

**AN ANALYSIS OF THE CONSTRAINTS AND  
OPPORTUNITIES FOR SCALING-UP HEALTH HUMAN  
RESOURCES IN THE DELIVERY OF A NON-  
PHARMACOLOGICAL INTERVENTION FOR THE  
TREATMENT OF DEPRESSION IN UGANDA**

by

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## **ABSTRACT**

The use of non-pharmacological interventions for the treatment of depression is evidence-based, effective and has been successfully used in many developed countries. Evidence for the usage of these types of interventions to treat depression in developing countries is not as widespread. However, two recent randomized control trials have demonstrated that a non-pharmacological intervention, specifically group interpersonal therapy (IPT), can be successful on a small-scale in Uganda to treat depression. Following a call to action by the international mental health community to act on the significant burden of depression that is afflicting the developing world, this report seeks to analyze the opportunities and constraints for scaling-up the health human resources needed to deliver this evidence-based intervention on a larger scale. This analysis was conducted by examining a previously published framework for scaling-up a health intervention in a resource-poor setting.

**Keywords: Depression; Non-Pharmacological Interventions; Health Human Resources; Scaling-Up; Mental Health; Uganda**

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# **1: INTRODUCTION**

## **1.1 Introduction**

Depression is a complex disorder that imposes a significant burden of disease on low and middle-income countries. Due to a lack of qualified human resources, minimal infrastructure, outdated policies, ineffective implementation of existing policies and lack of political will, the availability and accessibility of mental health services in such settings is poor. With even the most minimal mental health services being highly concentrated in urban areas, the country's largely rural population, many of whom may live on less than a dollar a day, rarely make use of existing services. The resulting treatment gap for depression that exists is thus immense.

This report examines the opportunities and constraints of scaling-up a successful, culturally relevant, evidence-based, non-pharmacological intervention for depression in one such country: Uganda. A discussion of the etiology of depression, its associated risk factors, and treatment is followed by an illustration of its impact on the global burden of disease. Using a case study method, two randomized control trials of a non-pharmacological intervention for the treatment of depression in Uganda are described to illustrate how such an intervention might be scaled-up. This is followed by a description of the components of an effective mental health system and an examination of the current state of Uganda's mental health system. Finally, a previously published framework for

scaling-up a health intervention is highlighted as the basis for the scaling-up analysis. The framework provides strategies and recommendations for scaling-up a health intervention according to five criteria: (1) prioritizing mental health; (2) effective organization of mental health services; (3) availability of mental health services; (4) adequate health human resources; and (5) effective public mental health leadership. These strategies and recommendations provide the basis for an analysis of the opportunities and constraints that exist for scaling-up a successful intervention for depression in Uganda. Given the scope of this report, only one category could comprehensively be addressed and thus the scaling-up of health human resources will be examined in detail. This category was chosen because studies have shown that the lack of human resources is the largest limiting factor for the delivery of proper mental health care in developing countries (Saxena, Thornicroft, Knapp, & Whiteford, 2007).

## **2: BACKGROUND AND RATIONALE**

### **2.1 Depression: Etiology, Risk Factors, and Treatment**

Depression is a mental disorder that is not characterized by one single causal pathway. It is the consequence of interactions between various biological, psychological, environmental, and socio-economic factors that can affect different individuals in diverse ways. Many factors have been identified through research as determinants of causing and maintaining depressive symptoms as well as affecting disease progression and severity. Biological factors that have been associated with the development of depression include age, sex, genetic factors, the abnormal concentrations of various neurotransmitters and their metabolites, elevated levels of certain kinds of hormones, and abnormalities in biological second messenger systems (WHO, 2001). These biological factors are thought to interact and interrelate with each other as well as with other psychological, environmental, and socio-economic factors. The interactions between the various factors can subsequently produce changes in emotions, behaviours, beliefs and attitudes in an individual. These interactions ultimately result in the experience of emotions and symptoms associated with depression. Examples of psychological factors associated with the development of depression include current life stressors, the quality of social relationships, and physical health (Stephens, Dulberg, & Joubert, 1999). Environmental factors include displacement of one's usual living environment, lack of education, lack of

housing, peer rejection, poverty, racial discrimination, work stress, war, and access to alcohol and drugs (WHO, 2004). Finally, examples of socio-economic factors associated with the development of depression include culture, income, education level, and place of residence (WHO, 2001).

Depression can be divided into two categories: mild and major depression. Mild and major depression have similar symptoms however major depression is more severe as symptoms are often more intense and prolonged (Health Canada, 2002). Major depression also results in greater interference in a person's ability to work, socialize and complete their daily activities as compared to mild depression. A depressed individual will generally experience one or more depressive episodes that last at least two weeks and episodes may reoccur following periods of absence of depressive symptoms (Health Canada, 2002). Symptoms of depression vary for each individual but can include low mood, loss of interest or pleasure in usual activities, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration (WHO, 2008). Depressive symptoms can be short-lived or chronic. When symptoms present chronically, they are likely to lead to impairments in one's ability to function on a daily basis (WHO, 2008).

The previous description of depression is a general one. Broadly, it can be applicable to most individuals' experience of depression, regardless of whether or not it is experienced in a developed or developing country. The applicability of the 'Western' model of depression to the lived experience of depression in developing countries has been questioned in the past, though it

has been demonstrated to be clinically valid (Bolton, 2001; Wilk & Bolton, 2002; Rodrigues, Patel, Jaswal, & De Souza, 2003).

It is important to adapt interventions for depression to ensure local acceptability, as there are some differences that exist in the experience of depression between individuals in developing and developed countries (Patel, Araya, & Bolton, 2004). For example, it has been found that people experiencing depression will not complain as frequently about emotional symptoms but will describe physical symptoms such as fatigue and muscle pains as their primary ailments (WHO, 2006). As such, diagnosis may require further probing in order to understand an individual is experiencing depression.

There also exists an expanded scope of risk factors for depression in developing countries, particularly in sub-Saharan Africa. A study conducted in Zimbabwe examined depression risk factors at a population level (Patel, Abas, Broadhead, Todd, & Reeler, 2001). It found that risk factors associated with elevated levels of depression included high rates of poverty, detrimental economic reform programs, very limited public health infrastructure, inaccessible and inefficient health services, the widespread use of private and traditional health care, cultural diversity within a country, and gender inequality (Patel, Abas, Broadhead, Todd, & Reeler, 2001). This study also found that individual risk factors included female gender, chronicity of illness, more than three presenting physical complaints, lack of cash savings, job loss, and infertility. Bereavement, significant morbidity, psychological illness, disability, and other significant negative life events were also found to be risk factors for depression

persisting longer than twelve months. The authors postulated that these population and individual level risk factors could be applicable to many other sub-Saharan African countries that share similar historical, economic, political, and social characteristics.

## **2.2 Burden of Disease for Depression: Global**

Disability Adjusted Life Years (DALYs) are a “summary measure of population health that combines years of life lost from premature death and years of life lived in less than full health” (Mathers, Lopez, & Murray, 2001). DALYs have been utilized to quantify both current and future burden of diseases in populations. This method of quantification has enabled research to describe and demonstrate numerically the estimated burden of depression within a population. Using this method, it has been found that worldwide, neuropsychiatric disorders are the most important cause of disability, and of all disorders contained within this category, depression is the leading cause of disability in both males and females. The Global Burden of Disease project estimated the impact of disorders in the future. It was found that the burden of disease due to neuropsychiatric disorders worldwide is projected to rise from 10.5% in 1990 to 14.7% in 2020 (Murray & Lopez, 1997). Again, of all neuropsychiatric disorders, depression accounts overwhelmingly for the greatest proportion of the burden of disease. It represents 4.4% of the total burden of disease in the world. Worldwide, depression is expected to represent the second most significant contribution to the total burden of disease by 2020. Depression is also expected to be the primary contributing factor to the burden of disease in the developing world by

2020, with sub-Saharan Africa experiencing one of the most striking increases in prevalence (Murray & Lopez, 1997).

In 1998, the World Health Organization International Consortium in Psychiatric Epidemiology compared the prevalence rates and correlates of common mental disorders across seven countries in the developed world (WHO, 2000). They found that across these countries, mood disorders such as depression had an early age of onset (average age - 26 years), and that lifetime prevalence rates had increased in recent cohorts. It was also found that the lifetime prevalence rates of mood disorders such as depression varied widely across the countries surveyed. Turkey reported the lowest prevalence of 7.3% in comparison to the highest of 19.4% in the USA. This study also supports the fact that women have consistently higher prevalence rates of depression than men. The World Health Report of 2001 (WHO, 2001) showed that globally, women have a twelve month prevalence rate of depression of 9.5% and men have a 5.8% prevalence rate. Mood disorders were found to be linked to measures of socioeconomic status such as low income, low level of education, unemployment and being unmarried. Indeed, there is a well-documented relationship between impoverishment and mental health. It has been reported that there is a consistent relationship between low income and vulnerability to suffering from a common mental disorder such as depression (Patel, 2000). The relationship functions in a cyclical manner with depression affecting one's ability to work and contributing to increased economic burden that subsequently results in economic deprivation. Economic deprivation can in turn exacerbate the symptoms and severity of

depression, further affecting one's ability to work and capacity to pay for the health costs they must incur.

Despite the multitude of risk factors that can contribute to the development of depression, treatments for depression, particularly non-pharmacological ones, have been demonstrated to be effective in both developed and developing countries (Mynors-Wallis, Davies, Gray, Barbour & D. Gath, 1997; McKendree-Smith, Floyd & Scogin, 2003; den Boer, Wiersma, & Van den Bosch, 2004; Nelson & Loomis, 2005; Patel et al., 2007). A recent comprehensive review has described the current recommended treatments for depression focusing particularly on low- and middle-income countries (Patel et al., 2007). It was found that depending on the severity of the symptoms and what treatments had been tried in the past, depression could be effectively treated with low-cost antidepressants, psychological interventions such as cognitive behaviour therapy (CBT) and interpersonal therapy (IPT), or a combination of both. Current evidence from developed countries shows that mild to moderate depression can be treated with non-pharmacological interventions. Both CBT and IPT are just as effective as antidepressant medication (Ellis, 2004) Major depression can also be treated with these forms of non-pharmacological interventions, though in severe cases it is recommended that a pharmacological treatment be used as well (Simon, Revicki, Heiligenstein, Grothaus, VonKorff, Katon & Hylan, 2000). The World Health Organization (WHO, 2008) reports that currently fewer than 25% of individuals worldwide who are in need of treatment for depression actually receive it and in some countries, it is fewer than 10% of individuals. The

guidelines for treating depression published by the World Health Organization also reflect the previously stated recommended treatment guidelines for depression in developing countries. The World Health Organization (2008) recommends that depression can be treated with antidepressant medication and/or brief, structured forms of psychotherapy in primary care.

### **3: METHODS**

A case study approach is used in order to analyze the constraints and opportunities for scaling-up a successfully tested, culturally relevant, non-pharmacological intervention for depression. This approach is also used to add strength to what is already known about scaling-up interventions within existing health systems and also to show how published recommendations for doing so could be applied to a specific context based on readily available, published information. This paper utilizes Uganda as a case study in order to examine how this scaling-up process can occur. A comprehensive literature review was conducted using relevant databases (PsycInfo, Medline) and relevant grey literature (World Health Organization Publications) to identify research regarding depression in Uganda, Uganda's current mental health system, what treatments for depression have worked there, and how a successful mental health intervention can be scaled-up in a developing country. A scaling-up framework, and strategies developed and published by global mental health experts were used to identify opportunities and constraints that exist in Uganda for scaling-up a non-pharmacological treatment for depression. Given the scope of this report, only one area of focus could be described for scaling-up depression services and thus the identification of opportunities and constraints was conducted for health human resources.

## **4: CASE STUDY: UGANDA**

### **4.1 Demographics and Burden of Disease due to Depression**

Uganda's current social and political situation along with its elevated rates of depression makes it a useful country to focus on for the scaling-up of an intervention for depression. It has a population of nearly 27 million people, with 50% of that population under the age of 15 years and only 4% above the age of 60 years (WHO, 2005). Life expectancy at birth is 47.9 years for males and 50.8 years for females (WHO, 2005). Uganda has long been involved in a civil war that has resulted in large populations of internally displaced persons and ex-child soldiers. Uganda also has a significant rate of HIV/AIDS. Prevalence is estimated at 6.7% in the 15-49 age group (WHO, 2006). Alongside HIV/AIDS, malaria, tuberculosis, and malnutrition are widespread and cause a significant burden to individuals and the public health system of the country (WHO, 2008). The general Ugandan population also suffers from a high burden of depression. While there does not exist a national survey to investigate rates of depression, one study found that rates of depression were as high as 21% in some areas of the country (Bolton et al., 2003). Another study found a prevalence rate of 17.4% in two southern districts of the country (Ovuga, Boardman, & Wasserman, 2005). Two other cross-sectional studies conducted in Uganda found depression prevalences of 31.6% and 67% (Muhwezi, Agren, & Musisi, 2007; Roberts, Ocaya, Browne, Oyok, & Sondorp, 2008). These results however should be

approached with some caution when generalizing to the case of the general population as the studies were conducted in a primary care facility and an internally displaced persons camp, respectively, where elevated prevalences of depression could be expected.

Uganda's public health infrastructure is limited and ill equipped to deal with the significant burden of depression that exists. Antidepressant medication is expensive and the health system resources to prescribe, dispense, and monitor their side effects are not reliable (Bolton et al., 2003). Antidepressant medication also has a high risk-benefit ratio<sup>1</sup> and is often not effective for people suffering from mild to moderate depression (Kirsch, Deacon, Huedo-Medina, Scoboria, Moore, & Johnson, 2008). Logistical problems may also arise when attempting to maintain a supply of drugs to the region.

The ratio of mental health workers to the population is very low. In a country of 27 million people, there are only 21 psychiatrists. This translates into one psychiatrist for every 1.3 million people (Ovuga, Boardman, & Wasserman, 2007). There is also a limited number of other specialized mental health workers. There is a ratio of one psychiatric clinical officer for every 500,000 people (Ovuga et al., 2007).

Depression is clearly an important public health problem in Uganda. The burden of disease due to depression is significant and is projected to become a greater burden given the current public health infrastructure and available

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<sup>1</sup> Risk-benefit ratio can be defined as, "The risk associated with a treatment versus its potential benefits to an individual." (DCRI, 2008)

resources. It needs to be addressed as it not only affects an individual's quality of life through the imposition of significant disability but it also increases the risk of being affected by other physical health problems (Patel, 2000). In addition, it places an increased burden on the already scarce health resources of the country. Despite evidence from the World Health Report of 2001 and estimates from the Global Burden of Disease Report that depression in the developing world is a significant and growing problem, there continues to be little priority placed by national governments on depression. Instead, there is a disproportionate focus on infectious diseases and child and maternal health (Prince, Patel, Saxena, Maj, Maselko, Phillips, & Rahman, 2007). While these are important areas of the disease burden to address, ignoring mental health issues, and particularly depression, will only cause the burden of infectious diseases to grow as there exists a well-documented link between mental illness and the exacerbation of physical health conditions and susceptibility to infectious diseases (Katon, 1996). Particularly relevant to sub-Saharan Africa, associations between depression and the incidence of HIV/AIDS have been shown (Olley, Seedat, Nei, & Stein, 2004; Penzak, Reddy, & Grimsley, 2000; Prince et al., 2007). Evidence has indicated that individuals with a mental illness may be at increased risk for contracting HIV/AIDS (Prince et al., 2007). There has also been evidence regarding the consistent association between an HIV infection and the subsequent development of a mental illness such as depression (Penzak, Reddy, & Grimsley, 2000; Prince et al., 2007). Some of the largest studies conducted in low and middle-income countries reported that the rates of

depressive symptoms were higher in symptomatic HIV-positive individuals in comparison to non-symptomatic or seronegative individuals (Prince et al., 2007).

## **4.2 Non-Pharmacological Treatment of Depression**

The Lancet Global Mental Health Group consists of experts in global mental health practice and policy, and have determined that one of the five most important research priorities for depressive disorders is “effectiveness of innovative and simple cognitive and behavioural strategies for treatment of common mental disorders that can be administered by general physicians and community health workers” (Chisholm et al., 2007). Two published efforts for the treatment of depression by non-pharmacological means in Uganda address this issue.

The first study was a randomized control trial of group interpersonal therapy (IPT) for the treatment of depression in rural, southwestern Uganda (Bolton et al., 2003). Previously, this region was surveyed and the depression rate among adults was found to be 21% (Bolton et al., 2003). Thirty study villages were randomly assigned to gender-specific study intervention and control groups. For initial participation in the study, the subjects believed themselves to be depressed or were believed by others to have depression-like symptoms. They were then assessed using a locally adapted, validated instrument - the Hopkins Symptom Checklist - to ensure that they met the criteria for major depression in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). Group interpersonal therapy (IPT) was delivered to the intervention groups of the study. IPT is a form of talk therapy that uses the connection made between

one's own current problems or situation and the onset of symptoms as a point of intervention. It is also time-limited and the procedures are standardized and formalized in written materials. There are four areas that are considered triggers for depressive symptoms in IPT: (1) grief; (2) interpersonal disputes; (3) role transitions; and (4) deficits, i.e. one is having problems building or maintaining relationships. Often a clinical treatment provider will work with a patient to identify problem areas and the onset of symptoms. IPT was chosen as the intervention to investigate as it was considered the most culturally appropriate based on previous qualitative research conducted by the authors and on discussions with representatives of the local population.

The control groups of the study received treatment as usual. Treatment as usual was defined by the authors of the study as whatever villagers had previously been doing in order to deal with their depression. The control group was also able to seek other interventions for their depression if they wished. It was not reported what, if any, interventions were sought by participants in the control groups. They were also informed that should the intervention be successful, they would receive treatment following the conclusion of the study. In this study, IPT was delivered by a local facilitator of the same sex as the rest of the group because sex-segregated groups were deemed more culturally acceptable. The facilitator received two weeks of training in the facilitation and implementation of group IPT prior to the delivery of the intervention. Two of the authors of the study conducted this training of facilitators. IPT groups met weekly for 90 minutes for 16 weeks, Group participants were able to describe their life's

events in their weekly meetings and then were prompted to link their current mood or feelings to those events. Facilitators were there to promote group discussion of the issues and to provide support. Dropout rates were low – 7.8%. Results showed that prior to the IPT intervention, 86% of the people in the intervention groups met the criteria for major depression whereas after the intervention, only 6.5% met the criteria. In comparison, prior to the intervention, 94% of the control group participants met the criteria whereas after the study, 54.7% met the criteria. The significant improvement demonstrated by the control group in this study was attributed by the authors to regression to the mean as severity of depressive symptoms and function could have varied throughout the course of the study. They also acknowledged that the individuals from the control group may have sought outside treatments provided by traditional healers.

This study found that IPT was effective for depression-like illness, depressive symptoms and associated dysfunction. At the time of publishing the results in 2003, the authors stated that this was the only known controlled clinical trial for a psychological intervention in sub-Saharan Africa (Bolton et al., 2003). A post six-month assessment was performed, finding that participants who received group IPT had a much lower rate of depression - 11.7% - versus the control group whose depression prevalence was 54.9% (Bass et al, 2006). This study demonstrated a successful non-pharmacological treatment for depression in a resource-poor setting. The fact that the mental health benefits were maintained six months after the intervention is a positive sign of potential long-term benefits of the intervention at a population level (Bass et al, 2006).

The second study was a randomized control trial that tested the efficacy of a psychological intervention for the treatment of depressive symptoms among adolescents who had survived war and displacement (Bolton, Bass, Betancourt, Speelman, Onyango, Clougherty, Neugebauer, Murray, & Verdeli, 2007). Group IPT, among other activity-based interventions such as creative play, was used in the trial. Group IPT was chosen as the non-pharmacological intervention of interest given the authors' previous successful experience with group IPT in Uganda and its cultural acceptability in the region. Participants ranged in age from 14 to 17 years old and were living in two camps for internally displaced persons. Participants were assessed for depressive symptoms before and after the intervention on a locally developed screening scale designed for the study – the Acholi Psychosocial Assessment Instrument (APAI). They were also measured for function, based on qualitative data and gender specific questions. The participants randomized to the group IPT intervention participated in 16 weekly group meetings that was lead by a local facilitator who was of the same sex as the group. The facilitators received two weeks of training in group IPT. They were also provided with a treatment manual that highlighted group IPT strategies and techniques that had been adapted for local use.

Results showed that in comparison to the control group, girls who received group IPT demonstrated significant improvement in depressive symptoms. Compared to the controls, the improvement in depressive symptoms in boys was not significant. The authors indicated that the lack of significance in results for boys may be due to the fact that boys are less willing to talk about emotional

problems, especially in a group format. This study showed promise that IPT could be effective in the Ugandan setting, at least for women. The authors did note that other interventions should be investigated for adolescent boys affected by war as they did not show improvement using IPT. However, positive treatments for women are promising given the high rates of depression in this group (WHO, 2000; Government of Canada, 2006; NSDUH Report, 2007).

The successful use of IPT for treating depression in the two previously described studies provides evidence that the use of IPT could be successful on a larger scale. It should be noted that while developed countries using IPT for depression have a better level of evidence on which to base the scaling-up of an intervention (i.e. there are many more studies and rigorous trials that have been conducted in these settings), many developing countries do not have this luxury. Evidence is sparse, and as Patel et al. (2003) acknowledge, we should act on what works and not necessarily wait for further studies because the burden of depression is so great. The previously described studies were the only two randomly controlled studies to assess treatment efficacy for depression in Uganda or any other sub-Saharan African country.

The only other study evaluating the use of IPT for the treatment of depression outside of industrialized countries was in Puerto Rico (Rossello, Bernal, & Rivera-Medina, 2008). This study examined the use of individual and group formats of cognitive behavioural therapy (CBT) and interpersonal therapy (IPT) for the treatment of depression in Puerto Rican adolescents. Because it has been shown that it can be adapted to the cultural context of Latino populations

IPT was chosen as one of the non-pharmacological interventions to be tested. In addition, the group format of the intervention presented advantages such as providing opportunities for group support and providing a scenario where new skills could be observed, learned and practiced in a safe environment.

Participants were included in the study following referral if they met the DSM-III-R criteria for major depressive disorder and were randomly assigned to intervention and control groups. The intervention groups received weekly group-IPT for 12 weeks. The group IPT was adapted for use with Puerto Rican adolescents by the authors of the study. The individuals administering the group intervention were all graduate clinical psychology students with clinical experience and who had been trained in IPT. Results showed that group IPT produced a clinically significant decrease in depressive symptoms for both sexes. Clinically significant was defined as the movement of participants from a dysfunctional or clinical range of depressive symptoms to a more normative range. No significant differences between individual and group treatment formats were found.

In addition to evidence from developing countries, IPT has also been shown to be effective in developed countries. Two systematic reviews based on evidence from studies in the developed world demonstrate that IPT is effective in the reduction of depressive symptoms and depression severity (de Mello, Mari, Bacaltchuk, Verdelli, & Neugebauer, 2005; Churchill, Hunot, Knapp, McGuire, & Tylee, 2001). IPT is also a recommended course of treatment for depression in developed countries as reflected by the clinical practice guidelines in Canada,

the United States and Britain (Segal, Whitney, Lam, & CANMAT Depression Work Group, 2001; Karasu, Gelenberg, Merriam, & Wang, 2000; The British Psychological Society & The Royal College of Psychiatrists, 2004).

In addition to demonstrated clinical efficacy, the use of IPT has been found to be cost-effective. In an examination of seven different types of interventions for the treatment of depression in developing countries, it was found that after episodic treatment with older tricyclic antidepressant drugs, episodic psychosocial treatment, such as IPT, was the second most inexpensive form of treatment. Categories of interventions included several types of antidepressants, psychosocial treatment or a combination of the two interventions (Patel, Araya, Chatterjee, Chisholm, Cohen, De Silva, Hosman, McGuire, Rojas, van Ommeren, 2007). Also, a recent review of non-medication trials of IPT support the finding that IPT can be useful in populations where medication is not available or cannot be used and that it is an intervention that can be taught to persons of diverse backgrounds with limited training in psychotherapy (Weissman, 2007).

### **4.3 Mental Health Systems**

#### Mental Health Systems

In order for a mental health intervention to be helpful and widely used in a population, it is recommended that the mental health system is effective, efficient and organized. Resources for mental health and depression throughout the world are scarce, often inequitable in distribution, and inefficient in delivery. This is

particularly true and significant in the developing world. Absence of resources, outdated or non-existent mental health policy, poor infrastructure, few mental health services, few community resources and trained human resources, and little funding are typical problems, particularly in sub-Saharan Africa (Saxena, Thornicroft, Knapp, & Whiteford, 2007). In order for a mental health system to deliver effective interventions and services to the population it serves, there must be certain essential components that are in place.

An effective mental health system must have policies in order to provide a framework for services, to implement them, and to protect those who access the services from stigma and discrimination (WHO, 2004). It is also essential for a mental health system to have accessible and affordable treatments, both pharmacological and non-pharmacological. The harnessing of community resources is also important as the community can provide some level of care to affected populations. Community resources can include non-governmental organizations, consumer and family organizations, informal social networks, and traditional or indigenous health care (WHO, 2004). Methods of financing are also important to an effective mental health system. More than one third of developing countries rely on out-of-pocket payments as their primary method of finance (Saxena, Thornicroft, Knapp, & Whiteford, 2007). This is in comparison to 3% of high-income countries that rely on this method (Saxena et al., 2007). This is the most inequitable form of financing in health services (Roberts, Hsiao, Berman, Reich, 2004). Many developing countries rely on this method because they do not have the adequate infrastructure to introduce general taxes and

social insurance or these methods are not effective because much of the employment in the country is informal. It is important for mental health systems to have a financing system that does not rely solely on one method of taxation and the mix that is appropriate differs for each country and context (Roberts, Hsiao, Berman, Reich, p.160, 2004). Another crucial aspect of an effective mental health system is the availability of trained human resources. Unskilled health human resources or shortages contribute to the inaccessible, poor level of mental health care that is observed in many developing countries of sub-Saharan Africa. Studies have shown that this is the largest limiting factor in the provision of proper mental health care in developing countries (Saxena, Thornicroft, Knapp, & Whiteford, 2007).

### Uganda's Mental Health System

Uganda's national mental health policy was formulated in 2000. It includes sections on advocacy, promotion, prevention, treatment, and rehabilitation. Despite these inclusions, a comprehensive survey of the Ugandan mental health system by the World Health Organization found that the legislation is in great need of being updated to reflect current best practices and recommendations (WHO, 2004). Uganda also has a national mental health program, formulated in 1996, in which mental health is one of twelve services that is included as a part of a minimum health package. This, however, does not translate into practice. Uganda spends 0.7% of its total health budget on mental health. The way in which mental health programs and services are financed is, in descending order, through taxes, out-of-pocket payments, private insurance, and social insurance.

Health funding and subsequently, mental health funding is mainly from economic aid (WHO, 2004). Due to the fact that economic aid is donor driven, priorities may not favour mental health especially in the context of Uganda's morbidity and mortality from HIV/AIDS and malaria. Any focus on mental health tends to be targeted to more severe cases such as bipolar disorder or schizophrenia but not to the lower levels that cause dysfunction but not complete disability (WHO, 2004). Disability benefits do not exist for people with mental disorders so treatment is very often unaffordable (WHO, 2004). People who access mental health services must pay out-of-pocket, rarely to be reimbursed later. The majority of people do not have the insurance that is necessary for reimbursement of mental health services. Over 70% of all health expenditures in Uganda are derived from private expenditures including out-of pocket expenses (WHO, 2008). This is particularly dire as the percentage of the Ugandan population that live below the poverty line is 84.9% (WHO, 2006). It has been reported that most families that must deal with a mental illness such as depression see their economic situation deteriorate and their productivity decrease as a result (WHO, 2004). As previously stated, there is a well-documented relationship between low income and vulnerability to common mental disorders like depression (Patel, 2000).

The harnessing of community resources is a very minor component of Uganda's mental health system. Intersectoral collaboration is presently minimally occurring at the national level within government agencies (WHO, 2004). Community-based programmes that combine traditional and modern practices

are supported but are not widespread (WHO, 2004). Uganda possesses a national therapeutic drug policy in which a basic set of drugs used to treat a variety of mental illnesses are available at a cost at some sort of primary health care centre. However, some drugs are only available at referral centres and these tend to be concentrated in urban areas (WHO, 2004). Non-governmental organizations (NGOs) are increasingly getting involved in primary mental health care (WHO, 2004). There has also been an increase in capacity building by NGO's. Consumer support groups for mental health are emerging, particularly with a focus on psychosocial care to war-afflicted populations, but there is still little intersectoral collaboration. Thus, efforts are often isolated and limited by the lack of physical and financial resources (WHO, 2004). The capacity of the community to advocate on behalf of their cause is also reduced because of this.

Training facilities do not exist for primary care mental health professionals (WHO, 2004). As previously reported, there are only 21 psychiatrists in Uganda and 50 psychiatric clinical officers in the country (Ovuga et al., 2007). Other medical professionals are trained in a very basic level of symptom recognition and the treatment of certain mental health disorders in primary care (WHO, 2004).

#### **4.4 Scaling-up a Health Intervention**

Scaling-up can be defined as, “deliberate efforts to increase the impact of health service innovations successfully tested in pilot or experimental projects so as to benefit more people and to foster policy and programme development on a lasting basis” (WHO, 2007). It has been increasingly recognized that the

success of a small-scale health intervention does not necessarily mean that it can and will be easily incorporated into regular programs and care (WHO, 2007). Many small-scale projects and health innovations are criticized for their lack of ability to induce change and have an impact on a larger scale. Therefore, following a process for scaling-up that has been developed through experience, consensus, and taking local considerations into account is important. There are broadly agreed upon criteria that indicate the likelihood of the successful scaling-up of a tested health intervention. It is important that (1) the health intervention be evidence-based; (2) it has been successful in a local context; (3) that scaling-up is given a longer time frame than a smaller health project; and (4) that the scaling-up is occurring simultaneously or shortly following the development of policy, capacity building and the mobilization of financial resources (WHO, 2007). Other criteria include comprehensive technical support if the intervention requires significant change to the current system, the consideration of gender and human rights issues, and having an appropriate monitoring and evaluation system in place so that adjustments can be made throughout the process of scaling-up (WHO, 2007). In terms of the IPT interventions for depression in Uganda that were previously discussed, they meet the criteria in that they are evidence-based, they have been shown to be successful in a local context, and one trial, following a six month period, indicated the intervention was still successful. Scaling-up of IPT would also come at a time when Uganda is increasingly recognizing the importance of mental health and is making some efforts to

address the significant burden of disease and treatment gap that currently exists (Ovuga et al., 2007).

A recent series of publications in the Lancet regarding the global mental health crisis concludes with an examination of how to scale-up successful, smaller-scale health interventions. The publication examines the procedures and strategies needed to scale-up services for mental disorders (Chisholm et al., 2007). This publication provides a framework and will inform the analysis of the potential for scaling-up IPT in Uganda for the treatment of depression. The basis for the scaling-up model provided by Chisholm et al. (2007) is derived from the World Health Organization's World Health Report of 2001. Ten strategies were outlined for mental health system reform in 2001 and these strategies guided Chisholm et al.'s (2007) synthesis of a framework for scaling-up mental health interventions and more specifically, scaling-up mental health systems within developing countries. Five core indicators were proposed by Chisholm et al. (2007) to assess the current capacity of national mental health systems and to monitor and evaluate the scaling-up progress over time. Only four will be discussed in this report as the fifth is related to schizophrenia. For the purposes of this analysis, the proposed indicators will be used for a baseline assessment of Uganda's mental health system to respond to the burden of depression observed throughout the country. The indicators are (1) presence of official policy, programmes, or plans for mental health, either including or accompanied by a policy on child and adolescent mental health; (2) specified budget for mental health as a proportion of total health budget; (3) number of mental health and

related professionals per 100 000 population; and (4) proportion of primary health-care clinics in which a physician or an equivalent health worker is available, and at least one psychotropic medicine of each therapeutic category is available in the facility or in a nearby pharmacy all year long.

An analysis of Uganda's current mental health system would lead one to conclude that it is weak, requiring significant inputs and improvement. In terms of the indicators named above, there does exist an official policy, however it needs to be updated (WHO, 2004). The budget for mental health is 0.7% of the health budget (WHO, 2004) where in contrast, Canada spent 4.8% of its health budget on mental health in 2003-2004 (Jacobs, Yim, Ohinmaa, Eng, Dewa, Bland, Block, & Slomp, 2008). There is one psychiatrist for every 1.3 million people and one psychiatric clinical officer for every 500,000 people. Finally, although data was unavailable, given the lack of health human resources and lack of budget for mental health, one could postulate that primary health care clinics throughout the country are certainly lacking providers and the necessary medicine needed to be effective.

Given the challenges previously discussed regarding the ways in which depression affects an individual's life and Uganda's current burden of disease due to depression, it is clear that the capacity of the mental health system is unable to effectively address the problem. It might, however, be possible to scale-up a successful intervention such as IPT as there are resources and infrastructure already in place, albeit in a quite limited way.

Following an analysis of the capacity of a mental health system, Chisholm et al. (2007) identifies five key goals in order to successfully achieve the scaling-up of any health intervention. Each of the five goals is accompanied by more detailed strategies that can be used to achieve the goal. The five goals/barriers are as follows: (1) place mental health on the public health priority agenda; (2) improve organization of mental health services; (3) integrate the availability of mental health in general health care; (4) develop human resources for mental health; and (5) strengthen public mental health leadership (Chisholm et al., 2007). Given the scope of the paper, it is impossible to examine the scaling-up of IPT in Uganda for every goal and examine all strategies in which to achieve these. The goal of developing human resources for mental health and in this case, depression, has been selected for analysis and will be addressed in terms of scaling-up the availability of IPT services in Uganda. The rationale for choosing this goal is two-fold. First, a review by Patel et al. (2007) stated that the need for more research should not be used as an excuse to not scale-up current interventions that work. They call for the recruitment of a new group of health care workers that can detect mental disorders and can deliver psychosocial interventions (Patel et al., 2007). Second, studies have shown that the lack of health human resources is the largest limiting factor for proper mental health care in developing countries (Saxena, Thornicroft, Knapp, & Whiteford, 2007). For the above reasons, the goal is therefore deemed the most important strategy to address in an effort to scale-up IPT in Uganda.

## **5: DISCUSSION**

### **5.1 Opportunities and Constraints for Scaling-up Health Human Resources for IPT Delivery in Uganda**

Chisholm et al. (2007) outlined four strategies in which to achieve the goal of developing human resources for mental health. They are (1) improve quality of mental health training, to ensure that it is practical and occurs in community or primary care settings; (2) increase and diversify the professional and specialist workforce; (3) expand the non-specialist workforce to incorporate, where possible, ex-service users and their family members; and (4) provide the financial means for ongoing supervision of trained workers.

Based on the previous examination of Uganda's current mental health system and the outlined strategies for scaling-up health human resources, several opportunities and constraints have been identified for this process. It should be noted that there are other aspects of scaling-up that would need to occur simultaneously or shortly following the development of health human resources in order for scaling-up to be successful. The scope of this report, however, limits that analysis.

The following analysis presents opportunities and constraints according to the previously listed strategies.

- (1) Improve quality of mental health training, to ensure that it is practical and occurs in community or primary-care settings

Several opportunities exist for this strategy for scaling-up IPT. Policies and a budget already exist for mental health services. While they may not be optimal for IPT delivery, they are nonetheless on the agenda of decision-makers therefore an opportunity for change, and thus the improvement of training, does exist. Training in mental health care already exists in Uganda therefore it is already possible to assess what currently works and what does not. Some training is given for the management of depression in medical education for primary care providers and specialized mental health providers such as psychiatrists. This could be important when planning for larger-scale IPT training as it provides an opportunity to build upon already existing resources. International non-governmental organizations (NGOs) are also present in the country and could be utilized as a resource to provide and improve the quality of training already in place for depression.

There do exist several challenges to improving the training of human resources for mental health, and specifically IPT. Training manuals are out-of-date and do not necessarily reflect evidence-based best practices for depression, such as the use of IPT (WHO, 2004). Training in mental health is a small component of medical training and training in methods for the treatment of depression is even smaller as the focus tends to be on more severe mental health cases such as schizophrenia (WHO, 2004). Training for the treatment of mental health disorders occurs almost exclusively in urban, primary care settings (WHO, 2004). Yet it has been demonstrated that there is a significant prevalence of depression in rural areas of Uganda, only 13% of the Ugandan population

resides in urban areas, and it has been reported that 99% of Ugandans will seek the help of a traditional healer for mental health problems before seeking help in primary care (WHO, 2006; Ndyabangi, Basangwa, Lutakome, & Mubiru, 2004). Shifting the focus from traditional, urban training sites may be difficult as resources continue to be invested and concentrated there. Training in urban settings does not promote retention of human resources in rural settings, local capacity building, or reflect the acknowledgement by decision makers to place support services where people need them most. Trainees who were trained in urban areas may also not be able to address depression in rural areas. Training locals may be more appropriate as they possess a familiarity with the community, local resources, and may be more appropriate to address local situations that are associated with observed depressive symptoms.

(2) Increase and diversify the professional and specialist workforce

There already exist experts, albeit of limited number, in the field of mental health who have training in the treatment of depression. This means that there are not as many new resources required to train an individual in the delivery of IPT. There are also occasions to diversify an existing specialist's role through less patient treatment and increased supervision, training and evaluation of new clinical interventions such as IPT. Saraceno et al. (2007) stated that changing of the role of specialists to ensure that there was continuous training, resource support and supervision, with a focus on the mental health of the population and not on complicated mental health cases, was a more efficient and effective use of limited resources. However, a challenge that exists is the specialist may dislike

her/his role shift, which may be accompanied by changes in salary or power. It also may not be desirable to deal solely with one disease as would be the case if IPT were to be integrated into care. Another opportunity that exists is that by diversifying the specialist workforce to train for IPT, there is a chance for collaboration between districts and local levels of health care. This could result in more coordinated care and accountability for delivering the intervention. This power balance could be difficult to manage and it is unclear who would be suited to manage these relations. There would also be an opportunity for this strategy because locals will be able to deliver the intervention and if problems are encountered and support is required, they have a resource outside of their area of service delivery. This enables them to clarify issues and engage in further training if necessary, which can ultimately result in better care for individuals.

(3) Expand the non-specialist workforce to incorporate, where possible, ex-service users and their family members

The two IPT trials for depression discussed previously demonstrate that there is no need for a highly specialized workforce to deliver an effective intervention for depression. Locals were able to give guidance, support and knowledge of IPT to a group of depressed individuals following two weeks of training with dramatic improvements in depression rates as a result. This is much less resource intensive in a country such as Uganda than training a more specialized workforce. This is because less human, capital and infrastructure resources are required when training this type of workforce. Expansion may therefore come from an already existing source of manpower within the local community. Also,

by harnessing the capacity of the local community, the probability of retaining the trained workforce is greater. Local IPT facilitators have an opportunity to utilize local knowledge about depression risk factors and symptoms that may be unknown to someone from outside of the community. This opportunity to scale-up however does not come without challenges. These include the need for follow-up, supervision and referral of the trainers by a specialist. This means that there would need to be some role shifting of specialists in order to ensure that IPT is carried out effectively. This role shifting may come with an expectation of increases in salary which, given the limited financial resources already allocated for mental health, can be challenging to address. Also, the community may not be as engaged as one may expect since there does exist stigma associated with mental disorders and some cultures may feel apprehensive engaging in IPT with a group of peers.

(4) Provide the financial means for ongoing supervision of trained workers

There is an opportunity in Uganda to address this strategy in so far as there already exists funding, although small, for mental health in the health budget. Due to the fact that funds exist, there is a possibility for the reallocation of funds. However, it may be difficult to reallocate scarce funds for a program that focuses on depression. Depression may not be viewed as an urgent disorder because it is not perceived as severe as other mental disorders such as schizophrenia. Reallocation of funds may also not be favoured because decision makers in mental health may feel threatened or pressured to find other sources from which to reallocate funds and other diseases may be just as significant in terms of

burden of disease for the population. Also, as previously stated, most of the health funding in Uganda is from economic aid, which indicates that it is from outside donors. This funding may be tied to a different set of priorities.

Allocations for funding the supervision of trained IPT workers and paying the IPT workers themselves may not be viewed as an important enough priority. There also may exist a way in which funding is derived from local community resources.

A community may view depression as one of the most significant contributors to the burden of disease it is experiencing and may mobilize itself to raise necessary funds for the expansion of depression services. This is a very difficult opportunity in a resource-poor setting such as Uganda, however the possibility should not be discounted.

## **6: SUMMARY AND RECOMMENDATIONS**

It is recognized that the scaling-up of health human resources is only a component of the broader goal to increase the scale and reach of IPT for depression in Uganda. While this is the foundational step for being able to scale-up this evidence-based and locally feasible intervention, it is crucial that the development of infrastructure closely follows. For the development of human resources to occur successfully, it will be important that aspects of scaling-up such as necessary political will, appropriate policies and finances are present and mobilized. Systems of training and supervision are also essential to ensure that services are consistent and maintained. It is very important to ensure that as health human resources are trained in increasing numbers that there is a strategy for follow-up and supervision of facilitators of IPT. Training locals and supervisors in the delivery of IPT is an opportunity to respond to the serious burden of depression in Uganda. It is also an opportunity to strengthen an existing weak mental health system and demonstrate the opportunities for efficient and cost-effective interventions for a mental health disorder. It may also provide a model for other countries of sub-Saharan Africa that are experiencing a debilitating burden of depression alongside other health conditions such as HIV/AIDS and malaria.

The goal of this report was to apply readily available, peer-reviewed, best practices literature in global mental health to a locally tested intervention in a

resource poor setting and describe the way in which strategies recommended on a broad level could be applied to a local setting. Based on the findings from this case study, it is recommended that:

- (1) A pilot study for scaling-up IPT in Uganda be conducted. This is important to carry out because there is less of an evidence base that exists in Uganda for this intervention for depression in comparison to other developing or developed countries that have scaled-up a health intervention. It would be important to begin with a small number of study villages and to base the intervention closely on the previously described methodology for the delivery of group IPT in Uganda. It may also be key to include leaders in global health whose experience in scaling-up health interventions could be utilized to inform a pilot study strategy. The inclusion of a monitoring and evaluation framework to assess the feasibility and effectiveness of this IPT intervention and scaling-up process is also important. In addition to the collection of demographic and depression prevalence data, it would be useful to conduct focus groups with the participants and facilitators of the intervention. Focus groups could provide insight into how the training and delivery of the intervention could be improved, how to assess gender and confidentiality issues that may arise in this type of treatment setting, and other key information that would inform what barriers exist to the implementation of this strategy on a larger scale. A successful pilot project would not only provide further evidence for the

effectiveness of this intervention but it would also provide decision-makers with more incentive to invest in this strategy.

- (2) A survey of best practices should be conducted in order to understand how other countries in the region respond to their burden of depression. Best practices of interest would be the training of non-specialized health human resources and the use of non-pharmacological interventions for the treatment of depression.
- (3) A stakeholder analysis of all individuals, community groups, and organizations, both governmental and non-governmental, that are providing services for the treatment of depression should be completed. This would provide the opportunity to strengthen collaboration, advocacy and increased knowledge translation of local best practices for depression.
- (4) A study to determine the feasibility of task shifting the role of psychiatrists and other specialized mental health professionals should be conducted. As a component of the study, conducting focus groups of involved individuals, organizations, and levels of government will be key to understanding barriers and concerns regarding shifting the role of specialized mental health professionals from treatment to a more supervisory and training role.

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