

Comparisons of attempted suicide between India and UK

Steve Jones and colleagues provide an insight into attempted suicide following clinical practice visits and research in Southern India and draw comparisons with the UK situation

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Abstract

This paper aims to raise the issues and dilemmas within India by suicide and attempted suicide. In the UK evidence-based interventions have progressed over the past 20 years and changes are having positive benefits on standards of interventions and reducing deaths in some areas by suicide. However, when comparing one culture's custom and practice with another, deficits of some areas of practice present and this facilitates some interesting insights for investigation. Fundamentally, the aim is not to place one above another but to aid identification for cross-cultural comparisons leading to practice advancements.

Key words

Suicide, attempted suicide, self-harm, practice development, organophosphates, OPC, India, UK

Reference

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Introduction

The opportunities and experiences of working internationally assist in developing practice in the UK, in addition to the country visited.

In order to capture the experiences with coherence *Mental Health Nursing* intends to publish a series of papers that are aligned to the practice advancement.

The first identifies the wider degrees of harm caused following attempted suicide.

The second in the series will investigate care and treatment implications that impact on staff attitudes. This should then enable cross-cultural practices to be investigated.

Background

Attempted suicide in India is too multifaceted for one short paper to examine fully, not just in terms of the wide range of methods used, but also the considerable reasons driving the attempts and multiple consequences of the attempts.

Therefore the aim of this paper is to raise the issues and allow some comparisons to be drawn between India and the UK. It will outline cultural influences following suicide attempts by the deliberate ingestion of organophosphate compounds (OPC) that are widely available as pesticides.

An acute lack of funding and human resources are major obstacles in developing countries, and efforts to educate the wider community and equip staff can be difficult when cultural or religious beliefs impact on care and treatment.

Within India religion plays a major societal

role, with a high percentage of people being of Hindu, Christian, and Muslim faiths.

This is further complicated and significant when suicide and attempted suicide are considered a sin against god, and within India attempting suicide is a criminal offence (WHO, 2012a).

While there is a differentiation clinically between self-harm and attempted suicide in practice in the UK, within India deliberate self-harm is conceptually more commonly known as attempted suicide.

Self-harm is a deliberate, self-initiated, and a non-fatal act, although the term deliberate associated with self-harm is losing favour within National Institute for Health and Care Excellence (NICE) guidance publications (Crawford et al, 2003).

The term deliberate self-harm is not well defined in Indian literature or clinical practice, and the use of attempted suicide is better defined and will be used in this piece.

This includes self-poisoning or self-injury, irrespective of the presenting level of suicidal intent. The most common form of deliberate self-harm is self-poisoning (Hawton et al, 1997).

Suicide rates are endemic within other societies globally, and in the UK rates of deliberate harm by ingesting over-the-counter medications are comparable, in severity and in terms of treatment outcomes.

The World Health Organization (WHO) reports that suicide in some Asian countries is more likely to be an impulsive act, with

pesticides a chosen method in rural areas.

Unfortunately the scale of the problem is largely unknown and, with a lack of official recording of deaths by suicide, is probably much greater than estimated (WHO, 2012b).

Context of suicide and self-harm

Suicide rates are a global phenomenon and rates have increased over the past 45 years (WHO, 2012a).

Statistically 1.5% of the global disease burden is attributed to suicide and it is a large public health concern (Kapur and Gask, 2009).

There are no reliable figures relating to the true scale of the problem of deaths by suicide in India, although reporting of deaths in the media suggest a sharp increase in the past decade.

India has high levels of unemployment and poverty combined with political instability. Underreporting of actual deaths by suicide may be explained partly by religious and cultural beliefs that consider suicide a sin and that alcohol, a factor in increased suicide risk, is forbidden for some faiths.

Governmental statistics in India highlight the proportional differences in methods used to commit suicide, with poisoning (36.6%), hanging (32.1%) and self-immolation (7.9%) commonly used (National Crime Records Bureau, 2005).

Suicide is best understood as a multidimensional, multifactorial malaise (Vijaykumar, 2007). If the estimates are to be believed and official figures used, then as a lower guide there are about half a million suicides every year in India.

There are issues of stigma around mental health and this restricts the formation of any meaningful social pressure to affect individual or governmental action.

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The prevention of suicide is an important public health problem in India. There are limited resources to tackle the problem, and the stigma of mental illness poses a formidable challenge to mental health professionals, policy makers, and the government (Khan, 2002).

Mental health practice in India must consider the many religious, cultural, financial, social and legal consequences that can mask the issues and keep them from a more open and informed debate.

In the UK, for example 70% of people affected by mental illness experience discrimination at some time, and discrimination in developing countries similarly impedes mental health provision (Chambers, 2010).

Many causative combinations are suggested that impact on attempted suicide in India. Divorce, dowry, the inability to get married, illegitimate pregnancy, extramarital affairs and other conflicts within marriage play a crucial role, particularly in the suicide of women (Vijaykumar, 2007).

Attempted suicide by pesticide ingestion

More than 100,000 lives are lost every year to suicide in India. In the last two decades, the suicide rate has increased from 7.9 to 10.3 per 100,000 and this a trend that continues to rise (Vijaykumar, 2007).

The majority of suicides in India happen in people below the age of 30 (37.8%), and 71% of suicides in India are by people below the age of 44 years (National Crime Records Bureau, 2005).

The numbers of male and female deaths by suicide in India is nearly equal, and this differs from many other societies where significantly more males die by suicide (Appleby et al, 2011; Mayer and Ziaian, 2002).

The gap between the need for treatment for mental disorders and its provision is wide all over the world. For example, between 76% and 85% of people with severe mental disorders receive no treatment for their mental health problem in low- and middle-income countries. The corresponding range for high-income countries is also high: between 35% and 50% (WHO, 2012a).

In India this is exacerbated by limited access to mental healthcare due to

inadequate facilities and human resources, for example one bed per 40,000 population and three psychiatrists per million of population (National Mental Health Programme, 2002).

An increase in the numbers of people ingesting organophosphates (pesticides) to commit suicide in India has risen significantly year on year.

The rate of admissions to hospitals in India following suicide attempts has become a major public health concern (Khan, 2002; Gururaj et al, 2004).

The act of attempting suicide remains a reportable offence in India and is subject to police investigation when reported to authorities, but if the attempt is 'accidental' then police investigation may not be required.

Section 309 of the Indian Penal Code states: 'Whoever attempts to commit suicide and does any act towards the commission of such an offence shall be punished with simple imprisonment for a term which may extend to one year or with a fine or with both.'

The availability of a means to attempt suicide is fundamental in harm attempts and for India OPCs are widely accessible and recognised as a means of escaping the challenges that face those that attempt harm.

The care of people who have attempted and survived a suicide attempt through ingesting poisons is reasonably high, and mortality rates are reducing.

However, such advances in survival rates have raised awareness of a gap in the ability of nursing staff to psychologically support patients and to begin support for the underlying issues that led to the attempt in the first place.

While there are overlapping themes in relation to hospital treatment for suicide attempts in the UK in comparison with India, OPC poisoning is one of the most common causes requiring intensive care unit admissions and ventilator support in India.

An estimated 12% of all intensive care unit admissions in India have been shown to be due to OPC ingestion, and 30% of the patients who require ventilator support are victims of OPC exposure. Overall, more than 70% of all admissions due to poisonings are due to OPCs (Vaidyanathan et al, 2010).

It is sad and somewhat ironic that

participants who attempt harm require intensive care and this care is not always free in India, so can lead to accruing more debt (which is typically what has led to the harm attempt) and compound the person's mental health problems.

Vulnerability to mental disorders

Depending on the local context, certain groups in society may be particularly susceptible to experiencing mental health problems, including households living in poverty, people with long-term health conditions, minority groups, and persons exposed to and/or displaced by war or conflict.

People with mental disorder have their own set of vulnerabilities and risks, including an increased likelihood of experiencing disability and premature mortality, stigma and discrimination, social exclusion and impoverishment (WHO, 2012; a).

There are overlapping themes in relation to hospital treatment for suicide attempts in the UK and India.

Religion, for example, forms a protective and supportive mechanism and for some can be a deterrent, as suicide is seen as an offence against their god.

Yet there can be considerable burdens experienced by the patient and their family following an attempt. What has to be remembered is that staff may have widely held beliefs that might integrate into clinical practice and for that reason further investigation is a worthwhile endeavour.

Mental health or psychological wellbeing makes up an integral part of an individual's capacity to lead a fulfilling life, including the ability to form and maintain relationships, to study, work or pursue leisure interests, and to make day-to-day decisions about educational, employment, housing or other choices.

Religion can be a deterrent, as for some suicide people is seen as an offence against their god

Disturbances to an individual's mental wellbeing can adversely compromise these capacities and choices, leading not only to diminish functioning at the individual level but also broader welfare losses at the household and societal level.

The wider sociocultural and geopolitical environment in which people live can also affect an individual's, household's or community's mental health status, including levels of access to basic commodities and services (water, essential health services, the rule of law), exposure to predominating cultural beliefs, attitudes or practices, as well as by social and economic policies formed at the national level.

For example, the ongoing global financial crisis is expected to have significant mental health consequences across the world, including increased rates of suicide and harmful alcohol use (WHO, 2011).

Discrimination, social or gender inequality and conflict are examples of adverse structural determinants of mental wellbeing.

OPC poisoning is a major health problem not only in the developing countries but also in Western countries. OPC compounds were first discovered more than 100 years ago, and are at present the predominant group of pesticides employed globally for pest control.

A study was undertaken to assess the distribution pattern, outcome and possible predictors affecting the mortality and the need for ventilator support in patients who had consumed OPC pesticides.

A total of 91 patients were studied, who were admitted to an intensive care unit between April 2009 and March 2010 with history of ingestion of pesticides.

Out of 91 patients, 39 required ventilator support. Of these 39 patients, two died, one due to severe sepsis and multi-organ failure, and the other, long-term alcoholism with liver disease, due to hepatic encephalopathy. The overall outcome in these cases was favourable as the mortality rate was 2.3% (Vaidyanathan et al, 2010).

OPC poisoning causes of death are chiefly related to ventricular arrhythmias, central nervous system depression, seizures or respiratory failure due to excessive bronchial secretions, bronchospasm, pulmonary oedema, aspiration of gastric contents, paralysis of respiratory muscles or apnoea associated with depression of the respiratory centre.

Later mortality is associated with respiratory failure and infections such as pneumonia, septicaemia, or complications related to mechanical ventilator support and intensive care management.

Diagnosis can also be based on history of ingestion, characteristic odour, and signs and symptoms of cholinergic overactivity.

However, if the patient is received into hospital care and treated within a window of opportunity, the earlier the better but typically within six hours, then outcomes are favourable (Vijaykumar, 2007).

Discussion

Untreated mental, neurological and substance use disorders exact a high toll, accounting for 13% of the total global burden of disease. Unipolar depressive disorder is the third leading cause of disease burden, accounting for 4.3% of the global burden of disease.

The estimates for low- and middle-income countries are 3.2% and 5.1%, respectively (WHO, 2012). Current predictions indicate that by 2030 depression will be the leading cause of disease burden globally.

When only the disability component is taken into consideration in the calculation of the burden of disease, mental disorders account for 25.3% and 33.5% of all years lived with a disability in low- and middle-income countries, respectively (WHO, 2012).

Factors that increase people's vulnerability or risk of developing mental health problems include poverty, exposure to domestic violence and abuse, and the presence of long-term disease.

Generally hospital care and treatment in Intensive care and physical healthcare needs are being met at a high level in India.

However, the mental healthcare and treatment in hospital and post-discharge are areas that are underreported and under-investigated.

There is a need to raise the profile of mental health needs in India generally, through improving mental healthcare and reducing stigma, and the many psychosocial harms that occur to the person and their family.

Skills development

The UK and India can benefit considerably from the partnership that specifically targets nursing staff to undertake mental

health assessments and support of those who are vulnerable after attempting to take their own life and continue care beyond hospital discharge.

India clearly has a booming economy and acute physical hospital care that is improving, however the mental health needs of certain societal groups, and the stigma and criminality focus of those who have harmed themselves is an area that requires nursing staff education and skills development to assist in meeting this challenging area of practice.

Suicide, attempted suicide and self-harm remains a culturally sensitive issue within both India and the UK.

In India there are many barriers and difficulties, and statistics reflect the need to drive future initiatives. These could include staff attitudinal and mental health assessment and treatment skills, standards compiled, stigma addressed, and followed by patient-centred research.

Therefore, the aim would be to research the efficacy of interventions, and compile pathways of support and guidance for practitioners that is similar to the NICE guidance that exists in the UK.

Crucially, however, these suggestions must be embedded into health and social care settings and practice, which may then extend to raising societal awareness.

There is also a need to better understand the complex inter-relationships that exist between exposure to these social determinants of health and mental health outcomes.

Conclusion

Suicides in India differ from those in Western countries in a number of ways, including the high use of OPC pesticides, involving larger numbers of married women yet fewer elderly subjects, while family relationship problems and life events are important causative factors (Khan, 2002).

There is need for increased and better information regarding suicide in the countries of the Indian subcontinent. In particular, studies must address culture-specific risk factors associated with suicide in these countries.

Suicide and attempted suicide imposes a huge social, emotional and economic burden on the family and society, irrespective of the country studied.

References

- Appleby L, Kapur N, Shaw J, Hunt IM, Flynn S, While D, Turnbull P, Windfuhr K, Williams A, Rodway C, Roscoe A, Rahman MS. (2011). *Suicide and Homicide in Northern Ireland*. Available at: www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci/reports (Accessed 1 May 2014).
- Chambers A. (2010) *Mental illness and the developing world*. The Guardian. 10 May 2010. Available at: www.theguardian.com/commentisfree/2010/may/10/mental-illness-developing-world (Accessed 1 May 2014).
- Crawford T, Geraghty W, Streetb K, Simonoff E. (2003) Staff knowledge and attitudes towards deliberate self-harm in adolescents. *Journal of Adolescence* **26**: 619-29.
- Gururaj G, Isaac MK, Subbakrishna DK, Ranjani R. (2004) Risk factors for completed suicides: a case control study from Bangalore, India. *Injury Control and Safety Promotion* **11(3)**: 183-91.
- Hawton K, Fagg J, Simkin S, Bale E, Bond A. (1997) Trends in deliberate self-harm in Oxford 1985-1995. Implications for clinical services and the prevention of suicide. *British Journal of Psychiatry* **171**: 556-60.
- Khan MM. (2002) Suicide on the Indian Subcontinent. *Crisis: The Journal of Crisis Intervention and Suicide Prevention* **23(3)**: 104-7.
- Kapur N and Gask L. (2009) Introduction to Suicide and Self Harm. *Psychiatry* **8**: 233-6.
- Mayer P and Ziaian T. (2002) Suicide, gender and age variations in India. Are women in Indian society protected from suicide? *Crisis: The Journal of Crisis Intervention and Suicide Prevention* **23**: 98-103.
- National Mental Health Programme. (2002) *Mental health care by primary health care doctors*. National Institute of Mental Health and Neuro Sciences: Bangalore: 15.
- National Crime Records Bureau. (2005) *Accidental Deaths and suicides in India*. Ministry of Home Affairs: Bangalore.
- Vaidyanathan R, Ashoka HG, Pramod Kumar GN. (2010) Management of Organophosphorus Compound Poisoning – A One Year Experience in a Tertiary Care Hospital. *Journal of the Indian Society of Toxicology* **8(1)**.
- Vijaykumar L. (2007) Suicide and its prevention – the urgent need in India. *Indian Journal of Psychiatry* **49(2)**: 81-4.
- World Health Organization. (2012a) *Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level*. A65/10. World Health Organization: Geneva.
- World Health Organization. (2012b) *Risks to mental health: an overview of vulnerabilities and risk factors: Background paper by WHO secretariat for the development of a comprehensive mental health action plan*. World Health Organization: Geneva.

There are differences in methods of harm chosen and popularity of method, but causal factors have many similarities internationally.

Developing educational initiatives and health resources seems a sensible step towards developing services for those who have attempted to harm themselves.

A targeted approach to reducing suicidal behaviours for those who do not succeed in the suicide is desired for those in high-risk groups and at times of vulnerability.

While interventions should start with staff attitudes towards attempted suicide and harm attempts, it follows that education and skills training should focus on the assessment and treatment of more common mental disorders in general health settings.

This is a considerable practice change area and must be informed by practice from both countries and approached in a culturally sensitive way.

The acute shortage of psychiatrists in India, and of mental health services generally in that nation, suggest that others must become involved in service improvements.

Since suicides and harm attempts are multifactorial, approaches to prevention must be multi-pronged, by macro and micro level initiatives aimed at individual, family and societal levels (Gururaj, 2004).

Developing a strategy and targeting resources must be given serious consideration and goals should be measurable, achievable, and realistic.

The overall aim should be an awareness of the many intricacies and influences that exist in society that allow for service improvements, and staff in any hospital settings can play a vital role in the holistic care, physical, psychological and social domains. **MHN**

Suicide imposes a huge social, emotional and economic burden on the family and society