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Human resource challenges facing Zambia's mental health care system and possible solutions: Results from a combined quantitative and qualitative study

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Abstract

Human resources for mental health care in low- and middle-income countries are inadequate to meet the growing public health burden of neuropsychiatric disorders. Information on actual numbers is scarce, however. The aim of this study was to analyse the key human resource constraints and challenges facing Zambia's mental health care system, and the possible solutions. This study used both qualitative and quantitative methodologies. The WHO-AIMS Version 2.2 was utilized to ascertain actual figures on human resource availability. Semi-structured interviews and focus group discussions were conducted to assess key stakeholders' perceptions regarding the human resource constraints and challenges. The results revealed an extreme scarcity of human resources dedicated to mental health in Zambia. Respondents highlighted many human resource constraints, including shortages, lack of post-graduate and in-service training, and staff mismanagement. A number of reasons for and consequences of these problems were highlighted. Dedicating more resources to mental health, increasing the output of qualified mental health care professionals, stepping up in-service training, and increasing political will from government were amongst the key solutions highlighted by the respondents. There is an urgent need to scale up human and financial resources for mental health in Zambia.

Introduction

Despite the growing public health burden of neuropsychiatric disorders, there is still widespread neglect of human resources for mental health care in low- and middle-income countries (LMICs). The evidence that is available highlights an alarming scarcity and inequitable distribution of professionals available in such countries (Horton, 2007; Jacob *et al.*, 2007; Saraceno *et al.*, 2007). This includes not only a scarcity of staff numbers, but also a shortage of appropriate training and supervision in mental health care (Ghebrehiwet & Barrett, 2007; Saxena *et al.*, 2007). Nearly 90% of African countries have less than one psychiatrist per 100,000 people, and the median density of professionals for low-income countries is 0.06 per 100,000, compared to 10.5 for high-income countries (Jacob *et al.*, 2007). Such shortages have been attributed to the lack of financial incentives for professionals to receive mental health training (Ghebrehiwet & Barrett, 2007); poor working conditions (Saraceno *et al.*, 2007); widespread stigma of mental health professionals (Byrne, 1997; Leff & Warner, 2006); frequent migration of professionals to high-income countries; and a grossly inadequate number of mental health training facilities and institutions (Saxena *et al.*, 2007). Globally, inadequate human resources have been identified as one of the most tangible barriers to scaling up and improving mental health services (Saraceno *et al.*, 2007).

Like many other low- and middle-income countries, mental health services in Zambia have been chronically under-resourced, although the actual extent of the problem is unknown (Katontoka, 2007). Indeed, very little mental health research has been conducted in Zambia (Gleisner, 2002; Mayeya *et al.*, 2004). A review of the performance assessment report in 2003 suggests that there are critical

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shortages of mental health care staff, with some district health centres being run by untrained staff (NHSP, 2005). Two thirds of health personnel are located in Lusaka and the Copper Belt Provinces (Berman *et al.*, 1995). In addition, one of the few mental health studies conducted in the country found that there are less than 260 mental health workers in psychiatric units in the country, with only three psychiatrists covering a total population of 12 million people (Gleisner, 2002). This dire resource situation is compounded by, and possibly a symptom of, the poor implementation of mental health policy, an archaic mental health law and deteriorated and fragmented mental health services (Flisher *et al.*, 2009; Katontoka, 2007; Mayeya *et al.*, 2004). The Ministry of Health in Zambia has indicated that the shortages of trained personnel adversely affect the quality of mental health care in the country (MoH, 2005).

Although past studies have documented the mental health country profile of Zambia (Mayeya *et al.*, 2004), and some of the human rights challenges facing mental health service users (Katontoka, 2007), a comprehensive study of the human resource situation in Zambian mental health services has not yet been conducted. The constraints around human resource allocation and distribution in Zambia need to be identified and addressed, before targets for strengthening the mental health system can be set for the country.

Utilizing both quantitative and qualitative data, this study had two aims. Firstly, it sought to identify what human resource constraints and challenges the country's mental health system currently faces. Secondly, it aimed to explore what steps key stakeholders perceive to be necessary to redress the situation. Based on the insights drawn from this study, recommendations will be provided on how the human resource situation in mental health could be addressed in Zambia.

The data collection for this study formed part of a situation analysis of the current status of mental health policy, legislation and services in Zambia which was conducted as part of the first phase of the Mental Health and Poverty Project (MHaPP). The MHaPP, which is being conducted in four African countries: Ghana, South Africa, Uganda and Zambia, aims to investigate the policies level interventions that are required to break the vicious cycle of poverty and mental ill-health, in order to generate lessons for a range of LMICs (Flisher *et al.*, 2007).

Methods

This current study made use of both quantitative and qualitative methodologies. Quantitative data regarding the mental health system in Zambia for the 2005 calendar year were gathered using the World Health Organization's Assessment Instrument for Mental Health Systems (WHO-AIMS) Version 2.2 (WHO, 2005). WHO-AIMS consists of six domains covering the ten World Health Report 2001 recommendations comprising 28 facets and 156 items. The six domains are interdependent, conceptually interlinked, and somewhat overlapping. The domains include:

- Domain 1: Policy and legislative framework
- Domain 2: Mental health services
- Domain 3: Mental health in primary care
- Domain 4: Human resources
- Domain 5: Public education and links with other sectors
- Domain 6: Monitoring and research

Sixty-five respondents were drawn from three study districts (Lusaka, Kabwe and Sinazongwe). These districts were chosen because they had mental health activities appearing in the Ministry of Health annual budgets, suggesting that these districts have mental health plans. From these geographic units we drew a sample from heads of departments of line ministries and units, mental health coordinators, health service managers, lead nurses and clinicians and notable non-governmental organizations (NGOs) dealing with mental illnesses. The WHO-AIMS 2.2 instrument was administered through the head of a unit or NGO. Each respondent was given a relevant set of questions to answer drawing from the instrument. Data from these spreadsheets were then entered into a national spreadsheet, where numeric data were aggregated. Descriptive statistical analyses of relevant items were conducted.

In addition, 50 interviews and six focus group discussions were held with policy makers in the ministry of health and other ministries, health and mental health care professionals, users of psychiatric services, teachers, police officers, academics, members of three NGOs and traditional healers (see Table I). The sampling of respondents for the semi-structured interviews and focus group discussions was purposive. Respondents were selected either because they represented key organizations in mental health in Zambia, or they possessed information or had experience that was particularly relevant to the study. Respondents were also selected based on the principle of maximum variation, in order to provide a wide range of organizational representation and perspectives on mental health policy development and implementation in Zambia.

The interviews were loosely structured, consisting of open-ended questions that broadly defined the area to be explored, and from which the interviewer or interviewee could diverge in order to pursue an idea on a specific issue in more detail (Patton, 1987;

Fontana & Frey, 1994). The semi-structured interviews were tailored according to the specific individual being interviewed, although there were certain generic themes and questions. Amongst others, generic areas covered included challenges facing the health system, mental health needs and priorities in Zambia, process and content of mental health policy and legislation development. Focus groups consisted of homogenous participants (with nurses alone, clinical officers alone and patients alone), although in two instances focus group discussions were conducted in the company of both nurses and clinical officers. Various scholars emphasize that the major advantage of focus groups lies in their ability to mobilize participants to generate their own questions in their own vocabulary and to respond to, and comment on, each other's contributions on their own terms (Kitzinger, 1995). For this reason, the data collected from the focus groups both enhanced and expanded upon some of the issues that emerged within the individual interviews (Barbour & Kitzinger, 1998; Krueger & Casey, 2000).

Permission to conduct the study was obtained from the Ethics Committee of the School of Medicine, University of Zambia and the Research Ethics Committee of the Faculty of Health Sciences, University of Cape Town, South Africa. Detailed information was provided to participants concerning participation and the consequence of the study, and thus participation was voluntary. With the consent of individual participants, all sessions were digitally recorded and transcribed verbatim. All digital recordings were erased following transcription, and all identifying information was removed from all transcripts. Confidentiality and anonymity was thus ensured. Transcripts were entered into NVivo 7 which was used for coding and analysis. A framework analysis approach (Ritchie & Spencer, 1994) informed the data analysis.

Table I. Semi-structured interview respondents, by stakeholder group.

Stakeholder group	No.
Directors, Ministry of Health	5
Director, Ministry of Labour	1
Director, Ministry of Home Affairs	1
Director, Ministry of Education	1
Director, Ministry of Community Development and Social Services	1
Director, Ministry of Local Government and Housing	1
Commission of Prisons	1
HMIS specialist	1
Director, DHMT, Lusaka	1
Provincial clinical care specialist	1
Medical doctors	4
Clinical psychologist	1
Clinical officers	4
Nurses	6
Mental health NGOs	5
Family members	3
Users	3
Social worker	1
General psychologist	1
Teachers	3
Policemen	2
Traditional healers	1
Prison warder	2

HMIS, Health Management Information System; DHMT, District Health Management Team; NGO, non-government organization.

Results

Human resource constraints

Inadequate supply of mental health care professionals. There are 0.44 mental health personnel per 100,000 head of population working in public or private facilities in Zambia. The limited human resources that are available are concentrated in Chainama hospital, the only psychiatric hospital in the country, which is located on the outskirts of Lusaka. Of the three psychiatrists in the country, two are based in the university while one works for the Ministry of Health. These psychiatrists do not work in any outpatient facilities, but as consultants in the wards at Chainama. The four medical doctors working in the field of mental health work solely in Chainama. There are no psychiatrists or medical doctors in community-based psychiatric inpatient units. There are also no nurses or psychosocial staff (psychologists, social workers and occupational therapists) in community-based psychiatric inpatient units.

Results from the interviews revealed that the dire shortage of mental health care staff has a major impact. A number of stakeholders indicated that the total number of staff available in mental health is totally inadequate to meet the mental health burden

Table II. Human resources in Zambian mental health services.

Profession	Ratio (per 100,000 population)
Psychiatrists	0.03
Other medical doctors, not specialized in psychiatry	0.03
Nurses	0.17
Clinical psychologists, social workers and occupational therapists	0.01
Clinical officers	0.2
Total	0.44

in the country. As one service user clearly revealed when talking about the psychiatric institutions:

> When you talk of care man oh! You are talking maybe of the nurse, two to three attendants against 80 to 90 patients in one ward.

Similarly, a mental health nurse lamented:

> The very big problem concerns human resources, there're actually so few staff levels in different kinds of professional cardres . . . there're just very few.

Other respondents attested to the particularly low levels of allied mental health professionals such as psychologists:

> You know, we have psychiatric wards in our provincial units of which we expect psychologists to be based in those wards; you do not find them in our hospitals. However, there is one (psychologist) at Chainama. (Academician/clinical psychologist)

Many health professionals shared these views, with ubiquitous comments scattered around the interviews about the 'lack of psychiatric staff' and 'low levels of workers' in Chainama and the other psychiatric units across the country. These shortages of mental health care professionals were seen by a number of stakeholders to compromise the care that they are able to provide, as most aptly revealed by this clinical officer:

> We have to do some short cut . . . you know you can have a patient who really needs time to be attended to but I only do it for 15 minutes and just to touch on the surface without going deep and this is not the way it is supposed to be done but because of manpower problem, things are being done wrongly.

Inadequate training in mental health care. Training in clinical psychology and specialization in psychiatry are not available in Zambia. Both WHO-AIMS and qualitative data revealed that amongst primary and mental health care providers, initial training and in-service training in mental health is scarce. WHO-AIMS data indicated that the time devoted to basic training in mental health care for primary health care staff is small in comparison to training in other health care domains. For example, amongst general medical doctors, 8.3% of the training is devoted to mental health, in comparison to other disciplines, such as surgery, paediatrics and obstetrics/gynaecology where 33.3%, 16.7% and 16.7% of time is devoted respectively. Furthermore, amongst general nurses, 8.7% of the training is devoted to mental health in comparison to 26% devoted to public health nursing, 23.7% to medical nursing and 15.6% to paediatric nursing.

The bulk of staff providing mental health services are what are termed 'clinical officers'. Despite not being initially trained or qualified in mental health care, these officers are front line staff in the delivery of mental health care in primary health care units and in long stay facilities. Clinical officers do a post-graduate training in clinical care for three years, and are therefore located between nurses and doctors in terms of the length of their training and status within the health system. During these three years, only 12% of the training is allocated to mental health, compared to 29% of training being devoted to medicine, 23% to obstetrics and gynaecology, 20% to paediatrics, and 16% to surgery. The law prohibits clinical officers from administering psychotropic drugs. However, results revealed that for practical reasons clinical officers do prescribe medicine in many instances.

Results also revealed that refresher and in-service training amongst primary health care staff and mental health care professionals is not a priority in Zambia. WHO-AIMS data indicate that not a single mental health care professional attended refresher training on the rational use of drugs, psychosocial interventions, or child/adolescent mental health issues in the last year.

This was confirmed by a medical officer who works in a psychiatric unit who emphasized that he had never received any in-service training in the last decade:

> I have worked for ten years here and there is no in-service training. I have never sat in class to learn. But I have managed through experience . . . I have learnt more from Professor G and Dr T, otherwise there is no other training. There should be a post graduate programme for doctors in mental health but nothing is being done.

In addition, qualitative data indicated that long and short in-service training for mental health care staff is almost non-existent. One mental health nurse adamantly said:

> I don't have sufficient training to formulate nursing care plans and carrying it out for mental disorders. We also don't have any in-service training that updates us on the current trends in psychiatry . . . No no no, to the best of my knowledge we have not included in that area mostly it is just in the general area.

Some respondents provided reasons for the limited in-service training that occurs amongst mental health care staff. One mental health care nurse explained that although there are a few in-service training courses available, due to the dire shortages of staff, professionals are unable to attend them. When asked whether in-service training is available to her and

other nurses, she replied:

> Yes and no. There are few professional courses being carried out at Chainama College, if a nurse applies, or a member of staff applies, they will be told you can't go because there is a shortage of man power. Right now there are some nurses who have applied to go for training, but they have been told they can't go due to critical shortage of staffing. No in-service training.

Another clinical officer suggested that there are very few incentives, such as an increase in salary, for workers to go for in-service training. In turn, professionals feel discouraged to increased their skills and training:

> We have an in-service training, but it has not been attractive to the members of staff. You see, you need to *get* something, we need upgrading, like if he goes to school, his salary should be changed. You will find out that many people have gone to do that particular course in psychiatry and when they come back they get the same amount of money. So they are not motivated. So they rather say its better I remain were I am, or maybe change career to do psychology or maybe go and do social work or go and do economics.

A number of respondents spoke about the negative repercussions of the limited training afforded to both primary and mental health care practitioners. Many respondents talked about feeling 'inadequate', 'incapable' or 'not having enough experience to do the things I am supposed to do'. One general health nurse explained:

> I wouldn't say I am competent in this area. Given an opportunity like attending refresher courses I could then comfortably treat a patient, but right now . . .

Other respondents emphasized that one of the consequences of the lack of training in mental health amongst professionals working in the psychiatric units, is that people with mental disorders are frequently referred immediately to Chainama hospital. As a director in the Ministry of Health suggests:

> There are no trained workers, no workers . . . they [clinical officers] are referring patients to Chainama because there are no professionals. I mean the nurse and general clinical officers are not trained in mental health so they shift patients to the main hospital where they think there are experts there.

Another respondent stated that the limited number of properly trained professionals in mental health means that:

> At the health centres no-one is there attending to mental health needs, and everyone is being referred to Chainama.

Sharing the views of others, one general health care director most succinctly captured this issue when he said:

> It seems Chainama is operating like an island in isolation, because even at clinic six in UTH (University Teaching Hospital), where I am working, I always refer patients to Chainama. Honestly, I just don't feel experienced enough.

WHO-AIMS data indicated that 81–100% of non-physician based primary health care units made referrals to Chainama hospital, in the month of assessment.

Misplacement of mental health care professionals. Qualitative interviews revealed that the low numbers of qualified and trained mental health staff are made worse by misplacement of health-care professionals. Descriptions by mental health care workers revealed that there are many instances where general nurses are heading mental wards, or unqualified auxiliaries stand in for nurses or clinical officers. As one mental health nurse exclaimed:

> in certain cases, the ward assistants are left alone during a shift to run the ward . . . Its just due to constraints, otherwise they are not supposed to remain on their own, because there are certain things that happen which nurses are supposed to be responsible for. And because of shortage of nurses, you find out that some one may be sick and there and then you have no nurse to take up that shift so they will remain alone.

At other times, it seems that professionals are doing jobs for which they are over-qualified. For example, it was suggested that a large number of psychiatric professionals are forced to do general health care, such as screening general patients and carrying out night calls, because general practitioners are also scarce. As a clinical director highlighted:

> You find that the people trained in psychiatry are actually doing general work, because sometimes the general personnel are not there. So they are actually forced to do general work as well as psychiatry. But some of them even forget about psychiatry, and they just do general work.

Similarly, a psychiatric clinical officer explained:

> We had one mental nurse but because of the pressure of work and shortage of manpower, she has been put to the general category.

The misplacement and mismanagement of mental health workers was most pertinently captured by this clinical officers' comment:

> We have just been going round the country to do a laboratory survey and we found that people are not actually in their positions as they are trained and this is a common phenomenon for all of us. It is a little bit tricky, with the staff shortage . . . What I know is that we lump clinical officers and nurses together and we do not know who is suppose to be doing what.

Proposals for the way forward

Some respondents made suggestions for ways to resolve some of the critical human resource issues. There was almost unanimous agreement amongst respondents that 'more financial resources needed to be allocated to mental health' and that 'government must devote more funds to addressing the mental health needs'. Many stakeholders suggested that the allocation of increased financial resources could go a long way in addressing many of the human resource constraints plaguing mental health. As one clinical officer suggested:

> If resources were allocated, if there is enough resources people will be trained, and people will be rewarded properly and then people will be motivated.

This respondent highlights the numerous benefits that would result from greater resources, including increased training, increased salaries and increased motivation amongst mental health staff. Many respondents emphasized that more resources would only be afforded to mental health if 'mental health is prioritized in Zambia' and 'first and foremost there is a need for increased political will from government'. Redressing mental health's marginalization in the country was a common theme amongst the participants' discussions around addressing the human resource constraints.

The issue of increased mental health training was also at the centre of numerous respondents' conversations about reducing the burden placed on the only mental hospital. Some respondents spoke about the need to increase the number of qualified mental health professionals, as indicated by this general nurse's remark:

> The best thing is to train more psychiatric nurses and clinical officers . . . if we can have continuous training, each and every district in Zambia will be catered for and therefore people will have access to mental health. And this will lessen the burden at the main hospital which is Chainama.

Some respondents emphasized the need to focus on training allied health professionals, such as psychologists and social workers:

> I think we need more social workers and even a psychologist, we need a clinical psychologist, because certain cases need somebody who is specialized in that field. And for the nurses, most of the nurses practising in the hospital are general nurses; they are not trained in psychiatry and those who are trained are those who just trained in enrolled psychiatry nursing, not necessarily in registered nursing. So we need more of registered mental nurses and we need more psychiatric social workers, clinical psychologists and other cadres in relation with psychiatry (Clinical officer).

Other stakeholders suggested the need for greater emphasis to be placed on in-service training in mental health, amongst general and mental health practitioners. Sharing the views of many other nurses, one psychiatric nurse emphasized:

> In-service training and courses don't take place. As a person who has worked at the psychiatric hospital for a long time, maybe 20 years, I know technology changes, so I feel from time to time people should be taken for in-service courses to update us because there are so many conditions which come with new illnesses.

Discussion

Utilizing both quantitative and qualitative data, this study has painted a picture of the mental health human resource situation in Zambia, by documenting some of the key constraints facing the mental health care system and some of the possible solutions to redressing this situation. To the authors' knowledge, this is the first study that has attempted to assess and document the mental health human resource situation in Zambia.

Both quantitative and qualitative results revealed an alarming scarcity of trained mental health care professionals within the mental health care sector in Zambia, an insidious problem in other African countries (Horton, 2007; Jacob *et al.*, 2007; Saraceno *et al.*, 2007). Quantitative data indicated that mental health training amongst primary health care workers is marginalized. Furthermore, it was revealed that clinical officers, who are the main service providers of mental health, are usually not initially qualified as mental health professionals, and during their three-year post-graduate training in clinical care, only about four months are devoted to mental health. The problem is compounded by the fact that in-service training in mental health care for

mental and general health care providers is almost non-existent. Qualitative data highlighted that limited incentives, something shown in other settings (Ghebrehiwet & Barrett, 2007), as well as mental health care staff shortages, were major barriers to the uptake of in-service training.

In Zambia, mental and general health care training is a highly neglected area (Mayeya et al, 2004; MoH, 2005). The country has one medical school, established at the University of Zambia in 1966, but the overall output from this school has remained very low, rising from an initial 26 individuals to about 40 per annum (UNZA Public Relations Unit, 2007). Thus, the country relies heavily on overseas training, particularly when it comes to critical mental health care professionals such as psychiatrists and psychologists.

Problems around the inadequate numbers of qualified and trained mental health staff are made worse by the fact there appears to be widespread misplacement of staff, with people performing tasks for which they are not qualified, and those who are qualified being forced to do general work due to the paucity of general health care professionals. Indeed, over the past few years, the human resource situation in health care generally has been worsening in Zambia. Recently, there has been a massive exodus of health workers, especially nurses and doctors, to other countries (MoH, 2005). A recent assessment of the health workforce in Zambia reported that current workforce levels are only 50% of the required levels (FNDP, 2006).

The human resource crisis of the health sector has not gone unnoticed by the Ministry of Health in Zambia. In 2004, the Government set up a Human Resource Task Force to develop an emergency Human Resource Rescue Plan. The task force highlighted key human resource constraints and helped identify strategies to address these constraints (FNDP, 2006). Other efforts to check the brain drain include the rural retention scheme, the loan scheme, and housing development for rural staff. Training has also been made a priority on the government agenda (FNDP, 2006). Despite the promise of these initiatives, based on the findings from this study, it seems that the effects of these initiatives have not adequately been felt in the mental health sector. The results from this study underscore the urgent need for government to start implementing a comprehensive and workable human resource strategy within mental health.

As indicated by many of the respondents in this study, failure to properly address the human resource crisis in mental health has led to poor service delivery and compromised care, low morale and feelings of incompetence amongst staff, and an over-reliance on the psychiatric hospital rather than on community psychiatric services and primary health care units. These problems appear to be common consequences of inadequate human resources for mental health in other LMICs (Desjarlais *et al.*, 1995; Jacob *et al.*, 2007).

In light of this dire situation, many respondents provided suggestions for redressing the resource crisis. The allocation of increased funding to mental health was seen as a fundamental starting point. Indeed, various scholars have argued that dedicating more funds to mental health is crucial before any real gains can be made for mental health care in low-income countries (Jacob *et al.*, 2007; Kohn *et al.*, 2004; Saxena *et al.*, 2007). Increasing the output of qualified mental health professionals, including allied health professionals, as well as placing more emphasis on in-service training for primary and mental health care staff were also emphasized. These recommendations are consistent with those made a decade ago (CBH, 1999).

Finally, many respondents highlighted that the human resource constraints will only be redressed if mental health is prioritized on the political agenda. Over the last decade, there has been increased concern about, and commitment towards, addressing the innumerable health challenges afflicting the nation. As a consequence, Zambia has embarked on a radical transformation process aimed at creating a well functioning, cost-effective and equitable, district-based health care system (MoH, 1992). A number of progressive health laws and regulations have been devised, together with the Basic Health Care Package which offers interventions through the public health system freely or on a cost-sharing basis (FNDP, 2006). None of these recent progressive reforms have sufficiently addressed and incorporated mental health (FNDP, 2006). Ultimately, the results from this study show the need for greater acknowledgement from government about the critical human resource constraints facing the country's mental health care system, and increased dedication and political will to redressing this situation. This is essential if the country is to realize many of the ideals enshrined in the progressive health reforms undertaken over the last decade.

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