniques exist that try and cure mental disorders. In the Indian context, folk and magico-religious methods can range from localized community healers to whole alternate schools of medicine, as in ayurvedic traditions. Modern psychiatric care in developing countries is based around two options: psychotherapy and pharmacology. Often a combination of both modern and ancient techniques can be used for effective treatment. This section will examine traditional, pharmacological and psychotherapeutic interventions and look at their application as is relevant to the developing world, especially India.

## **Traditional treatments of mental disorders in India**

A psychiatric disorder is a "curse from God". While this might seem like a slightly archaic thought, in many rural parts of India, faith is an extremely important aspect of life. The reality is that mental illnesses hold such an overwhelming stigma due to the fact that they are associated with retribution for sin. For many in rural India, mental illnesses are perceived to be a sign that one has performed a morally questionable deed, has been possessed, is under the spell of sorcery, or has lost his or her soul (Kulhara *et al.* 2000). The symptoms of the disorders are regarded as punishment, and thus are considered to be shameful for the person inflicted with the mental health issue. Subsequently, families do not publicize mental illnesses in the attempt to remain respected in society. These cultural and social factors consequently affect the way in which a person with a mental disorder or his or her family approaches treatment. In order to escape public humiliation, many rural Indians flock to magico-religious or traditional methods of curing their mental health problems (Mukalel & Jacobs. 2005).

Magico-religious attitudes have been found in several societies throughout time. This practice follows the belief

that “various supernatural influences operating in the environment [affect] an individual’s physical and mental health” (Kulhara *et al.* 2000). It then pursues treatment for these health problems through rituals and spiritual healings performed by a faith healer. In India, these supernatural beliefs were influenced by the *Vedas*, which discuss the “wholeness” of the human body. The concept of faith healers in India has been regarded as a non-invasive medical practice for centuries, and despite the forms of clinical treatments available, many still respect this alternate medical practice. Not only is it a method of reconnecting with God, but it is also a way to avoid publicizing a health problem. Especially in traditional villages, magico-religious healing may be the only option for patients with mental health disorders.

Few studies have researched the concept of magico-religious beliefs and treatments within the Indian community. However, of the studies that have been conducted, certain trends have indicated that some demographic groups are more accepting of magico-religious ideas.

One study in North India analyzed the magico-religious beliefs in patients with Schizophrenia. A total of 40 patients were observed and their relatives were questioned about their opinions about supernatural treatments. The patients were diagnosed with many different variations of Schizophrenia. Some possessed delusions, while others experienced psychotic symptoms. After this diagnosis, the relatives of the patients were given the *Supernatural Attitude Questionnaire* in which they were to respond to what they believed the cause of Schizophrenia was in their loved one. The survey showed that a sizable portion of the relatives did believe in the magico-religious causation of Schizophrenia. And nearly 33% of the relatives believed that better treatment could be found in magico-religious methods (Kulhara *et al.* 2000). In essence, the results showed that the magico-religious aspects of causing mental illnesses and treating them are still widely believed by a multitude of people; 74% of the sample population believed in the supernatural causes and treatment (Koenig 2005).

Similar results were found in Southern India. Participants in a study in Vellore widely held that psychosis was the result of karmic or magico-religious factors. Emphasis is given to black magic or past lives’ impact on health outcomes. The community made frequent use of shamans, temples and traditional healers and informed others to do so as well. Both those who had mentally ill relatives and those who didn’t, viewed folk healing methods as entirely complementary to modern medical treatments (Saravanan *et al.* 2008). This is important to consider because the two systems don’t need to be competitive. Even the most well-informed and, educated family may still choose to use magico-religious methods as a complement to modern medicine and, as long as the patient isn’t put at further risk, it should be allowed. Unfortunately, the lack of mental health resources in India makes it difficult for modern medicine to show the results it could and the common citizen grows frustrated. Families were willing to use mental health hospitals but were often not given sufficient treatment or

explanations. This is a large problem in India due simply to a lack of resources. It is only logical that families would turn to traditional healers to fill the gap created by a low quality of modern medical care.

In 2008, Anubha Sood asserted in a paper that based off of her research, there was evidence that a large number of women seek mystical healing traditions to cure their mental illnesses because of the greater stigma that is held against them. In fact, there is only one woman for every three men who uses a public health facility (Sood 2008). In India, women predominantly are the ones who receive magico-religious treatment. Within these treatments, the women are rid of “[spirits, possessions, and sorcery, using] healing practices such as exorcism and ritualized ceremonies” (Bourguignon 1973). Sood questions the reason why women seek these ancient medical practices. She proposes two main reasons. When considering why women seek alternative mental health treatments, Sood believes that the mental health facilities that are provided for women are limited and “detrimental” to “women’s mental health needs” (Sood 2008). If policy were set against magico-religious practices that include physically harmful methods in India, women would be safer or would seek help for their mental disorders from public health centers. Her next argument states that women’s problems with the current public health system are not well understood, and thus they cannot be persuaded to stop using these magico-religious methods. Appearing to be against the idea of using magico-religious practices, Sood concludes that the outreach must be made to inform the public about mental illnesses and the proper treatment procedures.

Magico-religious treatments have become extremely controversial over the past few decades. However, considering that a large majority of the Indian population in rural areas believes in the positive attributes of these alternative treatments, the cultural value of these medicines is extremely significant. A majority of the negative attitudes towards the magico-religious treatments arise from the “Erwadi Tragedy” that questioned whether these spiritual methods adhered to human rights. This incident, explained earlier, exposed potential human rights violations within some magico-religious practices.

While magico-religious treatments may not provide the most effective results, the entire concept of the spiritual well being of the individual has remained an important part of the culture within India for several centuries and may possess therapeutic qualities themselves. Tiple *et al.* (2006) demonstrates how the incorporation of spiritual aspects to treatment can foster a positive environment for inpatients. These magico-religious beliefs are an integral part of the Indian tradition, and breaking these conventions to integrate more effective forms of treatment will require the removal of the stigma associated with mental health issues.

Using natural forms of treatment for mental illnesses has been subject to much experimentation in developing countries. Ayurveda, Siddha, and other forms of homeopathic medicines have been approached as possible

treatment options for patients with mental disorders. Ayurvedic treatment focuses on using the five elements (air, water, earth, fire, and ether) in different combinations (Vata, Pita, and Kapha) to create a harmonious balance within the human body. In the context of mental illnesses, Ayurveda recognizes four forms of mental disorders, which include “neurosis, psychosis, convulsive disorders, and obsessive disorders” (Al Bawaba 2005). To treat these disorders, the practice uses *daivivyyapasraya* and *satvapajaya* – psychotherapy – and *yukti vyapasraya chikitsa* – a drugs, diet, and lifestyle plan (Al Bawaba 2005). While there are few reports on the efficacy of these treatments, Indians in urban areas as well as rural areas follow this medical practice faithfully.

A study from 1993 experimented with a newer psychological approach to treating mental health. It used Indian mythological material that correlated to psychotherapeutic themes to treat patients with mental disorders (Shamasundar 1993). In the study, 538 excerpts from Indian mythological stories were taken that focused on common themes that are used in the treatment of mentally ill patients. These excerpts were distributed to psychiatrists, laymen, and patients, who were asked to assess whether the themes selected would be applicable to any form of therapy. 50% of the surveys said that these themes present in the mythological works were useful in the therapeutic process. The purpose of these excerpts from mythological works was to stimulate a response by the reader (the patient) to a certain emotion or incidence found in a particular work. Shamasundar lists three main contributions that mythological therapy can make towards a mental patient’s treatment. Firstly, it can stimulate “insight in a patient”. Secondly, it can explain potential coping methods to the patient through metaphors. And lastly, it can help the therapist devise a new approach to treating a patient with a mental disorder. This form of treatment has been especially effective in treating mental health issues in rural parts of India.

The traditional methods as well as newer alternative methods of treating mental disorders have been widely accepted in the Indian community. While modern medicine does not regard these forms of treatment for mental disorders as effective, the cultural value of these practices is immense and must be considered in the process of creating a more efficient primary health care system that encompasses mental health care facilities.

## Pharmacology

Pharmacology plays an important part in the treatment of the mentally ill in India. Though not always the best treatment option for certain patients or by itself, the general efficacy of these drugs to alleviate symptoms has been well documented. Fluoxetine, Risperidone, Olanzapine and Imipramine were all commonly used medications described in the literature (Wasan *et al.* 2009; Chakrabarti & Kulhara 2000a & 2000b). In Wasan *et al.* 2009, a comparison of American and Indian psychiatrists showed that Indian psychiatrists rely more heavily on medication than other forms of treatment, with drugs often being the only form of treatment. This finding fits with the severe shortage of psychiatrists in India. The average Indian psychiatrist in this study saw more than twice the amount of patients in a day than the average psychiatrist in the U.S (24.3 vs. 11).

This lack of resources does not allow much more than the writing of prescriptions to occur in most scenarios. One respondent to the Wasan *et al.* (2009) study recalls that his senior resident would have seen upwards of 100 patients in only four hours. Government initiatives such as the DMHP don’t fare much better in terms of time or resources. Additionally, when drugs are prescribed it may not be of correct dosage, administered for the correct amount of time or be monitored properly. A series of studies by Chakrabarti & Kulhara (2000a, 2000b) show evidence of depressed patients having medication switched inappropriately, starting at too high a dose, having dosages changed inappropriately and deficiencies in receiving continuation treatment.

Further complications with medication arise through a number of channels. Non-compliance is a huge problem represented both in the literature and in the experience of the authors in discussions with mental health professionals in India. Patients might be non-compliant for any number of reasons: general aversion to pharmaceuticals, unwillingness to continue after alleviation of symptoms, monetary and access problems and side effects are but a few of the more common occurrences. Pregnant and lactating women present another problem in pharmacotherapy. These women may be undergoing periods of great stress or depression due to the pregnancy or newborns and this requires treatment. Unfortunately, many of the psychotropic medications are potentially unsafe for the fetus or newborn child.

**Table 4:**

Drug	Risk for fetus	Risk for Nursing Infant (Adapted from Desai <i>et al.</i> 2009)
Lithium	Cardiovascular malformations	Rapid dehydration of infants
Sodium Valporate	Neural tube defects, craniofacial abnormalities, cognitive defects	Generally regarded as safe
Caranzepine	Neural tube defects	N/A
Flupenthixol	Safety not yet established but should be avoided	N/A
Clozapine	Not established	Present in milk; breast feeding should be avoided.

Olanzipin	No reported teratogenic effects but some concerns regarding gestational weight gain and diabetes	N/A
Risperidone	N/A	Limited data but exposure to infants should be limited to >10% exposure.
Fluoxetine	Cardiac arrhythmias, low birth weight, premature delivery	N/A
General SSRIs	Low birthweight, mild respiratory distress, increased risk of serotonergic symptoms, other possible complications	N/A
Paroxetine	Major malformations (omphalcele, craniosyntosis); cardiac abnormalities (ventricular and atrial septum disorders)	N/A
Tricyclic Antidepressants (i.e: Imipramine)	Not associated with congenital abnormalities however literature is sparse. May present problems closer to time of delivery	N/A
Benzodiazepine (i.e: Clonazepan)	Not major teratogens but screening should be carried out as a precaution for major malformations	N/A

As a result of the many potential risks, the doctors of pregnant women should try to rely on psychotherapy or carefully monitor the pregnancy and be up to date on the side-effects of the medications. Another problem is self-medication. Due to the relatively easy access to pharmacies patients can not only often gain access to medicines without a prescription but also be ill-informed by the pharmacists themselves (Wasan *et al.* 2009). Unfortunately, easy access to medicines can be both a curse and a blessing.

The problem with India’s national healthcare policy in relation to the overdependence on prescription drugs and scarce resources is documented in Jain & Jadhav (2009). The original NMHP focused more on access to care and community participation. Over time this focus has shifted to the distribution of psychotropic medications. Many of these medications are provided for free by the government, but a reliance on medication lacks the personal, cultural and therapeutic nature of more focused psychiatric care. Jain and Jadhav identify “the pill” as “a bureaucratic tool for implementation,” “a common minimum...that balances the need of a range of stakeholders,” “constrained by the social, political and economic context of rural life” and “limited by its inability to engage with the existential problems on the ground.” The use of medication is seen as constructing a multitude of identities. All at once, medications serve as a proxy for the government to rural dwellers, create a boundary between patients and professionals as well as within professionals (prescribing psychiatrists vs. non-prescribing psychologists) and acts as the main interface between professionals and the community. Furthermore, many patients do not view anything other than a pill or injection as a treatment leaving the non-prescribing team members even more powerless. This complex identity of “the pill,” in the opinion of the authors, stands in silence community voices and ultimately leads to the ultimate failing of the Indian mental health programme.

## Psychotherapy

Psychotherapy is a potential alternative or complementary treatment to pharmacological interventions. Unfortunately, this form of therapy has its hindrances in the context of developing countries. Compared to psychoanalysis, which is virtually absent amongst the poor, psychotherapy is more active and has a shorter treatment span. Repeated meetings over a few weeks can yield positive results. Concerns over travel or missed work, however, can create problems even for the shortest of repeated interventions. Prevailing thoughts on treatment being pill and injection-based as well as with concerns over privacy, many may be unwilling to try psychotherapy at all. This plays out in practice as psychiatrists in Delhi were significantly less likely to use psychotherapy than their American counterparts (Wasan *et al.* 2009).

There are numerous types and schools of thought on psychotherapy; however the scope of this review will focus on those types of interventions discussed with practising psychiatrists in Thanjuvar and Trichy, Tamil Nadu, as well as those with an Indian context in the literature. These are Cognitive (Behavioral) Therapy, Supportive Psychodynamic Therapy, Vocational Rehabilitation, and Family Therapy.

### Cognitive behavioral therapy

Cognitive Behavioral Therapy (CBT) combines the conditioning approaches of behavior theory and the clinical application of cognitive therapy. In this type of treatment, the therapist and patient work together to identify current problems and address the relationship between thoughts, feelings and behavior. The basic goal of treatment is to empower the patient and aim to provide them with psychological and practical skills that they can use outside of the sessions. These techniques have worked across

culture and can be performed by a variety of mental health professionals (Grazebrook *et al.* 2005). Cognitive theory is based on the idea that the brain categorizes information into schemata and it is the dysfunction of these schemata that causes mental illness. The location and correction of these dysfunctional schemata is the basis of the cognitive therapy. The behavioral part of the therapy is used to identify and continue activities that promote good mental health and cease those that contribute to a poor mental state (Driessen

*et al.* 2007). The literature shows how Cognitive Behavioral Therapy has been used to address a multitude of mental illnesses. Depression, panic disorders, psychosis and personality disorders, among others, have all been shown to respond positively to CBT (Manjula *et al.* 2009; Leichsenring & Leibing 2005; Jones 2002).

In a study protocol devised by Driessen *et al.* 2007, CBT was to be implemented through a series of 16 sessions over 22 weeks and based on the Boelens and Bloedjes model.

**Table 5:**

Phase	Sessions	Purpose (adapted from Driessen <i>et al.</i> 2007)
Introduction	1	Contact made with therapist, treatment explained and a "treatment contract" is signed.
1	2-4	Activation of the the patient by means of planning and registering activities.
2	5-7	Cognitive model and principles of cognitive therapy are explained. Patients keep a "thought diary."
3	8-15	Thoughts from diary are challenged by therapist. Therapist and patient assess validity and utility of thoughts and promote discovery of these reasoning errors by patients. Design of a behavioral experiment to test identified automatic thoughts in real life.
Alternative	13-15	Can be spent on additional practice of basic challenging techniques, discussing contemporary challenging techniques or working further with behavioral experiments
Final Session	16	Evaluation of therapy and reflection on goals from start of treatment. Discussions of strategies to deal with relapse are held.

In a review of the literature conducted by Leichsenring & Leibing (2005), 11 studies used CBT in randomized or naturalistic study designs in the treatment of personality disorders (e.g. borderline personality disorder, schizoid or schizotypal personality disorder etc.). The treatments were of varying lengths and follow-up periods and the authors concluded that CBT is an effective treatment for personality disorders (mainly of DSM-IV cluster A and B type disorders as only 2 of the studies looked at cluster C type disorders). A study by Manjula *et al.* (2009) showed that CBT was more effective than a behavioral intervention alone in the treatment of panic disorders. Patients were assessed at the beginning and end of every week of therapy for five weeks. This included between 15 and 20 therapy sessions. The treatment structure was psycho education and applied relaxation (AR) for the first week, continuation of AR in the second week, cognitive restructuring in the third week and interoceptive exposure and in vivo exposure in the fourth and fifth weeks respectively. Applied relaxation was a positive behavior taught to patients coping technique to help deal with panic attacks. CBT proved more effective on a number of measures including panic symptoms, panic diaries, and a large change in clinically significant change. (Manjula *et al.* 2009).

Gaudio (2006) in a meta analysis examined the reduction of symptoms of psychosis patients treated with CBT. Initial results were promising with 48% of the CBT conditions (12 studies) showing reliable change in at least one measure of disorder. The author also points out the need for more research in this area. A brief overview of the CBT treatment conditions of the 12 studies examined by Gaudio is available in the text. Sava *et al.* (2008) demonstrated the common finding that CBT (in this case both a cognitive

therapy and a rational emotional behavioral therapy) was not only as effective as the commonly prescribed drug, fluoxetine, in treating major depressive disorders but was actually more cost-effective with a patient deriving the same benefit from \$70 of CBT as against \$100 of medication.

The use of CBT at the community level is possible; however it must also be treated as challenging and complex. Jones (2002) recognizes this but also sees the possibility of community mental health teams with a focus on prevention over maintenance of illness. While Jones deals with CBT for psychosis many of her points could easily be generalized to treatment of other mental illnesses as well. Community psychiatry nurses form an important part of the team and help reduce caseload stress on the other members (i.e. the psychiatrist or psychologist). Quality training, clinical supervision, proper personnel and resources as well as solid operational policy and philosophy are all identified as requirements for a successful community mental health program based around the delivery of CBT.

Dattilio and Bahadur (2005) describe a case in which Dattilio, a clinical psychologist, was able to adopt CBT to fit Eastern Indian cultural norms about family. While the family were immigrants to the U.S. from Madras (Chennai) and the issue of a rebellious teenager may not be directly applicable to the uses of CBT among poorer Indian populations within India, this case study informs the ability of CBT to adapt to cross-cultural beliefs. Dattilio concedes that CBT is a largely North American construct but can be applied to other cultures if the psychologist has sufficient familiarity with the culture of his patients. Dealing with the whole family in therapeutic manners will be addressed further in another section of the paper.

### Supportive Therapy

Supportive Psychotherapy from the psychodynamic tradition is another type of psychotherapy used in India and has been shown to work for a number of diseases including depression and eating disorders. It is based on the psychological theories “that assume six innate, basic and social needs: sexuality, aggression, the need to engage in relationships, and the need to be protected, loved and esteemed.” Gratifying these needs is key to treatment

(Driessen *et al.* 2007). In reality, many types of therapy can be seen to have a supportive element to it. This includes CBT and psychoanalysis. Therapies often rest on a spectrum between supportive or expressive therapies. Pure supportive psychotherapy abandons the expressive element in favor of the relationship build-up between the patient and the therapist.. The treatment should extend to patients that have had an ego broken down by severe environmental pressures. The therapist aims to provide understanding, security and relationship to the patient (Winston 1986).

**Table 6:** Elements of supportive therapy

Elements of supportive therapy	
[From Hollis (1964) as described in Winston (1986)]	
•	Sustaining procedures: demonstration of interest, desire to help, understanding, expressions of confidence in the client’s abilities or competence, and reassurance concerning matters about which the client has anxiety or guilt.
•	Procedures of direct influence: suggestion and advice
•	Catharsis or ventilation
•	Reflective consideration of the current person-situation configuration (i.e economic, social, physical, educational and other considerations). Consideration of the nature of the people with whom the client is associated (relatives, friends). Considering effect of patients’ actions on others or themselves. Reflection on feelings, attitude and beliefs about current situation that may have been withheld or not recognized.
•	Procedures for encouraging the client to think about the dynamics of his response patterns or tendencies.
•	Procedures for encouraging the client to think about the development of his response patterns or tendencies.

In supportive psychotherapy the subconscious is not explored. If a patient presents with anxiety in psychoanalysis, it is allowed to continue as part of the therapeutic work. Supportive psychotherapy looks to control anxiety. The therapist’s best tool is being “real” with the patient as both a relatable figure and with the avoidance of the subconscious. According to Winston (1986) style of communication, respect, ventilation, feeding, praise, reassurance, advice, lending ego and self-disclosure are all important parts of the therapeutic process. Interventions with medication can also be treated in a different matter in conjunction with this form of therapy with an emphasis on the rationale and expectations from the medication.

In the literature, this type of treatment takes many names and slightly different iterations. Some therapeutic elements, however, remain consistent. They are usually time limited, preformed in a face-to-face setting and all come from the psychodynamic tradition. It differs from CBT on matters such as identifying past experiences, interpersonal experiences, and the therapeutic relationship among others (Leichsenring *et al.* 2004). The Driessen *et al.* (2007) study protocol included a methodology for testing Short Psychodynamic Supportive Psychotherapy alongside CBT. This allowed for three treatment phases over 22 weeks in 16 sessions:

**Table 7:**

Phase	Overview (adapted from Driessen <i>et al.</i> 2007)
1	Depressive complaints and their interpersonal context are attended to, psycho-education about depressive disorders is given, treatment aims are established and treatment protocol is made.
2	Work on treatment aims, which relate to one of four interpersonal problem areas (mourning, strife, role transformation and isolation). Discussion of problem area commences and connection is made to internal relationships is possible. Patients encouraged to experience and reflect on emotions. Behavior and cognition change is discussed and encouraged.
3	Treatment termination and related mourning are discussed. Treatment aims and patient perceptions of treatment are discussed. Attention is paid to confirmation of the patients’ independence and handling of problems in the future.

In Leichsenring & Leibling's (2005) meta-analysis, fourteen of the studies used a psychodynamic therapy to treat personality disorders. The authors concluded that psychodynamic was at least as effective as CBT as a treatment form for panic disorders. A second meta-analysis by Leichsenring, Rabung & Leibling (2004) included seventeen studies of short-term psychodynamic psychotherapy for various psychiatric disorders and saw significant pretreatment-posttreatment effect sizes for target problems, general psychiatric symptoms and social functioning. A mega-analysis of three previous trials by de Maat *et al.* (2008) concluded that independent observers, patients and therapists all preferred short psychodynamic supportive psychotherapy along with medication to medication alone. The combination therapy was higher for both symptom reduction and quality of life measures. Also, the authors concluded that independent observers found SPSP to be equally efficacious as treatment methods.

### Vocational therapy

Vocational Rehabilitation is shown to have positive effects and outcomes on patients. This type of practice highlights the importance of the continuation of an intervention even after the treatment phase. A study by Kumar (2008) in Kerala, India, highlighted that in cases of chronic schizophrenia, where patients were given rehabilitation services at the Governmental Mental Health Center, Kozhidoke. Rehabilitation included various jobs for both male and female patients in which they earned between 75 and 100 rupees/day. Compared to a control, those in vocational rehabilitation had less severe of symptoms, improved social functioning, reduced re-hospitalization and enhanced cognitive functioning. Such programs allow the patients an outlet to function as normally part of society, which improves cognitive health. Also, with a steady income, patients are better able to handle the expenses that may come with their treatment, such as medication. The author goes on to praise this model as a cost-effective option for developing countries but further research is needed. The vocational rehabilitation model is particularly attractive because there is an infrastructure available from the government for it and other organizations working to promote it. In the authors' experience at the Banyan NGO, a patient with a history of mental disorder from head trauma was brought to the National Institute for the Empowerment of People with Multiple Disorders, which is a site for vocational rehabilitation like that described in the study above. It is important to consider the post-treatment lives of patients and vocational rehabilitation seems like a promising answer to this concern.

### Family therapy

In treatment, it is important to consider the family as an important asset to recovery. In many cultures all over the world, the familial unit is important as a source of support. As a result of the various stigmas surrounding mental illness in India, the patient can be robbed of that support structure. This is why education is both important and essential to the fight against mental illness. It cannot be overlooked, however, that for a family to care for a member who is experiencing mental illness can be an incredibly draining and stressful experience in itself. Time, money and human resources most often are dedicated to the patient that the

family may not have to spare. The newsletter, *India Together*, featured the story of one father of a schizophrenic daughter who was not offered family therapy as an option for treatment. Instead drugs and advice for reduced pressure were given. This is viewed not only as a failure of the doctor to recognize that "in cases [of schizophrenia] involving teenagers [...] family therapy is of the utmost importance," but one incident in the overall failure of Indian mental health policy as a whole (Kanjilal 2006).

While this method holds promise for a number of potential mental illnesses, much of the literature in the fields of family educational interventions deal with schizophrenia patients. McFarlane *et al.* (2003) in a review of the family psychoeducation literature surrounding schizophrenia offer a general overview of the field, its techniques and its efficacy. Since, often, medication alone can only partially treat the effects of schizophrenia, family therapy is a viable outlet to continue to make further advances in treatment. The paper identifies behavioral family management, family psychoeducation, psychoeducational multifamily groups, relatives, groups and family consultation as some short-term models as types of familial intervention strategies (See appendix for a detailed description of these therapies). Most importantly, many of these types of interventions not only show promising outcomes in the literature but also show that they are effective in cross-cultural contexts.

Two studies, one by Gutierrez *et al.* (2009) and one by Garcia *et al.* (2009), both speak on the promise of working with the families of schizophrenic patients. In Guterrez *et al.* (2009) the intervention group received eighteen weeks of a multi-family psychoeducation program in Chile. The program was geared towards changing attitudes and perceptions about schizophrenic patients, teaching coping and communication styles and reducing the emotional burden on families. Families shared experiences, attended to education sessions, and learned the importance of communication and self-care. This study showed that family members left the program with improved attitudes about schizophrenia with the best outcomes in those family members who have lived with the patient the longest and cared for female patients. The study did not assess if and how this change in attitude affected care but the authors point to previous studies where such an effect had been described. In Garcia *et al.* (2009) the importance of teaching families to cope with the burden of a schizophrenic family member is stressed in the Mexican American setting. A subject more efficient at coping was more likely to be positive and cordial to the patient. Poor coping efficiency was associated with a sense of helplessness and eventually psychological distress on the part of the caregiver. By working to improve coping mechanisms, the attitude of the caregiver to the patient is improved which can lead to better outcomes for the patient. Though neither of these studies reports outcomes for the patient they offer an insightful glance into the complex attitudes and strains facing these families. Although both studies have a Latin American focus, the family unit is just as important in an Indian context and the findings are likely applicable to other contexts. Lastly, as the Dattilio & Bahadur (2005) paper shows, many of the general psychotherapy techniques discussed above can be applied to a family setting. Jones (2002) offers "marginalization of family

members appears to disadvantage not only the relatives but also the psychotic sufferer in failing to protect against future relapse.”

## Conclusions about treatment options

Whether treating a patient by means of traditional methods, psychotherapy, pharmacotherapy or some combination of the above, the goals are always the same: a healthy patient. Magico-religious treatments present an interesting quagmire for the treatment of mental health. While clear human rights violations such as the Erwadi incident need to be stopped, there are a plenty of traditional healers who have nothing but the best interest of the patient in mind. The potential impact these healers can have on a successful recovery cannot also be overlooked. Providing proper facilities where people know they can get good mental health care would protect against the use of Erwadi-like asylums. Also, by educating the community and performing outreach to the traditional practitioners, these modern and ancient techniques can work hand in hand as complements towards a healthy patient.

Though an over-reliance on medication may be a problem in the Indian national mental health structure, it would be crass to devalue the importance medication does have in the treatment of mental health. Ideally access to medicine would remain high and medications would be delivered correctly and with a high adherence while at the same time being complemented by other treatments. Alone medications might not always work, but they often do and often even better when combined with other forms of therapy. No treatment is perfect and problems, of course, exist with both forms of treatment. Limited time and mental health resources can make even the shortest psychotherapeutic interventions simply unmanageable for both the Indian patient and therapist. A therapist properly trained in any of the therapeutic techniques mentioned here is a rarity in places like India. It is therefore important to be generally familiar with the therapies and try to locally adopt the best practices of each to fit the situation needed. Often times, many of the components of supportive or cognitive behavioral therapy will make their way into the most basic of therapeutic interventions. Facets of these interventions could fit well into community-based treatment and outreach models as well as adapted to group settings and support groups. The utility that these therapies can offer the community when integrated correctly is vast.

Another concern that needs to be addressed is that many of the psychotherapy studies listed above are not from India or even the developing world even though they are being used in or considered for the Indian context. It is an unfortunate reality that in many cases little research is available for many of these interventions in any developing country, let alone just India. This is a trend that is changing however and the future should show promising developments in these fields. It would take time, determination and likely a fair amount of funds for any organization to be able to provide the proper training,

conduct research and roll out effective mental health care, but as much of the above research shows, the tools are there; they just need to be wielded responsibly by competent hands.

## Conclusion and recommendations

Mental illness is a problem in low and middle-income countries. In India, there is no established system for addressing mental illness at the community level, with the exception of private or civil society initiatives that have sought to address specific populations. Considering the cases presented in this review, there is reasonable justification to implement an affordable and accessible system of mental health care at the primary level that cooperates with the existing health care infrastructure.

In order to work towards building a system of community mental health care, there are a series of steps that need to be taken. First and foremost, IKP Centre for Technologies in Public Health (ICTPH) needs to recruit mental health professionals, such as psychiatrists, psychologists, and social workers. These professionals will contribute towards designing a preliminary research study, which investigates the needs of specific communities in Thanjavur District.

A proper and scientific needs assessment of the community is an integral part of understanding the prevalence of mental health concerns. This research method should incorporate observation, focus group discussions, surveys, and in-depth interviews with the different stakeholders, which include doctors, faith healers, community leaders, etc. Based on the results of the needs assessment, appropriate interventions need to be planned. These interventions must start with targeted issues in order to be most effective. Interventions should include raising awareness at the community level to further preventive health care. This venture will sensitize the community towards individuals with mental disorders, which will subsequently help reduce stigma and discrimination.

In order to achieve the long-term goal of providing community mental health care, it is imperative to build a team of community health workers who are trained to specifically work in the field of mental health. Community health workers will be trained to diagnose disorders, carry out appropriate referral, and provide supportive counseling to the patients and their families. They will also be involved in raising awareness and educating the community through the use of media, all in the interest of integrating mental health care. Another effective intervention could be collaborating with schools. This will not only help raise awareness, but it will also help in diagnosing mental disorders in children and adolescents. By involving the students, teachers, and parents in this process and inviting counselors to visit schools, the community will be more sensitized towards mental disorders.

There are obvious gaps in the mental health system in developing countries. However, by formulating context-specific and culturally sensitive programs designed for effective care at the community level, equal access and resources can be provided to all individuals.

## Appendix

### Appendix A

#### DSM-IV Axes

Axis I	Clinical Syndromes	This is what we typically think of as the diagnosis – See TABLE for list of disorders and descriptions
Axis II	Developmental Disorders and Personality Disorders	Generally, the disorder is put into one of these categories. See descriptions for more information about each category
Axis III	Physical Conditions	Such as brain injury or HIV/AIDS that can result in symptoms of mental illness
Axis IV	Severity of Psychosocial Stressors	Events in a person's life that can impact disorders listed in Axis I and II
Axis V	Highest Level of Functioning	The Clinician rates the person's level of function in the present and the highest level in the previous year, integrating all four axes to understand what type of changes could be expected

### Appendix B

#### DSM-IV Diagnoses

DSM-IV Classifications	Includes	Descriptions
Disorders diagnosed in infancy, childhood, or adolescence	Mental retardation, learning disorders, motor skills disorders, communication disorders, developmental disorders, attention-deficit disorders, feeding and eating disorders of infancy, tic disorders, elimination disorders, other childhood disorders such as selective mutism, separation anxiety	Any disorders that are usually diagnosed early in life, including developmental disorders. Elimination disorders concern problems in elimination of feces or urine, cause may be psychiatric (bedwetting).
Substance Abuse Disorders	Disorders related to alcohol, amphetamine, caffeine, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioid, phencyclidine, sedatives, polysubstance abuse, or unknown substance-related disorders	For each type of substance abuse, diagnosis ranges from abuse to dependence to induction of other mental disorders such as anxiety, mood disorder, psychotic disorder, intoxication delirium, and withdrawal delirium
Delerium, Dementia, and amnesic and other cognitive disorders	Delerium, dementia, amnesic disorders	Includes dementia and delerium of organic and non-organic nature. Dementia due to injury or diseases such as Huntingtons, Parkinsons, HIV, etc. Delerium is a state of cognitive impairment or confusion usually of recent onset with another illness, dementia is an irreversible state of cognitive impairment, usually related to an organic degenerative brain disease
Adjusment Disorders		Characterized by a more difficult adjustment to a life situation than would normally be expected considering the circumstances.
<b>Anxiety Disorders</b>	Acute Stress Disorder, agoraphobia, obsessive-compulsive disorder, panic, phobias, posttraumatic stress disorder	Primary feature is abnormal or inappropriate anxiety can become a problem when anxiety occurs with no appropriate stimulus

<b>Dissociative Disorders</b>	Amnesia, fugue, multiple personality, depersonalization	Characterized by disruption in consciousness, memory, identity or perception.
Eating Disorders	Anorexia nervosa, bulimia nervosa	Disturbances in eating behavior
Impulse-Control Disorders	Kleptomania, Pathological Gambling, Pyromania, Trichotillomania, Intermittent Explosive Disorder	Failure or difficulty in controlling impulses despite negative consequences
Mood Disorders	Bipolar Disorder, Cyclothymic Disorder, Dysthymic Disorder, <b>Depression</b> , Major Depressive Disorder	Primary symptom is extreme disturbance in mood, either excessive depression, excessive excitement (mania), or episodes of both.
Sexual Disorders	Exhibitionism, Fetishism, Frotteurism, Pedophilia, Sexual Masochism, Sexual Sadism, Transvestic Fetishism, Voyeurism	Paraphilias all have in common distressing and repetitive sexual fantasies, urges, or behaviors.
Sleep Disorders	Insomnia, hypersomnia, narcolepsy, nightmare disorder, sleep terror disorder, sleepwalking disorder	Two categories, dyssomnias relate to the amount, quality, and timing of sleep and parasomnias relate to abnormal behavior or physiological events that occur during the process of sleep or sleep-wake transitions
Psychotic Disorders	Brief Psychotic Disorder, Delusional Disorder, Schizoaffective Disorder, Schizophrenia, Schizophreniform, Shared Psychotic Disorder	Major symptom is psychosis, or delusions and hallucinations. Delusions are false beliefs that hinder a person's ability to function, such as believing you are someone else. Hallucinations are false perceptions.
Sexual Dysfunctions	Dyspareunia, Female Orgasmic Disorder, Female Sexual Arousal Disorder, Hypactive Sexual Desire Disorder, Male Erectile Disorder, Male Orgasmic Disorder, Premature Ejaculation, Sexual Aversion Disorder, Vaginismus	Impairment in normal sexual functioning
<b>Somatoform Disorders</b>	Body Dysmorphic Disorder, Conversion Disorder, Hypochondriasis Disorder, Pain Disorder, Somatization Disorder	Symptoms suggest a medical condition but no medical condition can be found by a physician. For example, experiencing significant pain without an apparent cause.
Personality Disorder	Antisocial Personality Disorder, Borderline Personality Disorder, Narcissistic Personality Disorder	Symptoms must be enduring and play a major role in most or all aspects of patient's life, and must be persistent and long-term. For example, being antisocial or narcissistic.

All data from DSM-IV site

Disorders listed in bold are common mental disorders

## Appendix C

### ICD-10 Classifications

<b>F00-F99:</b>	<b>Mental and Behavioural Disorders</b>	<b>Conditions included</b>	<b>Comparison to DSM-IV</b>
F00-F09	Organic, including symptomatic mental disorders	Dementia, Amnesia, Delirium, mental disorders due to brain damage and dysfunction, Personality disorders due to brain damage due to physical disease, including organic mood, anxiety, and dissociative disorders.	Similar to Dementia, Delirium, and Amnesic category of diagnosis

F10-F19	Mental and behavioural disorders due to psychoactive substance abuse	Acute intoxication, dependence, substance abuse, withdrawal, psychotic disorders, amnesic disorder, late onset disorders.	Similar to substance abuse section, categorizing different levels of substance abuse. Additionally, includes tobacco as substance abuse.
F20-F29	Schizophrenia, Schizotypal, and delusional disorders	Also includes persistent delusional disorders, acute and transient psychotic disorders, nonorganic psychotic disorders. psychotic disorders.	DSM-IV includes schizophrenic disorders and delusional disorders under ICD-10 Diagnosis of these disorders depends often on length of symptoms
F30-F39	Mood (affective) Disorders	Bipolar affective disorders, mania, mild to acute depressive disorders	Similar to DSM-IV Mood disorders
F40-F48	Neurotic, stress-related and somatoform disorders	Phobias, anxiety disorders, obsessive-compulsive disorders, adjustment disorders, acute stress disorder, post traumatic stress disorder, dissociative disorders, somatoform disorders	includes similar info to DSM-IV categories on adjustment, anxiety, dissociative disorders
F50-F59	Behavioural syndromes associated with physiological disturbances and physical factors	Eating disorders, sleep disorders, sexual dysfunction, disorders associated with puerperium (post partum/natal depression)	DSM-IV includes sexual identity disorders with dysfunctions, ICD-10 includes with orientation disorders
F60-F69	Disorders of adult personality and behavior	Personality Disorders (paranoia, schizoid, etc.), personality changes due to traumatic experience or illness, habit disorders, sexual development and orientation disorders	includes similar conditions to DSM-IV Impulse-Control Disorders, sexual disorders
F70-F79	Mental Retardation	Condition of arrested or incomplete development of the mind, ranging from mild to profound	Included in DSM-IV disorders diagnosed in early childhood or infancy. The ICD-10 also includes a system to rate severity of mental retardation.
F80-F89	Disorders of psychological development	Early onset, disorders in development of speech and language, scholastic skills, includes autism and Rett's syndrome	Included in DSM-IV disorders diagnosed in early childhood or infancy.
F90-F98	Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	Hyperkinetic disorders, conduct disorders, mixed conduct and emotional disorders, childhood emotional disorders (phobias), tic disorders	Included in DSM-IV disorders diagnosed in early childhood or infancy. Organic and non-organic disorders included.
F99	Unspecified mental disorder.	Excluding any organic mental disorder, any unspecified mental illness	Don't think DSM-IV has a category of unknown

Data from ICD-10 website.

## Appendix D

### The Banyan

Formed in 1993, the organization's main purpose is to rescue and rehabilitate homeless, mentally ill women, offering them treatment, therapy, vocational training, and community support. Women are rescued from the streets and brought to the rehabilitation center, Adaikalam, which in Tamil means

"shelter." There, they go through stages of rehabilitation until they are prepared to enter society again. The Banyan helps to reunite these women with their families, fully educating the family members about the patient's condition and how to care for her. When this is not possible, the women are moved to a different center in Kovalam. The women sent there from Adaikalam continue treatment, and also become part of the community. They participate in additional vocational training, making crafts that the center sells, and earning a small wage. The Banyan Village program

in Kovalam is a small community living center for the patients, with a few caretakers. They are encouraged to take care of themselves and live as independently as possible. The directors of this program note that even chronically ill women who were not fit to re-enter society have shown enormous improvement from the experience of living in The Banyan Village.

The Banyan center in Kovalam does not only treat the mentally ill; it is also a clinic, modeled after a PHC with a mental health care component. It caters to around 400 patients, most of whom are outpatients. The center has a very unique set up, located in close proximity to a Dargah and some faith healers. Usually the mentally ill are brought to either center for spiritual healing. When treatment fails in these places, families will be more likely to come to Banyan for additional help. The Banyan coordinators note that the traditional healing and prayer had a beneficial effect on the patients who come for treatment, and that those institutions were important to consider and incorporate. They also importantly note that at times these traditional methods sometimes produce results all by themselves. The patients that come often pay respects to all three centers, and between the three they get pharmacotreatment as well as a supportive community. In this way, the Banyan has succeeded in incorporating aspects of traditional healing with clinical therapy and treatment, and has been successful.

The Banyan also makes excellent use of community health workers. They train their own community health workers to recognize mental illness, and to provide information to the families and patients about mental illness. The workers take on the responsibility of caring for the mentally ill without needing extensive psychiatric training, by working to ensure the patients receive proper care for their condition. For example, though Banyan does not house and rehabilitate mentally ill men they do provide support through their community health workers, who will work with the patient and the patient's family to find suitable care in a hospital or other government program. They are also responsible for making house visits to previous Banyan patients, ensuring that the families are taking proper care of the patient, and that the patient is taking medications and has not relapsed. Offering just two days of training with a qualified psychiatrist, the Banyan has found an effective way to use community health workers to care for the mentally ill in their community. (Information from personal correspondence and The Banyan website, see references)

## Appendix E

### Schizophrenia Research Foundation

In 1984, the Schizophrenia Research Foundation India (SCARF) was founded with Dr. M. Sarada Menon's vision of a non-profit NGO that could address some of India's pressing mental health problems. From the current headquarters in Chennai, India, SCARF focuses on furthering research in the field of mental health, providing rehabilitation, residential, and vocational training facilities for those afflicted with mental disorders, educating the public about the importance of mental health, offering mental health resources in urban

slum and rural settings, and training members of the community to provide diagnostic and preventative mental health care within rural areas. Even though SCARF is involved in a multitude of projects, the organization has an underlying motive of helping to remove the stigma associated with mental disorders in India, setting it apart from other foundations.

The facilities that are provided in Chennai itself are geared towards helping people with Schizophrenia and other mental disorders. SCARF has several residential sites that provide support for people with mental disorders who are not able to rely on their family members all of the time. At these residential centers, different activities are offered to keep the patients occupied, which has proven to be an effective rehabilitation method for people with Schizophrenia. These activities range from arts and crafts to producing goods to sell in the community. In SCARF's day care center, patients are taught a trade as a part of vocational therapy, for which they are paid to produce. Both men and women receive care, which includes free medications and admittance to the rehabilitation program. Although SCARF is immensely involved in Chennai, many resources are provided in the rural and urban slum areas.

SCARF's research initiatives have included work in the field of Schizophrenia, treatment methods for different mental disorders, effects of mental disorders on family life, and community mental health. In all of these fields, SCARF has made significant progress, but it is through the field experience, community efforts, and rehabilitation programs that SCARF has truly made a difference. From making simple pamphlets, flyers and posters, to performing skits about mental health in rural communities, SCARF has been active in providing the community with resources about mental health.

Through immense work experience in the field, SCARF has noted that the stigma surrounding mental illnesses has reduced over the years, but the discrimination against those who have a mental disorder still persists to this day. The organization believes that this can be attributed to the fact that there is a lack of awareness about the causes and the proper methods of treating mental illnesses. To tackle this, SCARF has been involved in training Community Health Workers (CHWs), and has acknowledged that it is an effective method of outreach and providing resources to the mentally ill in less developed communities. SCARF, in collaboration with other field organizations, has trained teams of CHWs to diagnose different mental disorders. In SCARF's program, CHWs are trained for at the most three days, which is built upon by monthly workshops that provide the CHW with in-depth knowledge about mental disorders. Training is done by a psychiatrist, and depending on the training there could be intermediaries of coordinators or field level coordinators, who use audio-visual and observational personal interaction supplemented by Power Point and written manuals as training mediums. These CHWs play an integral role in the community, as they are able to recognize disorders, make referrals for patients, deliver medications, provide supportive care to families and patients, and raise awareness within the communities.

As a part of SCARF's community outreach efforts, the organization has created a series of clinics that have taken place in Kanchipuram, Tambaram, and Chetput in Tamil Nadu. At these clinics, well-trained professionals write prescriptions, and the field workers are in charge of dispensing the medicine properly. SCARF has adopted the concept of community clinics that are run fortnightly or monthly to provide medicines for mental disorders and to perform follow-ups for the patients who have been diagnosed with mental disorders. This has proved to be an effective way of community outreach and has become one of SCARF's methods of providing health care at the primary level.

(Information from personal correspondence and SCARF website, see references)

## Appendix F

### Sangath

A large number of the interventions done by Sangath involve training lay people in raising awareness and outreach to the community, but also in providing treatment. Community outreach workers are also trained to work with people living with HIV, in the area of mental health. School health counselors are trained to deliver health education to adolescents in schools, and anganwadi workers are trained to promote early development among preschoolers. Their program called 'Saathi' is involved in promoting mental health among children with disabilities. The aim was to train the staff of a school for children with special needs to work with the parents and families of the children, and help the children while they are in the developmental phase. Currently they have developed the program in three schools, and are continuing to collect feedback on these programs.

The program MANAS is currently being implemented by Sangath, with the purpose of integrating care for common mental disorders with primary care. Using evidential research from published trials, and intervention was planned that integrated a number of mental health care services with primary care, including psychoeducation, dispensing of antidepressants, and group interpersonal therapy. To involve the PHCs in the area, they conducted brief informational meetings as well as consultation with stakeholders and formative research to evaluate each specific intervention. After obtaining agreement, the program was able to obtain support from a number of general physicians, and also developed training programs for the physicians as well as for lay workers. The training manuals are all available freely on the Sangath website. MANAS was piloted in 12 PHCs in Goa, treating 2,000 patients that were diagnosed with a common mental disorder, over the course of one year. Currently the evaluation study is being done by a partner NGO, to ensure that results are interpreted without a bias.

Sangath has received the McArthur Foundation International Award in 2008, for all of the valuable work the organization has done. With the effective use of resources to spread awareness and provide care for the community, this program is a successful model for any service organization.

(Information from personal correspondence and Sangath website, see references)

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