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Article

Suicide prevention in Nepal: a comparison to Australia – a personal view

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ABSTRACT

Suicide is a crisis of unknown proportions in much of the developing world. The majority of research into suicide has been done in high-resource countries such as Australia, and most intervention protocols have been drawn up using Western models. There appear to be a number of differences in the aetiology, presentation and treatment options for mental health problems between high-resource and low-resource countries. This review compares suicide in a high-resource country, Australia, and low-resource country, Nepal.

Many low-resource countries such as Nepal struggle to address barriers to mental health care due to limited mental health resources and issues such as stigma, workforce and mental health literacy. Issues relating to suicide prevention are raised, contrasting a low-resource country, Nepal, with a high-resource country, Australia.

Keywords: developing countries, Nepal, suicide

Introduction

In the year 2000, approximately one million people died of suicide worldwide, an increase of 60% in the last 45 years,[1] and a number that exceeds the number of deaths due to war and homicide.[2] Suicide is now among the three leading causes of death in those aged 15–44 years, accounting for more than 2% of all deaths in some central Asian countries.[1,3] Because of the stigma and legal repercussions of suicide, reported figures must be analysed with caution. Accurate counting of suicides in India has shown that suicide is the leading cause of death in 10–19 year olds and is responsible for up to 75% of all deaths in young women.[3,4] The suicide rate in Sri Lanka is 46 per 100 000,[5] whereas in Australia the rates are 17.7 per 100 000 for men and 4.7 per 100 000 for women.[6] It has been estimated that suicide attempts can be up to 10–40 times more frequent than completed suicides.[1,5]

In Australia, as in many high-resource countries, there has been a multifaceted effort by government, community and medical services to deal with the prevention, treatment and public attitude to mental health problems. General practitioners are at the forefront, and aim to integrate mental health into evidence-based holistic health care. The evidence and resources for dealing with mental health issues are different in Nepal and Australia but this comparison highlights some of the issues that may need to be addressed if suicide prevention is to be improved in developing countries such as Nepal.

Factors associated with suicide in Nepal and a comparison with Australia

One of the poorest countries in the world, Nepal, nestles between India and China. It is home to 25 million people of several ethnic groups and religions, mostly farmers living in rural areas.[7] Life expectancy is about 60 years, and 40% of the population is under the age of 15 years.[8] Frequent natural disasters and political conflict over the last ten years has disrupted much of the fragile health system and further diverted government and medical interest away from issues such as mental health. The burden of physical disease is high, with infectious diseases, malnutrition, infant and maternal mortality and public health issues taking priority over mental health in both government and non-government organisation (NGO) programmes.[9]

Attempted suicide is illegal in Nepal and people who attempt suicide when caught are subject to imprisonment, fines or both; therefore, any suicide figures will underestimate the incidence. Families usually only bring patients to the hospital as a medical emergency, are likely to hide previous episodes of deliberate self-harm and may attribute suicidal death to other causes both for legal reasons and because the family of those with mental illness may face social rejection and discrimination.[7] Reported rates of completed suicide in Nepal vary from 3.7 to 10.32 per 100 000.[10,11]

A study from 2001, looking at the methods of completed suicide in Nepal, noted that 70% of completed suicides were by hanging, 18% by poisoning and 12% by drowning, burning or stabbing.[12] Another study reported that 96% of the suicides were by organophosphorus poisoning. The different rates and methods of suicide reported may reflect inaccurate reporting because of legal and social consequences of suicide or deliberate self-harm.

The sex differences in completed suicide in Nepal show a near-equal or higher risk of completed suicide in women than in men,[13–15] whereas in Australia the risk of completed suicide is higher in men.[6] This sex difference may reflect that women in Nepal have less access to treatment and more social risk factors than men and may experience poorer mental health for particular environmental and social factors.[13,16] The highest incidence of suicide attempts in Nepal was found in housewives, students, labourers and the unemployed.[13]

When family members were interviewed after a suicide, in psychiatric research studies in Nepal, 50–70% of those who completed suicide were judged to have signs of depression noticed by the family, between 8% and 25% had a substance abuse problem and, in one study, 26.1% had a history of another family member who had committed suicide.[11,13]

Mental disorders account for 11.1% of the total burden of disease in low-resource countries such as Nepal.[3] Factors such as poverty, low education levels, conflict, disasters and sex disadvantage increase the risk of mental disorders in low-resource countries above that in high-resource countries.[3] Suicide may be seen as the only option at times of socio-economic, family and individual crisis situations, particularly in the face of the rapid social, cultural and economic change seen in many low-resource countries.[1,3,13,14]

The stigma of mental illness is an important barrier to accessing health care and evokes negative attitudes and feelings such as shame, disgrace, fear, disgust or hate. This can result in discrimination and rejection of the individual.[7] Feelings of shame or self-blame lead to secrecy, reluctance to seek help from healthcare services, isolation and social exclusion.[17]

Less than 15% of people who completed suicide in Nepal had contacted a government healthpost worker prior to their suicide, but more than 40% had consulted a traditional healer (dhami-jhankri).[11]

Mental health resources in Nepal

One author has experience of working in Nepal and Australia and the other author works predominantly in Nepal. The description of the mental health service in Nepal is based on literature and first-hand experience. Nepal's mental health policy was formulated in 1996. Its key components include:

- to ensure the availability and accessibility of minimum (i.e. essential) mental health services for all the population of Nepal
- to prepare human resources in the area of mental health
- to protect the fundamental human rights of the mentally ill
- to improve awareness about mental health.[8]

Despite these policies and a large amount of interest, evidence and financial input, the health system in Nepal faces enormous challenges in dealing with the effort to increase awareness, distribute funds equitably, decrease stigma, protect human rights, improve resources and establish reporting mechanisms.

There are currently 18 outpatient mental health facilities in Nepal, three day-treatment facilities, 17 community-based psychiatric inpatient units and

one mental hospital. There are 40 psychiatrists in Nepal, a ratio of 0.16 psychiatrists per 100 000 population, compared to 14 psychiatrists per 100 000 people in Australia. Nepal has 4.9 general practitioners per 100 000 population compared to 85 per 100 000 population in Australia.[8,10]

The majority of psychiatric patients in Nepal are treated in outpatient facilities, which are mostly located in metropolitan areas,[8] so that those in rural areas who have increased risk, for example as a result of isolation, lack of transport and communication, and limited educational, employment and economic opportunities, have decreased access to mental health care.[18]

One of the barriers to increasing the number of psychiatrists in Nepal is the stigma that is associated with those professionals who work with the mentally ill, from both the medical and the general community. Young graduates may struggle in an environment that is socially ostracising and where the limited number of mental health professionals means there are only limited prospects for training.[19] The 'brain drain' seen in many low-resource countries is also decreasing the number of doctors in Nepal, with 21–50% of medical graduates emigrating within five years of completion of their training, mostly to high-resource countries such as Australia.[8] The attrition rate of trained mental health workers in all developing countries is a great problem because of issues including remuneration, career opportunities and geographic and professional isolation.[20]

Nepal also struggles to deliver a multisectoral approach to mental health, including education, labour, police, justice, religion, law, politics and the media.[1,21]

Cultural differences in the assessment of suicide risk

A large World Health Organization multisite intervention study on suicidal behaviours looked at the demographics of and opinions about suicidal behaviour, and assessed thoughts about suicide, plans to commit suicide and suicide attempts in eight sites globally. A wide range of cultural differences in suicidal thoughts, plans and attempts was revealed; for example in Colombo fewer plans were made than actual suicide attempts.[5] This makes it very difficult to anticipate suicidal behaviour and prevent attempts. In most of the sites, less than half of those who attempted suicide received medical attention.[5]

There is a strong traditional and religious understanding of mental health issues in Nepal, and limited 'mental health literacy' to aid comprehension of mental illness as a medical problem. Bad fortune, life stresses, social conflict and evil spirits may be blamed. Patients are more likely to present with somatic symptoms or in a 'trance' from evil spirits than with the more Western symptoms that would lead to a diagnosis of anxiety or depression.[7] A study from the BP Koirala Institute of Health Sciences in Dharan in Eastern Nepal highlights the difficulty in using a Western model for assessing suicide risk in developing countries. Joshi *et al* found that, of those who attempted suicide, 22% had a low suicide intent score, 30% a moderate score, 34% a high and 7% a very high suicide intent score.[15]

Many people in Nepal still draw on the support of the extended family system; however, with urbanisation, the number of people able to access this support may be in decline and may affect mental health delivery.[7] Families can have a positive or negative impact by virtue of their understanding, knowledge, skills and ability to care for the person affected by mental disorders. There is a need to help families to understand the illness, encourage medication compliance, recognise early signs of relapse, and ensure swift resolution of crisis. When the family environment is not conducive to good quality care and support, and in fact may be damaging, a family solution may not be a viable option.[18] Families may also suffer rejection and lack of understanding by the community because of the mental illness of one of its members, to the extent that daughters in an affected family may not be able to marry because it is feared that they are contaminated.[19]

The evidence suggests that depressed patients are three times less likely to comply with medical regimens than non-depressed patients.[18] Feelings of worthlessness, excessive guilt and lack of motivation deter those who are depressed from seeking help. In addition, such people are unlikely to appreciate the potential benefits of treatment, and may be ashamed or afraid of involuntary hospitalisation.[18,19] Most patients with psychological problems focus on somatic complaints such as gastrointestinal problems, fatiguability, headaches, pain and insomnia. Many patients think they can handle or treat the episode themselves or do not see it as serious enough to seek treatment; they merely see their unhappiness and distress as an expected response to a life situation.[22]

Traditional healers and religious leaders can provide up to 80% of the care received by the mentally ill.[18] The education of health workers and traditional healers in mental health promotion, explanatory models for distress, problem solving, empathy, various counselling skills and recognition of major mental illness has been trialled in some areas in Nepal. This can link formal and informal care structures, improve access and decrease stigma, as well as improving the mental health of the community.[7]

Suicide prevention and treatment of mental health problems

Most 'evidence' in psychotherapy has been gathered using Western therapists treating Western patients. The outcomes of these studies cannot necessarily be extrapolated for use in a country such as Nepal by either a Nepalese or an Australian health professional. Therapy will need to be tailored to suit the different aetiology, culture, expectations, resources, skills and spiritual beliefs of both patient and doctor. For instance, what is 'normal, morally good, acceptable, desirable, appropriate, right or true will be different in every culture' and the use of cognitive behavioural therapy, which relies on challenging 'negative automatic thoughts', may not be useful.[23]

Limiting the means of completing suicide in developed countries such as Australia, particularly in young men, usually involves firearms restrictions.[12,14] In Nepal, as in other developing countries, men also use violent methods such as jumping from heights, hanging, and cutting their own throat.[12,15] Women tend to use self-poisoning, mostly by taking organophosphate insecticide, a potent neurotoxin which is used extensively in agriculture in countries like Nepal.[14,15] In Australia and other developed countries, self-poisoning is also more common in women but usually with less toxic substances that have a decreased likelihood of being fatal. Studies have shown a reduction in suicide rates in countries that have legislation or codes of conduct to limit the range of available pesticides or where emetics are added to pesticides or they are diluted to non-lethal levels.[9,14]

The integration of mental health into primary care

In 1972–73, the authors of a series of articles in the *British Journal of Psychiatry* came to the conclusion that the care and treatment of mental disorders in Latin America, Africa and Asia should be relegated to general physicians and health workers because of the scarcity of trained mental health professionals and because institutional care was expensive and frequently detrimental.[20] Thirty-five years later, in 2007, a series in *The Lancet* has made a similar call for funding from governments and NGOs to deliver services at a primary care level to deal with the worsening global standards of mental health care and increasing morbidity and mortality.[21]

The Lancet group looked at the cost-effectiveness of primary care evidence-based treatment for schizophrenia, bipolar affective disorder, depression and hazardous alcohol use in 12 countries including Nepal. Coverage was modelled using scaling up of current services based in districts using primary care physicians, hospital outpatients and outreach services, and inpatient mental health services if necessary. Patients with schizophrenia and bipolar affective disorder would be treated with antipsychotics and mood stabiliser drugs plus psychosocial care and support if applicable. Depression would be treated with antidepressants, psychosocial treatment, or both, and those with hazardous alcohol use given brief psychological interventions.[21] Expenditure per person to deliver the core package of interventions was estimated to be US$0.10–0.20 in low-income countries such as Nepal. This would need to increase to US$2 per person per year by 2015 if the target coverage of 80% for schizophrenia and bipolar affective disorder, 25% for hazardous alcohol use and 33% for depression is to be reached.[21]

These figures are much higher than can be sustained by the existing allocation in Nepal of 5.3% of gross domestic product (GDP), with 0.08% of the health budget spent on mental health (compared with 9.5% of GDP and 1.6% of the health budget in Australia).[10] To be achieved there would need to be additional budget allocation from the government and NGOs as well as attention to risk factors and social determinants of mental health from all sectors.

In Nepal, a country with limited psychiatric resources, only those with very severe illness who live close to a hospital will be seen by specialist services. Primary care practitioners, both doctors and health workers, should be the 'front line' for the detection and treatment of mental health disorders. Evidence supports the cost-effectiveness of mental health strategies in primary care because of decreased morbidity, co-morbidity and mortality, but also because of the preventive nature of primary care interventions and the reduced need for high-cost inpatient care.[24,25] The integration of mental health care into general health services has other advantages, including less stigmatisation of patients and staff, improved detection rates for patients presenting with vague somatic complaints, and improved treatment of the physical problems of those suffering from mental illness.[18] Local barriers in Nepal, such as the legislation making suicide a criminal offence and other important issues such as health workforce, education and human rights, need to be addressed at government level.

Education of primary care physicians on diagnosis and treatment of depression has been shown to reduce suicide rates.[2] The 1990s saw the development of several new treatments expected to improve the outcomes in mental disorders such as schizophrenia and depression, but these treatments are

still not widely available in low-income countries, which has increased the treatment gap.[17,23] Primary care physicians need training in the delivery of mental health services so that they are able to screen patients for mental health disorders, prescribe appropriate and adequate psychotropics, deliver simple psychotherapeutic techniques and suggest suitable follow-up and rehabilitation arrangements. Support at individual, community and government levels, supervision by psychiatrists, continuing medical education programmes and properly resourced community mental services must also be funded in a sustainable manner.[22] Brief and inadequate training with little support in the face of overwhelming physical disorders, isolation and little remuneration is likely to add to the risk of burnout among primary care physicians in countries such as Nepal.

Conclusions

There remains a need to prevent, assess and treat suicide in low-resource countries such as Nepal. However, the approach may need to be different from the approach used in high-resource countries such as Australia, and the expertise and support of international health professionals and NGOs is essential.

It is our opinion that the prevention of suicide in Nepal should include:

- culturally appropriate education of primary care practitioners about mental health issues
- lobbying government and NGOs to scale up primary and specialist health care
- increasing the numbers and training of mental health professionals and ensuring continuing medical education and support. Universities and teaching hospitals may need to build relationships with psychiatry and general practice units and mental health training programmes outside Nepal to fully achieve this aim
- training for health professionals and traditional healers in culturally appropriate recognition of risk factors for suicide, such as somatisation and social factors and high-risk populations such as women and those in rural areas
- reviewing legislation that classifies suicide as a criminal act, and recognition that suicide is the result of personal distress or disease that may require family, society or state help rather than punishment
- consideration of the restriction of access to organophosphate pesticides
- the promotion of community efforts such as health promotion, mental health literacy, family support and responsible media reporting
- accurate recording of suicide and deliberate self-harm to estimate the scale of the problem and enable appropriately resourced solutions
- integration of mental health fully into primary care.[25]

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CONFLICTS OF INTEREST

None.

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