

## **Editorial**

# Suicide prevention in low- and middleincome countries: part perceptions, partial solutions



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### **Summary**

Suicide, a common cause of death in many low- and middle-income countries, has often been viewed through a medical/psychiatric lens. Such perspectives medicalise social and personal distress and suggest individual and medication-based treatments. This editorial argues for the need to examine suicide from a public health perspective and suggests the need for population-based social and economic interventions.

### **Declaration of interest**

None

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## **Background**

Suicide has been recognised as a global public health problem.<sup>1</sup> It adversely affects not just those who have taken their own lives but also families, communities and society. Higher rates of suicide in some parts of the world demand strategies tailored to regional contexts. A key objective, for researchers and policy makers, that needs to be addressed is assessing the relative impact of different interventions in reducing population rates of suicide. A secondary one is examining the contribution of specific mental health initiatives in reducing suicide.

Psychiatrists view suicide through a biomedical lens and identify a constellation of symptoms, called depression, commonly seen in people who take their own lives. Whereas psychiatrists insist that simple screening instruments, which count symptoms without context, can identify depression, general practitioners argue that they essentially label people who are distressed because of social circumstances and psychological pressures.<sup>2</sup>

## Identifying risk factors in lowand middle-income countries

Studies on suicide, which employed psychological autopsies, identified mental disorders, particularly major depression, as a major risk factor.3 However, recent research from low- and middle-income countries (LMICs) challenges traditional points of view. A systematic review, which examined the association between suicide and poverty in LMICs, documented a positive association. 4 The review also acknowledged a positive association between non-fatal suicidal ideation, behaviours and poverty, and argued for the potential benefit in addressing economic poverty within suicide prevention strategies, with particular attention to both chronic poverty and acute economic events.<sup>4</sup> Studies from India<sup>5</sup> and from China<sup>6,7</sup> have also shown that the majority of the people who die by suicide are distressed secondary to their psychosocial context and only a small minority have severe mental illness. Poverty, social deprivation and its association with suicide have also been documented in more affluent Asian countries such as Japan<sup>8</sup> and South Korea. Although people with severe mental illnesses do take their own life, their contribution to population rates is much less significant than that seen in high-income countries. The absence of a social security net, which seems to be crucial in managing psychosocial and economic distress, may explain the differing rates of suicide and the rates of serious mental disorders among those who die by suicide in high-income and emerging economies.

Psychiatrists, using a biomedical formulation, medicalise psychosocial distress and suggest treatments for individuals. Although both medication and psychological interventions have been suggested as solutions, the evidence to support their usefulness in the community and in primary care is contradictory. On one hand, there is evidence to suggest that medication is superior to psychological intervention in primary care, <sup>10</sup> whereas on the other, antidepressants have been proven not to be useful in less severe depression, <sup>11</sup> commonly prevalent in communities.

## The importance of large-scale public health interventions

Nevertheless, there is strong evidence to link physical and mental health to the social and economic environment, and longevity to improved living standards. <sup>12,13</sup> The poor health status of populations in the poorest countries is related to chronic poverty working through lack of basic needs and access to health services, gender and social discrimination, economic insecurity and political exclusion. Suicide, a behaviour, is a final common pathway for a variety of predisposing and precipitating factors. Heterogeneity among people who take their own life and the diversity of their contexts suggests multifactorial aetiologies. The failure to identify specific necessary and sufficient causes argues against single or simple solutions. It calls for a comprehensive package of interventions and multisectoral responses. <sup>14</sup> Medicalising suicide or reducing it to psychiatric labels will prove ineffective.

Historical analysis of suicide data in England and Wales (1863–2007) demonstrates trends, which show much higher rates in the early 20th century particularly during the Great Depression of the 1930s. The steady reduction in rates after the Second World War coincided with the introduction of public health interventions such as social security. Similar reductions have been documented in the USA, Australia and New Zealand. Historical parallels between the reduction in many infectious diseases (such

as tuberculosis, cholera) suggest that mortality reduced long before the introduction of specific interventions (i.e. vaccines, antibiotics). <sup>19</sup> The provision of clean water, sanitation, nutrition and housing decreased transmission and significantly contributed to reduction in epidemics and mortality in the West and these occurred before the introduction of specific curative strategies.

Multidimensional phenomena, such as suicide, require large-scale public health interventions to reduce the suicide rates of populations. Many inputs – political, financial, social, cultural, science, engineering, educational, religious and legal, in addition to medical, are required to improve population health. Without such public health approaches, suicide prevention would remain on paper with the psychiatric strategies currently advocated inadequate for the task of reducing suicide rates. Public health in LMICs mistakenly employs urgency-driven curative solutions instead of preventive population health measures. <sup>21</sup>

However, the low base rate of suicide makes the task of demonstrating usefulness of interventions difficult, as it requires recruitment of very large population samples followed up over time. Consequently, most studies do not focus on outcome indicators (suicide) but emphasise indicators of process (such as the effect on depression, reduction in treatment gap).<sup>22</sup> Although such shifts in emphasis are pragmatic, they cloud issues related to reducing population suicide rates. Specific disciplinary perspectives tend to identify causal mechanisms operating in a minority of suicides and suggest single and simplistic solutions to manage the complex individual and social phenomenon of suicide. Reducing suicide rates requires comprehensive national responses.

#### **Conclusions**

Nevertheless, the biggest challenge for preventing suicides is the ability to scale up interventions to population levels. Many localised projects have succeeded in their objectives because of massive academic, financial, administrative and political commitments.<sup>22</sup> However, most attempts at scaling up of service delivery have failed in LMICs. Whereas individual treatments and psychiatric inputs can prevent suicide in people identified to be at risk, their impact of population rates of suicide is yet to be demonstrated. The reductions in suicide reported in some countries have more to do with secular trends and improvements in living standards than specific suicide prevention programmes.<sup>23</sup> Although interventions have shown a reduction in method-specific or site-specific rates, there is no firm evidence to suggest an overall reduction in suicide. Social determinants of health and mental health demand public health interventions in order to reduce inequity and provide social justice, which in turn may prevent suicide among vulnerable people.

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### References

- 1 World Health Organization. *Preventing Suicide: A Global Imperative* WHO. 2014.
- 2 Heath I. Commentary: there must be limits to the medicalisation of human distress. BMJ 1999; 318: 439–40.
- 3 Foster T, Gillespie K, McClelland R. Mental disorders and suicide in Northern Ireland. *Br J Psychiatry* 1997; **170**: 447–52.
- 4 lemmi V, Bantjes J, Coast E, Channer K, Leone T, McDaid D, et al. Suicide and poverty in low-income and middle-income countries: a systematic review. *Lancet Psychiatry* 2016; 3: 774–83.
- 5 Manoranjitham SD, Rajkumar AP, Thangadurai P, Prasad J, Jayakaran R, Jacob KS. Suicide in rural south India. *Br J Psychiatry* 2010; **196**: 26–30.
- 6 Zhang J, Xiao S, Zhou L. Mental disorders and suicide among young rural Chinese: a case-control psychological autopsy study. Am J Psychiatry 2010; 167: 773–81.
- 7 Li XY, Phillips MR, Zhang YP, Xu D, Yang GH. Risk factors for suicide in China's youth: a case-control study. *Psychol Med* 2008; **38**: 397–406.
- 8 Inoue K, Fujita Y, Takeshita H, Abe S, Fujihara J, Ezoe S, et al. A long-term study of the association between the relative poverty rate and suicide rate in Japan. *J Forensic Sci* 2016; **61** (suppl 1): S140–3.
- 9 Hong J1, Knapp M. Geographical inequalities in suicide rates and area deprivation in South Korea. J Ment Health Policy Econ 2013; 16: 109–19.
- 10 Patel V, Chisholm D, Rabe-Hesketh S, Dias-Saxena F, Andrew G, Mann A. Efficacy and cost-effectiveness of drug and psychological treatments for common mental disorders in general health care in Goa, India: a randomised, controlled trial. *Lancet* 2003: 361: 33–9.
- 11 Kirsch I, Deacon BJ, Huedo-Medina TB, Scoboria A, Moore TJ, Johnson BT. Initial severity and antidepressant benefits: a meta-analysis of data submitted to the Food and Drug Administration. *PLoS Med* 2008; **5**: e45.
- 12 Commission on Social Determinants of Health. Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health. World Health Organization, 2008.
- 13 World Health Organization and Calouste Gulbenkian Foundation. Social Determinants of Mental Health. WHO, 2014.
- 14 Jacob KS. The prevention of suicide in India and the developing world: the need for population based strategies. *Crisis* 2008; 2: 102–6.
- 15 Thomas K, Gunnell D. Suicide in England and Wales 1861–2007: a time-trends analysis. Int J Epidemiol 2010: 39: 1464–75.
- 16 Monk M. Epidemiology of suicide. Epidemiol Rev 1987; 9: 51-69.
- 17 Morrell S, Taylor R, Quine S, Kerr C. Suicide and unemployment in Australia 1907–1990. Soc Sci Med 1993; 36: 749–56.
- 18 Deavoll BJ, Mulder RT, Beutrais AL, Joyce PR. One hundred years of suicide in New Zealand. *Acta Psychiatr Scand* 1993; 87: 81–5.
- 19 McKeown T. The Role of Medicine: Dream, Mirage or Nemesis? Nuffield Trust, 1976.
- 20 Jacob KS. Public health in low and middle-income countries and the clash of cultures. J Epidemiol Community Health 2009; 63; 509.
- 21 Jacob KS. Public health in India and the developing world: beyond medicine and primary health care. *J Epidemiol Community Health* 2007; 61: 562–3.
- 22 Jacob KS. Mental health services in low-income and middle-income countries. *Lancet Psychiatry* 2017; 4: 87–9.
- 23 Bellanger MM, Jourdain A, Batt-Moillo A. Might the decrease in the suicide rates in France be due to regional prevention programmes? Soc Sci Med 2007; 65: 431–5.