The explanatory models of mental health amongst low-income women and health care practitioners in Lusaka, Zambia

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There is currently much debate about the cultural construction and specificity of mental health. It is thus not surprising that explanatory models, which look at the meaning of illness for those suffering from it, have been widely used within the mental health field. This paper considers the significance of explanatory models and presents a study comparing the explanatory models of mental ill health used by urban women in low-income groups and local health care practitioners in Zambia. To measure mental ill-health status, an instrument recommended by the World Health Organization was used – the Self Reporting Questionnaire, 20 items (SRQ 20). To obtain explanatory models, Kleinman's classic eight questions were adapted.

The terms used by the practitioners to define and explain the mental health problems of women in low-income groups were 'stress and depression', with these two concepts being used interchangeably. In contrast, the phrase most frequently used by the women was 'problems of the mind'. The professionals regarded the experience of depression itself as a manifestation of ill health. For the women, however, only the physical symptoms were defined as ill health. There was a common agreement, however, that the women's socio-economic situation as a major causal factor. Both groups identified the home environment as a key determinant, particularly the quality of marital relationships.

Greater awareness of explanatory models may have beneficial effects on mental health policy and planning, both at national levels (where recognition of the true prevalence and burden of mental ill health should have an impact on public health policy) and at the level of local implementation (where training of health professionals to take patients’ explanatory models into account might contribute towards the diagnosis of mental health problems).

Introduction

Mental health, as a significant component of the burden of disease in developing countries, is receiving increasing attention in the international public health arena. Debate about the cultural construction and specificity of mental health continues. It is thus not surprising that explanatory models, which focus on the meaning of illness, have been most widely used within mental health, as compared with any other field of health studies. The acknowledgement of the importance of explanatory models was exemplified by the fact that the latest version of the influential and internationally used Diagnostic Statistical Manual of Mental Disorders (DSM-IV revised) was supplemented by an outline for the ‘cultural formulation of culture-bound syndromes’. This paper considers the significance of explanatory models and presents a study comparing the explanatory models of mental ill health used by low-income urban women in Zambia and the local health practitioners.

What are explanatory models (EMs)?

Individual variations in the socio-cultural meaning of illness have been recognized as important determinants in help seeking, choice of treatment, ability to cope, use of social support and the quality of life (Eisenbruch 1990; Mechanic 1995). There have been a considerable number of studies in public health, particularly within the field of psychiatry (for example, Giel and van Luijk 1969; Kleinman 1973, 1988; Rosenstock et al. 1988; Downey et al. 1990; Eisenbruch 1990; Hollifield et al. 1990; Littlewood 1991; Jadhav 1995; Weiss 1997). Leading advocates of the use of this approach include Kleinman, Rosenstock et al. (1998), Gillespie et al. (1998) and Hunt et al. (1989), who, though they may differ in their emphasis on EMs, have contributed to the current attention being placed on the significance of EMs.

Behind the concept of explanatory models is the recognition that individual patients and their families often have their own concepts and categories for illness, which may differ from those held by clinicians. How illness is perceived, how experiences are interpreted and how choices are made about treatment may all form part of the total picture that needs to be taken into account by clinicians. The different views captured by EMs can be related to the ethnographic terms ‘emic’ (ideologies of local communities) and ‘etic’ (ideology of professionals outside local communities). Essentially, it is the dichotomy between ‘local insider’ and ‘professional outsider’ that is of interest.
An influential definition of explanatory models is that given by Kleinman (1973), who defines EMs as understandings or explanations of episodes of illness and treatment, framed within the context of the cultural beliefs and norms of the given society, and employed by all engaged in the clinical process, and in the interaction between healer and patient that is central to health care systems.

It is important to note that EMs were developed in a clinical setting and that, as Weiss (1997) points out, there are alternative conceptual frameworks for studying health in its socio-cultural context which focus less on the cognitive orientation of patients and more on structural (economic, power, status) factors, for example, critical medical anthropology, the health belief model, theories of reasoned action, and attribution theory. However, perhaps due to the availability of international funds for health service research (as opposed to the paucity of medical anthropology funding), EMs have received increased attention, particularly in developing countries where pluralistic health systems present particular challenges to health planning.

Weiss (1997) recently argued that EMs are important in that cultural beliefs and practices permeate all aspects of psychiatry and the cultural context in which meanings of illness are expressed; thus a framework for the ‘operational formulation’ of EMs of illness is needed. Without such a framework, patients and professional practitioners may not recognize the significance of the patient’s own understanding, even when they are from the same socio-cultural background.

**EMs and mental health**

Mental ill health in general, and the common mental health disorders of depression and anxiety in particular, are becoming significant in developing countries, and gaining ground as an important part of public health agendas. Key studies in the last two decades (e.g. Teja et al. 1971; Binities 1975; Racy 1980; German 1987; Guarnaccia et al. 1990; Tafari et al. 1991; Fleming 1993; Abas 1994, 1997; Yousif and Korte 1995; Bin Ishak 1996; Blue and Harpham 1996; Broadhead et al. 1997) have contributed to this concern, discovering that common mental health disorders are more prevalent in the community than had hitherto been recognized, having previously often gone undetected for a variety of reasons. One reason is that depressed individuals who attend clinics often present somatic complaints. Owing to a lack of training, the symptoms of the underlying depressive illness are not detected or diagnosed by health care staff in community health clinics, who are often the first point of call for community members seeking health care.

The World Development Report 1993 not only confirmed the prevalence of mental health problems in developing countries, but also showed that within the total burden of diseases identified, neuropsychiatric diseases rank as the second most common burden of non-communicable disease in developing countries (World Bank 1993: Table 5, B7, page 223). Among the ten main causes of ill health among women, depressive disorders ranked as the fifth most significant after maternal causes, sexually transmitted diseases, tuberculosis and HIV; and as the seventh most significant for men. Thus the statistical evidence and research findings support a greater emphasis on common mental health disorders within public health policy and health care delivery systems, as reflected by Desjarlais (1995).

In recognition of the significance of EMs in the psychiatric field, the fourth edition of the DSM-IV is supplemented by a guide on Cultural Formulation, which places emphasis on cultural factors related to the psychosocial environment: the ‘perceived causes or explanatory models that the individual and the reference group use to explain the illness, and current preferences for and past experiences with professional and popular sources of care’ (American Psychiatric Association 1995, p. 858).

The Cultural Formulation is designed with the intention of enhancing the effectiveness in use of the DSM-IV classification of diseases, to take account of cultural factors that may inform how illness is perceived and explained within lay people’s own phrases and concepts. This is supplemented with a Glossary of Culture-Bound Syndromes (e.g. anorexia nervosa, amok, ataque de nervios, ghost sickness, rootwork, zar), illustrative of psychiatric episodes as explained within a number of different cultural settings. The purpose of the Formulation is to assist the application of diagnostic schedules in cross-cultural settings. It can be seen as a response to previous criticisms by medical anthropologists, who, according to Weiss (1997), observed that ‘without efforts to validate the meanings and usefulness of these categories and criteria locally, the indiscriminate application of diagnostic criteria that made sense in one place could result in category fallacies in another’.

Referring to the volume of psychiatric research, Weiss remarks that little attention has been given to a coherent methodology for cross-cultural inquiry focusing on the study of patients’ illness experiences and their implications. To this end, he has developed the Explanatory Model Interview Catalogue (EMIC), a framework rooted in the concept of explanatory models. EMIC is also founded on a recognition of the inadequacy of assumptions, according to Weiss, based on experiences with patients from the majority cultures in North America and Western Europe as guidelines for clinical practice and mental health planning in developing countries and multi-cultural societies.

Weiss’ implementation of EMIC in Bombay found that there may be no clear dichotomy in the relationship between local and professional ideas. To explain this, Weiss (1997) suggests that the medical ideologies of health professionals influence popular ideas about illness; either subtly from patients’ interactions with medical professionals, or else as a result of health education, health articles in magazines and other media seen by lay people. Conversely, as was found in the study discussed below, health professionals’ attitudes can be influenced by ideas common in that society, at least in so far as they recognize the explanations offered by lay people.

**Mental health in Zambia and the current study setting**

Zambia, which has a population of 9.2 million, is one of the most urbanized countries in sub-Saharan Africa. One-quarter
of the population lives in low-income urban areas, the majority of the residents of which live below the poverty line. The urban economic environment is such that within the low-income segment of society men are no longer the only breadwinners; women and children are expected to contribute in the search for additional income for the family (Mtonga 1993).

Zambia has experienced major economic difficulties in the last two decades as a result of the decline in the price of copper, which has been central to the country's economy. This contributed to the decline in salary levels and the dilapidated condition of the infrastructure. Between 1965 and 1993 the formal employment sector stagnated, and the already falling level of incomes were exacerbated by high rates of inflation, driving more Zambians into poverty (Berman et al. 1995).

Major health problems in Zambia, like many other African countries, include diarrhoeal diseases, malaria, acute respiratory infections, HIV, tuberculosis, malnutrition and mental ill health (Kalumba 1997). Health services are offered by several sectors. In 1992, in Lusaka alone, there were 21 public health centres and a large number of private clinics, in addition to the outpatient department of the main general hospital (University Teaching Hospital – UTH) and an estimated 200 traditional healers (World Bank 1992). Until 1962, psychiatry was scantily developed. Today, Chainama Hills Hospital caters for mentally ill patients in Lusaka, with a capacity of 500 beds. There are also mental health units in various parts of the country (CHC 1987).

Health centres have been found to be underused due to poor quality of service, and lack of essential drugs. The poor, and particularly women, are mostly affected: they cannot afford to meet the cost of travel to UTH, nor procure private care, nor buy their own drugs (Atkinson et al. 1999). However, recent reforms show a movement towards quality control, with better local control of finance and the establishment of an advisory board for each health centre.

In line with the increasing global concern about mental health in developing countries, Zambia has embarked on measures to strengthen the effectiveness of mental health services. One of these measures was the amendment of their Mental Health Act to recognize that mental disorders are as important as any physical disease and patients should receive the same quality of attention and treatment as would be given to those with physical illness (Zambia Daily Mail 1993). A further recent development was the appointment of a director with a psychiatric background to the Central Board of Health in Lusaka. The most recent action to be implemented is the adoption of a community health approach to mental health, taking the services to the people, with a community mental health nurse heading this programme.

The current study was conducted in Mtendere compound in the southeast of Lusaka. Mtendere is approximately 7 km from the town centre, and the compound is designated as a ‘Site and Service Area’, where residents acquired plots of land from the city council to build homes according to family size and resources. The residents are from various ethnic backgrounds and have migrated to the city to improve their livelihood. Incomes are generally low, and social organization in the area is relatively complex and diverse.

**Methods**

The study population of Mtendere residents was selected on the basis of the following criteria: married women aged 20–40 years who had been living in Lusaka for more than 3 years. A systematic sampling procedure was used to identify 323 households in Mtendere. This number was determined by an equation proposed by Vaughan and Morrow (1989) based on the accepted prevalence rate and the margin of sampling error. Every third household was approached, starting from a randomly selected point until the required quota was reached of eligible women willing to participate in the study.

Eligibility for participation in the study was ascertained by the use of a questionnaire consisting of 11 questions: the first half addressed demographic details, while the remaining questions investigated background information, such as employment, type of accommodation and educational status.

Mental health status was measured by the Self Reporting Questionnaire, 20 items (SRQ 20, WHO 1993; see Table 1).

**Table 1. Self-Reporting Questionnaire (SRQ 20)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Do you often have headaches?</td>
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<td></td>
<td></td>
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<tr>
<td>(2) Is your appetite poor?</td>
<td></td>
<td></td>
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<tr>
<td>(3) Do you sleep badly?</td>
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<td></td>
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<tr>
<td>(4) Are you easily frightened?</td>
<td></td>
<td></td>
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<tr>
<td>(5) Do your hands shake?</td>
<td></td>
<td></td>
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<tr>
<td>(6) Do you feel nervous, tense or worried?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Is your digestion poor?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) Do you have trouble thinking clearly?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) Do you feel unhappy?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(10) Do you cry more than usual?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(11) Do you find it difficult to enjoy your daily activities?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(12) Do you find it difficult to make decisions?</td>
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<td></td>
<td></td>
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<tr>
<td>(13) Is your daily work suffering?</td>
<td></td>
<td></td>
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<tr>
<td>(14) Are you unable to play a useful part in life?</td>
<td></td>
<td></td>
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<tr>
<td>(15) Have you lost interest in things?</td>
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<td></td>
<td></td>
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<tr>
<td>(16) Do you feel that you are a worthless person?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(17) Has the thought of ending your life been on your mind?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(18) Do you feel tired all the time?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(19) Do you have uncomfortable feelings in your stomach?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(20) Are you easily tired?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

recommended by the World Health Organization (WHO) as a case-finding instrument. It was devised essentially for primary health care but is not restricted to that use, being increasingly used in the community context as a way of reaching a greater number of cases, particularly in developing countries. SRQ has been used in different cultural settings (rural, semirural, urban) in Brazil, Egypt, the Philippines, India, Senegal and Ethiopia (WHO 1993). Those respondents who were ‘cases’ of mental ill health went forward into the qualitative stage of the study.

To elicit interviewees’ explanatory models (EMs), a schedule for qualitative interviews was used. The questions were a modified version of those developed by Kleinman (1973, 1980; see Box 1). In particular, Kleinman’s eighth question concerning treatment was expanded into three questions relating to choice of treatment, influences on choice of treatment and anticipated results.

For comparative purposes, the second study population consisted of health professionals providing mental health services to the Mtendere community, among others. These included six psychiatrists, four male and two female, plus one female psychologist and three social workers, all based at Chainama Hills Hospital. Their length of service ranged from 6–10 years, and all worked with patients with severe mental health problems.

A pilot study was conducted with 26 women from Mtendere. The aim of this process was to determine the validity of the instruments, and to assess whether the instruments were understandable in the English version. The other purpose of the pilot was to establish a cut-off point for the main study, to determine caseness based on a defined number of positive responses to the SRQ 20. This aspect also involved the participation of a local practising psychiatrist who remained ‘blind’ to the researcher’s data, and advised on the cut-off point after interviewing the sample population subsequent to the researcher’s interviews, using a locally recognized instrument. A cut-off point of ≥7 was established, which is similar to cut-off points calculated in the use of the SRQ 20 in other sub-Saharan countries (WHO 1993).

Following the pilot study and on the basis of advice from the women respondents and the individual professionals who showed an interest in the study, all of the instruments were translated into a local language, Njanja. With regard to the SRQ 20, two particular questions were considered to be too direct, with the possibility in that cultural context of being interpreted as insulting:

- ‘Do you feel that you are a worthless person?’ was changed to ‘Do you feel that you have little worth?’
- ‘Has the thought of ending your life been on your mind?’ was changed to ‘With all that you’ve told us, have you thought of ending it all because it’s not worth going on?’

Stage one of the main study involved the application of an eligibility questionnaire; if the woman was eligible, the interview immediately proceeded to the SRQ 20. These results were analyzed on a day-to-day basis to determine caseness, using the cut-off point ascertained by the psychiatrist.

The second stage involved follow-up qualitative interviews with 139 of the women who scored ≥7 on the SRQ 20 (i.e. cases of mental ill health, which emerged as 43%), to ascertain their explanations for the causes of their mental health problems (Table 2).

The third stage was a series of separate group interviews, lasting approximately 90 minutes, with the professional

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**Table 2. Factors contributing to mental health problems as identified by respondents**

<table>
<thead>
<tr>
<th>Explanatory factor</th>
<th>Frequencya</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems of the mind</td>
<td>101</td>
<td>Including symptoms of headaches, unhappiness, disturbed sleeping patterns</td>
</tr>
<tr>
<td>Worries and poverty</td>
<td>98</td>
<td>Including problems in making ends meet</td>
</tr>
<tr>
<td>Mood swings</td>
<td>54</td>
<td>Including feelings of fragility, instability etc.</td>
</tr>
<tr>
<td>Satan – Nganga;b; God’s work</td>
<td>45</td>
<td>Various supernatural causes, either bad fortune or because they thought they might be the victim of an evil spell cast at the behest of another member of the community</td>
</tr>
<tr>
<td>BP (high blood pressure)</td>
<td>41</td>
<td>This symptom was commonly said to be caused by poverty, worries and problems of the mind</td>
</tr>
</tbody>
</table>

*a The numbers in each category add to more than the number in the sample population as many respondents named more than one category when describing their experiences.
*b Nganga: a practitioner of witchcraft.
respondents in the study. These were all conducted in English and were designed to elicit the professionals’ explanations for the causes of mental health problems among women in low-income groups in Lusaka. The same set of questions was used both for community women in stage two and for health practitioners in stage three.

Results

One strategy employed for analyzing the explanations offered by the women was ‘data reduction’ (Miles and Huberman 1994), a form of analysis that selectively discards untypical and tangential data, and organizes and focuses the material around the most common results. To assist in this process, ‘cross-case analysis’ (Quinn-Patton 1990) was applied for each question in the interview; answers from all the individual respondents were grouped together by question. The information was then organized to elicit broad categories of explanation given by the women for the factors contributing to their mental health problems (Table 2).

Through the qualitative interview process, it was possible to glimpse the deeper causes of these explanations in the form of women’s life stories. The following quotes give examples of how the women expressed the stresses they were experiencing:

“I work very hard and have to walk long distances each day, but I can hardly make ends meet and you have the added problem of my husband’s bad behaviour and using the money for beer.”

“What caused my problems is I have two children and lost both of them in mysterious circumstances . . . I am an unfortunate person I guess.”

“I think I am in a marriage of convenience; my husband wasn’t my choice, but my mother’s. She hooked me up with him because he runs a Katemba (small business), but the thing is, he’s a whole lot older than me, double if not more my age, so we have different interests. I can’t be me, and this is mental torment – and where do I go if I leave him?”

In analyzing the data generated from the group interviews with professionals, a similar process of analysis was applied to the responses, to form an understanding of their explanations. For example, they pointed out that women in Zambia are not empowered, and that the culture is not ‘open’. When women migrate to join husbands in the urban areas, they find a different way of life, where there is less support from the extended family and greater importance is placed on earning money. Given the low levels of educational attainment and the burden of large families, plus retained obligations to other family members, women are placed under great stress, especially if their husbands are not supportive.

A further comparative analysis was made between the professionals’ explanations and those offered by the women respondents (Table 3). The terms used by the practitioners to define and explain the mental health problems of women in low-income groups were ‘stress and depression’, with these two concepts being used interchangeably. In contrast, the phrase most frequently used by the women was ‘problems of the mind’.

There is also a difference in what it is about these experiences that is regarded as constituting ill health. The professionals regarded that the experience of depression is itself a manifestation of ill health. For the women, however, only physical symptoms were defined as ill health, such as headaches, palpitations, constipation, high blood pressure or visible sores. Problems of affect, such as low self-esteem, unhappiness or thoughts of suicide, were seen as ‘problems of the mind’, but not necessarily as ill health. For this group, mental illness implied ‘madness’, and this attitude inhibited the women from seeking psychiatric services, as such experiences were not considered to fit the spectrum of health disorders.

In respect of the EMs for mental ill-health, whether described as ‘stress’, ‘depression’ or ‘problems of the mind’, there was a common agreement that the women’s socioeconomic situation was a key causal factor. Both groups identified the home environment as a key determinant, particularly the quality of marital relationships and the stress caused by poverty. However, the professionals additionally identified large family size as an important contributory factor.

The EMs of a minority of the women respondents included a belief that ‘fate’ or the power of God had ordained their situation for them. Some made vague suggestions that ‘mashabe’ (spirit) could be a cause. The professional respondents recognized such concepts in their explanations, and expressed the opinion that the concepts could function for these women as explanations of causes of their mental ill health. They understood this, being of the same culture with knowledge of the existence of such beliefs in the community. Although they appeared tolerant of these views, they would not themselves spontaneously offer supernatural reasons.

Table 3 indicates a broad measure of agreement between the EMs of the two groups interviewed: namely that the experiences of mental distress among urban women in low-income groups can be explained primarily as stemming from problems within the home environment, both marital and economic.

During the interview process with the professionals, a consensus was apparent, although there were occasional differences of emphasis, as male respondents emphasized the stresses of urbanization and female respondents pointed to the stresses that women undergo as a result of social expectations of their role in marriage.

The greatest difference between the professionals’ EMs and the women’s is that the former group of respondents see a chain of causality in which social factors lead to stress and depression, which in turn can cause physical symptoms. The women respondents, however, have a more narrative, experiential style of understanding their situation, and do not readily make links between cause and effect in the same way. The women tend to consider their experiences of distress as
Most of the women did not readily recognize stress and depression as health related problems. This affects how they relate to the health service, which can be seen in the prevalence of somatization among the women interviewed (see Aidoo 1998), and the tendency to resort to self-medication with ‘painkillers’ to treat their symptoms. The latter trend can also be explained by the tendency of the health services to offer only this form of treatment, something which the community health care practitioners put down to a lack of diagnostic training and resources within the health system.

**Conclusion**

This study found that in contemporary urban Zambia, the significant factors contributing to the stress and depression (‘problems of the mind’) experienced by women in low-income groups fall into two broad categories with equal emphasis: material explanations and relational explanations.

Material factors identified by the women included poverty, lack of education, lack of economic opportunities and the effects of national economic policy. Relational explanations included quality of relationships within the home environment and unhappy marriages occasionally marked by violence. These factors interacted with certain cultural attitudes and practices to subject the women to an environment conducive to the development of mental distress.

The EMs of community women and health professionals do not differ as much as might have been expected. Indeed, the professionals’ experiences of their own culture mean that they are not unfamiliar with the kinds of explanation to which the women resorted. However, the professionals have the benefit of a theoretical structure in which they recognize the concept of mental ill health in a way that the women do not. They also understand that there is a continuity of mental health problems across a spectrum encompassing simple day-to-day stresses of living and potentially serious psychiatric illness.

Research into causes of mental ill health in developing societies commonly involves collaboration between local professionals and those from outside the cultural context. For this reason, a qualitative research approach, which takes account of the study population’s EMs and elicits accounts of the dynamics of their illness experiences, is valuable. In terms of both research and health care, diagnostic instruments need to be formulated to take account of EMs within a diversity of cultural contexts. The fact that the DSM-IV now recognizes this represents a step forward.

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*a Nganga: a practitioner of witchcraft.*
Greater awareness of EMs may have beneficial effects on mental health policy and planning, both at the national level (where recognition of the true prevalence and burden of mental illness should have an impact on public health policy) and at the level of local implementation (where training of health professionals to take patients’ EMs into account might make a contribution towards the diagnosis of mental health problems).

References

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