Title
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The Mental Health Education Gap among Primary Care Providers in Rural Nepal

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Abstract

Objective—In low- and middle-income countries, the majority of individuals with mental illness go untreated largely because of a severe shortage of mental health professionals. Global initiatives to close the mental health treatment gap focus on primary care providers delivering this care. For this to be effective, primary care providers require the skills to assess, diagnose, and treat patients with mental illness.

Methods—To assess primary care providers' training and experience in caring for mental health patients, the authors conducted five focus groups at three isolated district hospitals in rural Nepal where there was no access to mental health professionals.

Results—Primary care providers reported limited training, lack of knowledge and skills, and discomfort in delivering mental health care.

Conclusion—To address the mental health education gap, primary care providers in Nepal, and perhaps other low- and middle-income countries, require more training during both undergraduate and graduate medical education.

Keywords

Global Mental Health; Education; Nepal; Task-shifting; Needs Assessment

Low- and middle-income countries face a large gap in treating mental illnesses in their population because of the high burden of disease and a shortage of mental health specialists [1]. Global initiatives encourage task-sharing, which often places primary care providers at the center of scaling-up mental health services [2]. Few quantitative studies have shown that medical professionals and trainees may harbor stigmatizing attitudes toward mental illness

[3]. To our knowledge, no study has employed open-ended methods to assess the adequacy of mental health training in preparing primary care providers for clinical practice. To assess primary care providers' training and experience in caring for mental health patients, we conducted five focus groups at three isolated district hospitals in rural Nepal, a country of 28 million people served by 50 psychiatrists with most located in Kathmandu. Mental health receives only 1% of the national health budget with the majority of funds supporting a stand-alone mental hospital in Kathmandu [4].

Methods

Over 80% of the population in Nepal lives in rural regions [5] where there is no access to mental health professionals. We conducted our study at three rural district-level hospitals in Nepal's Far-Western Development Region that were chosen with purposive sampling among the seven districts where the nearest psychiatrist or inpatient psychiatric facility was located a minimum of 12 hours away. These primary care providers have no access to consultation from a mental health professional and most patients are unable to travel for specialized mental health care. Nevertheless, primary care providers are expected to assess and treat patients presenting with mental illness.

We obtained written informed consent from the primary care providers prior to beginning the focus group discussions. Both the Nepal Health Research Council (#288/2014) and the University of California, San Francisco (#066667) institutional review boards gave ethical approval for this study. To maintain participants' anonymity, we have not included their ages or the names of the hospitals.

Primary care providers included auxiliary health workers, who completed 15–18 months of undergraduate training including three months of clinical rotations; health assistants, who completed 36 months of undergraduate training including six months of clinical rotations; and Bachelor of Medicine, Bachelor of Surgery physicians, who completed five years of undergraduate training including a one-year clinical internship. We invited all 32 primary care providers at the three hospitals to participate in focus group discussions, which were conducted on-site. All auxiliary health workers and health assistants received their training in Nepal, while most physicians completed their training in Nepal. Physicians and non-physicians participated in separate focus group discussions to minimize workplace hierarchies affecting the discussion. We developed a list of questions to understand primary care providers' conceptualizations and clinical experience in caring for people with mental illness. We conducted five focus group discussions of 60–90 minutes duration to elicit information on the primary care providers' prior mental health training and their current clinical practice with mentally ill patients.

B.A. conducted and audiotaped all focus group discussions in Nepali. B.A. and S.H. are native Nepali speakers who translated and transcribed the data, verifying each other's translations and resolving any differences in interpretation. The data were analyzed using a hybrid of inductive approach [6] and a template approach [7] of thematic analysis. We created a codebook post-hoc from themes generated by the data. The coders independently analyzed and coded the data, discussed new themes, and adjusted the codebook before

conducting further analysis, using an iterative process to maintain integrity of the analysis [8]. We facilitated coding and sorting of transcripts using Dedoose [9]. Twenty-five percent of the data were calculated for inter-rater reliability using pooled Cohen's Kappa and determined to be 0.64.

Results

We invited 32 primary care providers to participate; three were off-site and unable to attend. We conducted three focus group discussions with physicians (n=3, 3, and 6) and two with non-physicians (n=9, 8) (Table 1). Here, we present the results with exemplary quotes on prior training, conceptualizations, assessment, and treatment for mental illness.

All primary care providers ("participants") reported that mental health was the most neglected topic in their clinical training. Clinical rotations in psychiatry ranged from 0–15 days and were viewed as inadequate. One noted, "I went to the psychiatric ward only once and that was to take my exam."

During the final year of medical school, students could choose between one month of psychiatry or otolaryngology and most picked the latter. Exams included very few questions on psychiatry; consequently, students spent little time studying for them. This finding was common to all participants, as one describes: "Psychiatry was worth 5–10 points [out of 300 points in internal medicine] so we studied for about 2–3 hours."

Primary care providers receive continuing medical education on specific diseases sponsored by the Nepali government or non-governmental organizations. Only two had received continuing medical education in mental health. Several were unaware of these training opportunities, felt ill-prepared to care for patients with mental illness, and desired further training in mental health.

All participants noted that undergraduate medical education changed their perception of patients with mental illness, especially those with severe psychosis, who are often referred to pejoratively as *paagal* ("crazy person"). Prior to undergraduate medical education, they mocked and sometimes feared such patients, believing that psychosis is caused by spirits and gods, and that patients can never improve. After completing their undergraduate medical education, participants believed that these patients were ill and could improve with appropriate treatment. One noted:

> "If someone became paagal, their family members would take them to... traditional healers. They would do possession rituals... We used to be scared because.... we would worry that the paagal was going to attack us. Then slowly, over time, we read books, we saw more, and our views have changed."

Participants used *Diagnostic and Statistical Manual of Mental Disorders*-based terms like schizophrenia and depression to describe mental illness. They agreed that to qualify as mental illness, symptoms must impair the person's functioning. Participants utilized the medical model but noted that most patients and their families continue to believe mental illness is caused by supernatural forces.

Participants suspected mental illness when it was challenging to interview a patient or when the patient had physical symptoms that were difficult to explain. A few participants reported feeling annoyed during these interviews, as explained by one: "Instead of just stating their complaints clearly, they will come in saying one thing is wrong but later we find out that something else is going on."

Some participants reported that interviewing family and friends was critical but required extra time, which is challenging in a busy clinic. Although primary care providers rarely informed patients of their diagnosis for any medical condition, they were especially hesitant to discuss psychiatric diagnoses because of concerns that it might negatively impact the person's ability to get married or engage in cultural and social events.

Participants estimated the following prevalence of mental illness in their practice: less than 5% (by 22%), 5–15% (by 44%), and more than 15% (by 36%). The most common diagnosis was conversion disorder. They learned this diagnostic category during undergraduate medical education and used it for a variety of symptom complexes following a stressful situation (e.g. domestic violence or failing a major test in school). Patients with this diagnosis typically did not respond to commands for hours after the incident, hyperventilated, or reported pain and inability to move their legs. All patients with conversion disorder were female. Participants reported a general belief among community members and some of the providers that females have these symptoms because they do not have much resilience against stress. One participant tells of this belief: "Although they say women have a lot of patience, I think women don't have the capacity to endure stress. They get stressed quickly."

When treating patients with conversion disorder, participants used practices they learned from senior clinicians and their peers in professional schools. They described interventions designed to cause discomfort such as giving intramuscular saline to elicit pain or furosemide so the patient is forced to urinate. They believed this was inappropriate, but stated it was the standard of practice of senior clinicians during their undergraduate medical education.

The second-most common diagnosis was depression. One participant noted that he makes the diagnosis of depression based on the patient's facial expression and presence of multiple unexplained symptoms. Other participants, who had not received mental health training, said they diagnose depression when someone has multiple complaints. However, others, mainly non-physicians, said that in such cases they do not know how to make the diagnosis.

For patients who attempted or completed suicide, participants thought they were probably suffering from depression, psychosis, alcohol abuse, or inability to tolerate stress. They noted that many members of the community believe suicide is a good outcome, because it is the only way to end individual suffering (e.g. from domestic violence).

Participant responses were varied when asked to identify which mental illness was the most challenging to diagnose and treat. By illness, nine participants identified psychosis (31%), six identified any mental illness (21%), six identified depression (21%), five identified unexplained multiple symptoms (17%), two identified anxiety (7%), and one identified bipolar disorder (3%). Without access to consultation by a mental health professional, all

participants felt compelled to provide treatment. Their sense of desperation led them to prescribe medications even when they did not know the proper diagnosis. Some prescribed medications because of patient preference and others thought prescribing was preferable to conducting a lengthy evaluation. Here, one expresses this compulsion: "If I don't give any medications, they might say, 'the doctor didn't... treat me properly.'"

Most prescribed vitamin B-complex as a placebo while others used acetaminophen, antibiotics, or antiparasitic medications. Three participants reported using psychotropic medications: amitriptyline for sleep, pain, and worrying thoughts; alprazolam for sleep; and chlorpromazine for violent behavior.

Participants consistently stated that counseling is an important component of treatment, but noted they had not received formal training and usually had to improvise. Counseling was used to describe advice-giving, psychoeducation, and psychotherapeutic interventions. A participant shared such a counseling statement: "You think too much, you take too many things to heart. Don't keep too many thoughts in your mind. You don't have any real illness. Just take these medications."

Participants reported varying levels of confidence in counseling patients and families, and most noted that they were rarely successful. A few providers noted that given their lack of training, they provide counseling similar to that of a lay person. This primary care provider gives an example: "I don't know how to provide counseling so I just try to explain to the patient in a way any lay person would… but I don't think they actually understand us... so at the end, we just end up writing prescriptions for medications that we at least know a little bit about."

Most participants asked patients to return if their symptoms did not improve. If the patient did not return, some assumed the patient was doing better while others assumed that the non-returning patients chose to visit another provider. Most participants believed patients with depression or psychosis require treatment by a psychiatrist but do not receive this because of the time and expense of accessing care by a mental health professional. Stigma also contributes to an unwillingness to accept a referral. In one case, the patient traveled to the city but saw a neurosurgeon instead and was prescribed benzodiazepine for depression. Here, a primary care provider explains this stigma: "If you ask them to go to the 'neuropsychiatrist', the patient will happily go. But if you tell them they have to go see a psychiatrist, the patient will refuse to go."

Discussion

The undergraduate medical education curriculum in Nepal devotes little time to mental health training. This leaves well-meaning and committed primary care providers ill-prepared to interview, diagnose, and treat these conditions. The resources devoted to training primary care providers in mental health care in Nepal simply do not match the burden of disease in the patient population. Mental health training for primary care providers is essential for effective scale-up of mental health services and many providers are interested in receiving more training.

Given inadequate training and a lack of data-driven conceptualizations, primary care providers are also at risk of worsening gender-based hierarchies that blame women for having distressing symptoms in response to abusive and traumatic experiences. The belief among community members that suicide is a positive outcome is especially concerning given that suicide is the leading cause of death for women aged 15–49 in Nepal [10].

Our study has three major limitations. Our experience in rural Nepal may not generalize to other low- and middle-income countries. Surveys of the mental health curriculum in undergraduate medical education programs are very much needed as are other qualitative studies of the mental health clinical experiences of primary care providers in other low- and middle-income countries. Second, to expand upon our study of self-report by primary care providers, future studies should interview patients about their experience after a clinical visit. Third, it is important to note that the attitudes around mental health may have changed since the 2015 earthquakes in Nepal.

There are several approaches to address the mental health education gap of primary care providers in Nepal: expanding undergraduate medical education and graduate medical education curriculum to include mental health training; making mental health continuing medical education available, [2] particularly to primary care providers in rural regions; providing an on-site psychosocial counselor to assist with lengthy evaluations and treatment; and developing internet-based consultations for ongoing supervision from mental health professionals. Many of these interventions can be implemented with partnerships between psychiatry departments in high-income countries and low- and middle-income country medical schools.

Acknowledgments

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Implications for Academic Leaders

- A significant gap in mental health education in low- and middle-income countries presents a unique opportunity for experts in training and education to address the global burden of mental illness.

- Strategies to scale-up mental health services rely on primary care providers who may be ill-equipped to care for patients with mental illness.

- Strengthening primary care provider competency in providing mental health services is critical and will require multiple approaches to address this educational gap.

Table 1

Characteristics of participants in the focus groups

Characteristics of participants	n (%)
Number of participants	29
Gender:	
Female	4 (14%)
Male	25 (86%)
Professional Degree:	
Health Assistant	14 (48%)
Bachelor of Medicine, Bachelor of Surgery	12 (41%)
Auxiliary Health Worker	3 (10%)
Years since graduation, Mean±SD	4.1±4.0
Received any prior post-graduate mental health training [*]	3 (10%)

[*] One primary care provider completed post-graduate residency training in General Practice (Family Medicine) and two health assistants had attended a few weeks of mental health continuing medical education.