Commentary: Preventing suicide: need for a life course approach

Vikram Patel

In this edition of the *LJE*, Gunnell et al. describe the impact of the regulation of pesticides on completed suicide rates in Sri Lanka, a country that has the unhappy distinction of one of the highest rates of suicide in the world—a health indicator in stark contrast to most other health indicators. Sri Lanka is, in fact, an outstanding example in Asia of a low income country which has invested in a basic health care system that has led to health indicators which other countries, particularly its larger neighbours in south Asia, can only dream of. Yet, for reasons that remain unclear, Sri Lanka has a very high suicide rate. It is apparent from this case study of one country that, at the very least, suicide is not an accurate reflection of overall health care standards. More than a century ago, Durkheim had proposed that social and structural determinants influenced the risk of suicide in a population. In Sri Lanka, Gunnell et al. did not find strong associations between trends in suicide rates and societal determinants such as unemployment level. It may well be that we may never quite be able to identify consistent and generalizable population level social determinants that are amenable to public health strategies to reduce suicide rates. That this is of great public health importance, particularly for young people in Asia for whom suicide is now one of the leading causes of death, is now well-established.2,3

It is therefore reassuring to read that the analysis of Gunnell et al. suggests that the reasonably well-established evidence that

---

2. Prasad et al. (2000) discuss the impact of unemployment on suicide rates.
3. Eddleston et al. (2002) highlight the importance of social and structural determinants in suicide prevention.
Population level interventions which target the availability of commonly used lethal methods of suicide may have an important effect in reducing the fatality rates associated with suicide also extends to the case of pesticides in Sri Lanka. This has enormous public health implications in other countries—mostly in Asia, where toxic pesticides ingestion is a major cause of suicide-related mortality. Of course, it also has a more general application to countries, where other preventable methods of suicide are prevalent; gun control in the USA comes to mind as one such potential public health intervention which may achieve the same result. However, a notable observation in this article is that while the fatality rates have fallen since the banning of pesticides, the actual suicide attempt rates have, if anything, gone up. Undoubtedly, some of this increase may be the consequence of repeated attempts of those who survived an attempt—survived due to the less lethal method used in their previous attempt. Nonetheless, one is faced with a larger concern here, the intervention described reduces deaths, and that is to be celebrated, but there seems to be no respite to the proximal determinant of those deaths, which is the suicidal behaviour itself, a significant proportion of which may be attributable to potentially modifiable risk factors related to mental disorders, interpersonal difficulties and coping strategies.

It is important that suicide prevention adopts the equivalent to a life-course approach to epidemiology, identifying both the distal and proximal determinants of suicidal behaviour as well as the determinants of the outcome of these behaviours, including both mortality and recurrence. Public health interventions may then target multiple points on this continuum through a combination of population level interventions such as pesticide regulations and individual level interventions, such as improving the detection and management of depression, the impact of which may be substantial. Such interventions must consider the critical determinants, which may be relevant for sub-groups of the population, such as young people—especially young women, older people—especially older men and marginalized groups—such as historically disadvantaged communities. The specific choice of such interventions may be guided by both observational data on risk factors and studies of specific interventions. A recent systematic review of suicide prevention strategies found, for example, that both education of physicians and restricting access to lethal means were found to prevent suicide. Other methods including public education, screening programs and media education need more testing.

However, virtually all this evidence derives from developed countries, and the paper by Gunnell et al. provides a welcome addition to the patchy evidence from developing countries. Other examples of recent additions to this evidence include studies showing that microfinance interventions help reduce income insecurity and gender-based violence in women in South Africa, both major risk factors for suicide; in South Asia, where acute income insecurity leading to debt is a major factor behind suicides—particularly of vulnerable groups such as male farmers—such interventions have particular significance. A community befriending programme in Sri Lanka, evaluated using a time series design, was found to be associated with a sharp decrease over a 6-year period in the numbers of suicides and self-harm episodes compared with a control village without this intervention.

A complex array of such multimodal and intersectoral interventions targeting a variety of stakeholders can be best organized through a national or regional strategy. The first national suicide prevention plan was initiated by Finland. Since then, a number of other countries have developed similar plans. Vijayakumar et al. in a recent review, identified that most of these national plans share a number of common elements including ‘public education, responsible media reporting, school-based programs, detection and treatment of depression and other mental disorders, attention to those with drug and alcohol problems, attention to those with somatic illnesses, improved access to mental health services, improvement in assessment of attempted suicide, crisis intervention, work and unemployment policy, training of health professionals and reduced access to lethal means’. Sri Lanka also implemented a National Plan in 1997 and the paper by Gunnell et al. indicates that the proportionate fall in the age standardized suicide rates for males and females was greater in the 5 years following the establishment of the National Suicide Prevention Policy than in the 2 years following the complete ban on Class 1 pesticides; although a causal inference for this association cannot be made from this observation, this possibility cannot be ruled out. Unfortunately, the Presidential Committee ceased to function in November 2000, raising questions about the ongoing sustainability of the plan. Public health research should focus on evaluating such regional plans and building the evidence base for countries to initiate and sustain their efforts to prevent suicides; given the rare nature of suicide events, the likely small effect of specific interventions targeting specific determinants and cost and ethical concerns of trials evaluating complex intersectoral interventions, ecological and time-trend designs employed by Gunnell et al. will be among the appropriate and feasible designs.

Conflict of interest: None declared.

References


