Thinking Clearly about Suicide in India—III

Youth and Young Adult Suicide in Australia and India

PETER MAYER

The rapid rise in suicide rates above 15 per lakh persons for teenaged males generated great public concern in Australia in the 1980s. Considered a "crisis" level, this led to an intense study of the causes of youth suicide as well as intensive efforts to devise public health programmes to assist young people at the risk of suicide. Reaching a peak in 1991, teenage male suicide rates have fallen steadily and are now less than 10 per lakh. In India, youth suicide rates vary greatly between states for males and females. For young males, suicide rates in 28, and for females in 12 states and union territories were at or above the crisis level. Yet there has been virtually no public recognition of the level or seriousness of youth suicide.

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For the past decade I have spent much time studying the sociology of suicide in India. The summation of much of what I found may be found in Mayer (2016). There were, of course, many findings and discoveries that emerged from my research which really surprised me. The finding that has concerned me most is the high levels of youth and young adult suicides in some parts of India. Despite suicide rates which are high in comparison to those of other countries, there appears to be little public awareness of a youth suicide "crisis" in India, and nothing by way of a coordinated health policy response. I will return to India's youth suicides later in this study. I wish to begin by exploring a contrasting case, the response to rising rates of young male suicide in Australia in the 1980s and 1990s. I believe it is instructive, because it appears to show what can be achieved by a concerted health policy response and offers at least one model which might be effective in India.

Australia's Youth Suicide Crisis

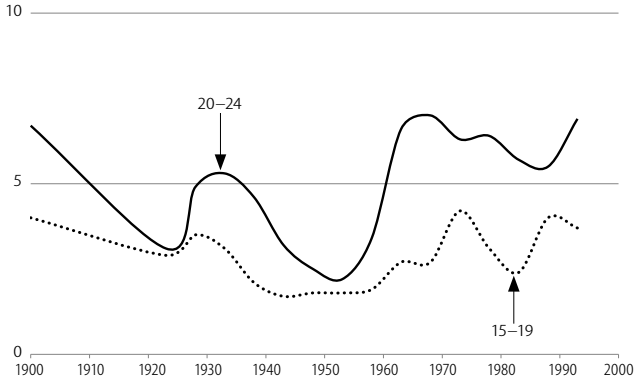
It was youth suicides in Australia which were the initial trigger for my study of the phenomenon in India. My colleague, the psychiatrist Robert Goldney, gave a professorial lecture in 1998 in which he surveyed what was known about youth suicide in Australia. That lecture prompted me to look seriously at what we know about the circumstances surrounding suicide in India. Goldney's lecture came at the end of a decade of growing concern in Australia about the striking increases in the rate of suicide deaths among young males, especially those living in rural areas.

To set the background, let us first consider the long-term trends in the suicide rates of young females in Australia. As can be seen in Figure 1 (p 86), over the 90 years between 1900 and 1993, young adult female suicide rates generally moved in a narrow band between 5 and 10 per lakh. At a maximum, in the early 1970s, teenage female suicide rates were 4 per lakh. In the late 1960s, young adult female suicide rates reached 7 per lakh.

The corresponding trends for young males in Australia can be seen in Figure 2 (p 86). Teenage male suicide rates began to increase slowly from 1960 onwards. By 1975, the rate had increased from 5 to 10 per lakh. In the 1980s the rate increased very rapidly, reaching over 17 in 1988.

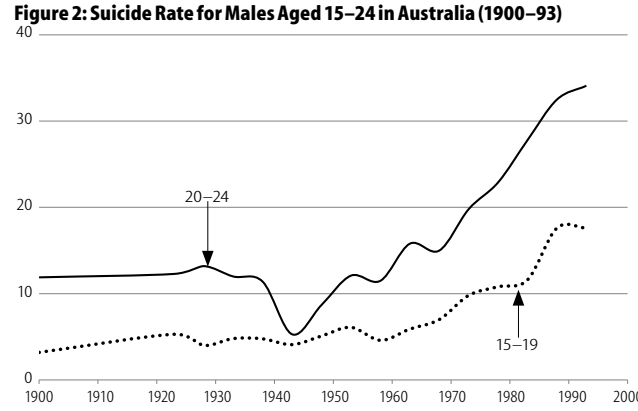
For young adult males between 20 and 24, the trend in suicides was even more alarming. From a low of 5.3 at the depths of World War II in 1943, rates rose steadily, decade by

Figure 1: Suicide Rate for Females Aged 15–24 in Australia (1900–93)



Source: Hassan (1995); Australian Bureau of Statistics (2000, 2004).

Figure 2: Suicide Rate for Males Aged 15–24 in Australia (1900–93)



Source: Hassan (1995); Australian Bureau of Statistics (2000, 2004).

decade. By the early 1950s, they were double the wartime rate and by the early 1960s, three times the rate of 1943. By the early 1980s the rate was almost 23 per lakh and by end of the decade it had reached over 33.[1]

Not Quite a 'Moral Panic'

The relatively slow increase in teenaged male suicides during the 1970s was not clearly perceptible until the rates continued to rise sharply in the 1980s.[2] Although young adult rates were already rising rapidly in the post-war decades, awareness of the extent and trajectory of the trend began to become fully evident only in the 1980s. Suzane Fabian wrote *The Last Taboo* in 1986 at a time when most of the evidence for rising youth suicide rates came from the United States (US). At that time, she noted that "there have been no Australia-wide research studies to get studies on the numbers of youngsters who attempt suicide…" (Fabian 1986: 7). Her monograph was based on individual cases arising from her experiences as a teacher. It made an early plea to "take ...[suicidal] behaviour among children and adolescents...seriously" (Fabian 1986: 5).

As late as 1987, Robert Kosky published an article in the *Medical Journal of Australia* which asked tentatively, "[h]as suicide and attempted suicide among young Australians increased in recent years?" (1987: 164). It was difficult to be certain, Kosky noted, because there had been a decrease in the proportion of youthful deaths reported by coroners as of "undetermined" cause and an increase in those attributed to suicide. "[I]t is possible that what appears to be a rise in suicide rates among teenage boys could be largely a statistical artefact as a result of coroners' attitudes more freely accepting suicide among the young in recent years" (1987: 165). The fact that admissions to hospital for attempted suicides had risen and that the rates for girls were largely unchanged over the same period, led Kosky to conclude cautiously, "the figures do seem to support a rise in suicide rates among Australian boys" (1987: 165).

Gail Mason (1990: 10) in a review of suicide prevention strategies written in 1990 observed, "At the time of writing there were no programs operating in Australia with the sole purpose of preventing youth suicides... To date, no Australian agency or service has evaluated its impact on the incidence and prevalence of youth suicide" (1990: 10).

By contrast, awareness of the seriousness of youth suicide in the US was already at a high level. As early as 1985, Ronald Maris began his review with the observation that "Adolescent suicide is probably *the* issue in suicidology right now, as far as the general public is concerned" (1985: 91).

In an editorial in the *Medical Journal of Australia* in 1987, Robert Goldney noted that health professionals in the US "have pursued vigorously the issue of suicide in young persons" (p 161). Comparable activities in Australia would come only a few years later.

A major scholarly conference on the emerging "crisis" in youth and young adult suicides was held in 1990.[3] At that conference Riaz Hassan spelled out what was then known about the trend in youth suicides. After considering whether the rising trend in rates of suicide might be an artefact of more accurate reporting by coroners, and concluding that the rising trends were real, Hassan considered the possible causes for the rising trend:

> There are several sociological reasons which bear on the question and appear to have significantly influenced the increase in adolescent suicide. These are the high youth unemployment rate; changes in the Australian family; increasing drug use and abuse; increasing youth violence; mental health; and an increasing disjunction between 'theoretical freedom' and experiential autonomy. (1992: 5)

Above all, Hassan noted, about 80% of teenagers contemplating suicide communicated their intention to a friend or a family member. And only one attempt in 40 resulted in death. Also, a significant number of attempters never make a second attempt. "This means broadly based suicide prevention programs can be very effective in reducing loss of life through suicide" (Hassan 1992: 14).

The engagement of informed public opinion appears to have been a significant aspect of the Australian response to youth suicide. In the early 1990s, articles discussing aspects of youth suicide began to appear regularly in the Australian media. An early article in the *Sydney Morning Herald* (SMH) by David Mcknight reported on a conference paper by Riaz Hassan and Joan Carr which found a correlation between male unemployment and rising levels of young male suicide. Rising levels of female employment appeared to have the reverse effect (Mcknight 1987).

An article the following year in the *SMH* by Peter Hughes (1988) bore the stark headline "Youth Suicide 'A Major Problem'."

Hughes reported the inaugural lecture of Robert Kosky who had been appointed as foundation professor of child psychiatry at the University of Adelaide. The article stated that "suicide by people in the 13 to 24 age group was a major public health" and that it was now "the second most common cause of death in the group after road accidents" (Hughes 1988).

Writing on the stresses experienced by young people, Michael Visontay (1989) noted that "until fairly recently, doctors and social workers have refused to admit that youth suicide is even a problem." He quoted Robert Kosky, "Overall, it hasn't been recognised appropriately until the last 10 years."

One of the first articles to pinpoint the acute problem of male youth suicide in Australia's rural areas was published by Tony Hewett in 1990. Hewett reported that "rural youth suicides in NSW [New South Wales] have increased 570 percent in 25 years." Ready access to guns was a significant factor in rural youth suicides: "[F]irearms were used in three out of four youth suicides in the rural shires" (Hewett 1990). If guns were the means of choice, the state of the rural economy was seen as a major precipitating factor. According to a study by "a team of psychiatrists and psychologists from the Prince of Wales Children's Hospital" the cause of the increase in rural youth suicides "may lie in the depth of isolation and hopelessness experienced by country boys surrounded by a collapsing rural youth employment market" (Hewett 1990).

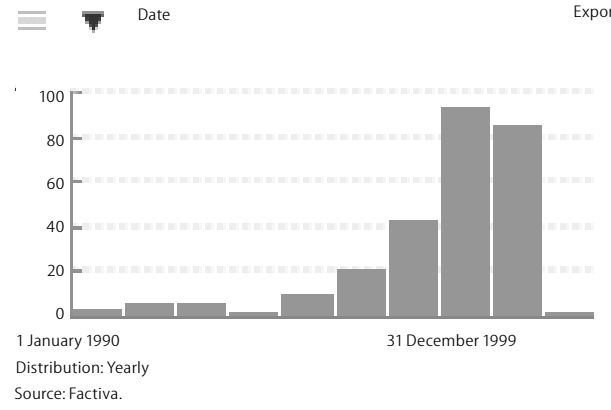
The report made one of the first calls in Australia for urgent public policy responses to the rising toll of youth suicides: "[There is an] urgent need to assess, advocate, and plan for the mental health needs of rural adolescents, and to design and implement suicide prevention programs in the bush." And the article noted that in response, the NSW Minister for Health, "Mr Collins announced that the Mental Health Services Unit of his department would convene a special conference to discuss youth suicides" (Hewett 1990). Perhaps for the first time, concern with the issue had moved from the realm of scholarly conferences and publications to the formulation of appropriate public policies.

By the early 1990s, it had become accepted without qualification that Australia's suicide rates were at high and alarming levels. The headline of an article published in the *Age* in 1993 stated baldly: "Our Youth Suicide Rate World's Worst, UN Report Reveals" (Barrett 1993). The article referred to a United Nations Children's Fund (UNICEF) report which ranked "Australia ahead of Norway, Canada, Switzerland, the US, Sweden and other Western states, with Spain and Italy at the bottom of the table."

In 1994, the national broadcaster, the Australian Broadcasting Corporation (ABC), presented an in-depth investigative report on youth suicide. In a report in the *Age*, Elissa Blake noted that "[t]he mainstream media has been ignoring the issue for years, perhaps fearing that discussing it may inspire some to take their own lives" (1994). She cited Mara Blazic, one of the team members who produced the programme: "Youth suicide is such a huge problem in this country that it would be extremely silly, stupid and ignorant for us not to do it."

Later in the decade, the media began to report on the significance of homophobia as a contributing factor in youth suicide. An article in the *Age* by Debra Jopson reported on research in the US which found that "[a]bout one in three gay American teenage boys attempts suicide." The article quoted Gary Remafedi, a visiting Associate Professor of Pediatrics from the University of Minnesota, who believed the situation in Australia "probably has the same rate; it's just that nobody has asked" (Jopson 1997).

Figure 3: References to Youth Suicide in the Australian Media (1990–99)



A crude indication of the chronology of media attention to the issue of youth suicide in Australia is conveyed in Figure 3—a chart of references produced by the Factiva media service.

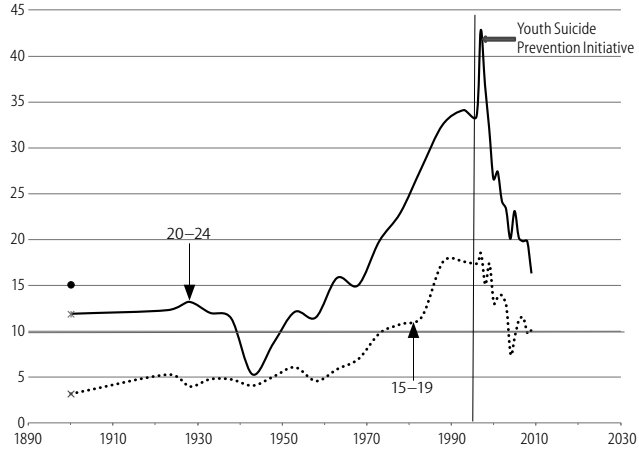
National Youth Suicide Prevention Strategy

It was in the context of growing public recognition and increasing expressions of concern at the rapid rise in young male suicide rates that the Commonwealth government initiated a series of reports which culminated in the formulation of a national strategy for suicide prevention.[4] The first of these was a survey of youth suicide prevention strategies undertaken by Gail Mason (1990). Commissioned by the Commonwealth Youth Bureau, then part of the Department of Employment, Education and Training, Mason's report reviewed the literature on youth suicide prevention programmes from Australia and elsewhere in the world. Mason made 35 recommendations, including that the causes of youth suicide needed to be identified, and that multifaceted prevention strategies should be implemented.

In 1994, Australia's ministers for health at the state and Commonwealth level met and agreed that reducing youth suicide was a key national goal to be met during the rest of the 1990s. The following year the Commonwealth Government published *Here for Life: A National Plan for Youth in Distress* (Mental Health Branch 1995). The "Action Plan" aimed to "develop, trial and evaluate best practice approaches to suicide prevention for groups of young people at the highest risk of committing suicide;" and "integrate best practice in youth suicide prevention into standard approaches to youth health and to young people in crisis or at risk of suicide" (Mental Health Branch 1995: 2).

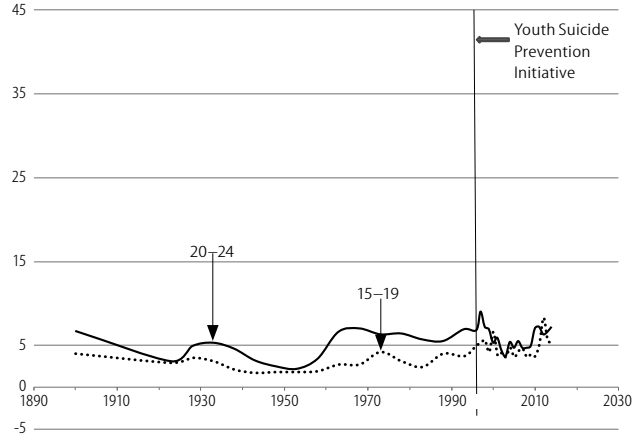
The report announced that among its aims were the establishment of a Youth Suicide Prevention Advisory Group to offer expert advice and the establishment of demonstration projects in youth suicide prevention to "develop new and better ways of working with young people at the highest risk of suicide" (Mental Health Branch 1995: 3).

Figure 4: Suicide Rate for Males Aged 15–24 in Australia (1900–2014)



Source: Computed by the author on the basis of Hassan (1995); ABS (2000, 2016).

Figure 5: Suicide Rate for Females Aged 15–24 in Australia (1900–2014)



Source: Computed by the author on the basis of Hassan (1995); ABS (2000, 2004, 2016)

Accompanying the report was a second publication, *Youth Suicide in Australia: A Background Monograph* (Special Health Services Section 1997). This report surveyed the history of rising youth suicide deaths in Australia over the previous decade. It also reviewed approaches to suicide prevention, particularly those delivered in schools and to the community which were "designed to assist either young people or people working with them to have a better understanding of warning signs associated with suicide and where to get assistance" (1997: 4). It also looked at programmes targeted at high risk groups, training programmes for general practitioners, the provision of specialised mental health services for young people and the development of programmes which addressed "the interplay between the social, health and cultural domains and their impacts on the quality of life for individual young people." It noted, pointedly, that "many of the complex issues with youth suicide lie outside the health system" (1997: 5).

In 1995 and 1996, the Commonwealth government allocated A$13 million to support the National Youth Suicide Prevention Strategy (NYSPS). In the following financial year, an additional A$18 million was allocated to support the strategy. The strategy was outlined in Mental Health Branch (1997a). A detailed description of the strategy can be found in (Mitchell 2000). A second edition of *Youth Suicide in Australia: A Background Monograph* was issued at the same time as the National Strategy; it contains significant revisions to the concluding section of the report dealing with "Can suicide among young people be prevented?" (Mental Health Branch 1997b).

Morell et al observed:

> Individual projects varied widely but received funding over the 1997–1999 period based on merit, with post-funding sustainability a key criterion .... Each NYSPS-funded project had an evaluation component, centring mainly on process or impact evaluation, not outcome evaluation. At the time, the knowledge on which youth suicide public health prevention measures actually worked was rather limited ... and consequently a variety of approaches were tried. Some projects were national in scope, others local, and some, in limited ways, were shown to work and others not. (2007: 748)

What the NYSPS Did

It is difficult to summarise the 44 National Demonstration Projects which were funded between 1995 and 1999. The principal areas which received funding were: (i) parenting education and support materials and programmes, (ii) curricula and a guide for suicide prevention in schools, (iii) resources for mental health promotion, (iv) development of materials to increase the skills and resources of communities to identify young people at risk, (v) primary prevention programmes including projects aimed at developing protocols for hospital accident and emergency departments, support and training for telephone counselling services, and suicide prevention training for those working in the primary healthcare sector, (vi) the creation of resource kits to help the media report safely on youth suicide issues (adapted from Mitchell 2000: ch 7).

Mitchell (2000: 36) noted that the National Strategy had both strengths and weaknesses:

> The National Youth Suicide Prevention Strategy had three of the five elements regarded as necessary for coherence of national strategies—government policy support, clearly articulated general aims and goals, and an emphasis on monitoring and evaluation. An important limitation of the Strategy [was] that it lacked measurable objectives, unlike the Finnish National Suicide Project where these were clearly defined. The Australian Strategy could have benefited from having a more coherent model of suicide prevention to guide policy development and planning. A strength of the Project developed in Finland was that programs could be matched against this model during the period of the Strategy, and consequently modified and refined as necessary.

Many aspects of initiatives began between 1995 and 1999 have continued up to the present. Especially prominent are a profusion of internet sites which offer support and confidential counselling for those at risk.

Results of the NYSPS

When we examine the male youth suicide rate figures from 1993 to 2014, the results are quite remarkable (Figure 4). From a peak at the time that the NYSPS was instituted, suicide rates have fallen sharply and consistently. Between 2010 and 2014, suicide rates for young males in the 15–19 age group had fallen to an average of 11.9 per lakh. In the same period, suicide rates for young adult males in the 20–24 age group averaged 18.4 per lakh.

The comparable trend for females is given in Figure 5.

Impressive as the apparent results for young males have been, the question must be asked whether the results can be

attributed to the effectiveness of the national prevention strategies. Morrell et al (2007) examined this question, looking in particular at whether changing rates of youth unemployment could explain the sharp declines in young male suicide rates. They conclude, cautiously, "the evidence is more consistent statistically and circumstantially in favour of the NYSPS plausibly being associated with the post-1997 fall in young male suicide rates" (Morrell et al 2007: 753–54). Martin and Page (2009: 74) in a comparison of suicide prevention programmes in a number of countries conclude:

> Are the results overall convincing enough for us to conclude that strategies work? Some of the results are impressive, and there is a trend for the results of those countries that have the most long-lived strategies to have the better post-strategy results. Despite the mixed results in female suicide rates, the changes post-strategy in most countries with regard to male rates are convincing. The changes in the youth rates (male and female) for Australia and New Zealand seem to reflect the initial targeting of these country's strategies, which seems to add weight to the fact that strategies do have some impact on suicide rates.

Goldney (2006: 304) noted several possible factors which might be responsible for the sudden decline in suicide rates, among which were: "better community awareness of both the antecedents of suicide and the fact that suicide prevention is possible ... the provision of more accessible services ... [and] better recognition and treatment of depression."

Despite the apparent successes of the programmes instituted in the 1990s, it is clear that there is no room for complacency in Australia. This was highlighted by the release in 2016 of figures for suicides in 2014 (ABS 2016). These showed increases in suicide rates for both men and women between 30 and 60 (*Age* 2016; Parnell 2016; Robinson et al 2016; Ting and Back 2016). The high suicide rates of Australian Aborigines were highlighted as a matter of special concern (Grant 2016; McHugh et al 2016; Middleton 2016; Robinson 2016).

Stepping back from the detail, we can see that as youth male suicide rates began to rise in the 1970s and 1980s, the issue came increasingly to public attention as a matter of public concern. As a rough "rule of thumb," when rates rose above 15 per lakh, youth suicide was increasingly perceived in Australia as constituting a public health "crisis." Although it is not possible to be completely certain, the evidence is consistent with an interpretation that the intervention programmes initiated in the mid–1990s were remarkably successful in ending the rising rates of young male suicide and in bringing them down substantially.

The Invisible Crisis of Youth Suicide in India

Those familiar with the media in India will know that the issue of suicide regularly appears as a topic. For example, if I tell someone that I have conducted research on suicide in India, they will almost certainly assume that I am referring to farmer suicides. This is because the suicide of farmers as a response to economic distress arising from drought and indebtedness is perhaps the aspect of suicide most widely covered in the media. Two other aspects which also receive more intermittent media coverage are the suicides of celebrities and the annual spike in suicides by students at the time of examinations.

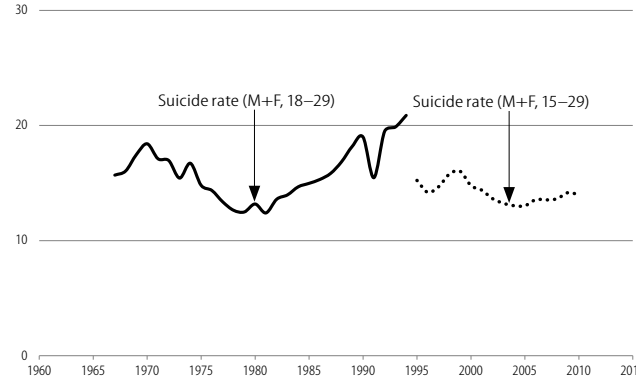
I noted in the first article in this series that, although the rates of suicide for different occupational groups are difficult to extract from existing official publications, those which we can calculate show that the rate of suicide deaths by farmers is lower than that for housewives, the retired and civil servants. I drew attention to the fact that official statistics record nearly four housewife suicides for every one of a farmer (Mayer 2016: 50). Though greater in both absolute magnitude and rate, housewife suicides constitute a sort of "invisible" public health problem which receive neither media attention nor government intervention. The same is true, in an even more acute way, of youth and young adult suicide in India.

Youth Suicides at the All-India Level

To form an idea of the seriousness of the magnitude of youth suicides, we may begin as we did with housewives by comparing just the raw numbers of recorded deaths. In 2014, the National Crime Records Bureau (NCRB) reported that there were 5,178 suicide deaths of male farmers and 472 of female farmers. In that year, in the 14–17 age bracket there were 4,682 male suicides and 4,548 female suicides. In the 18–29 age group, the corresponding numbers were 27,343 males and 17,527 females.[5]

When we turn to the overall trend in youth suicide rates, we find there are difficulties in doing so. From 1967, when the publication of post-independence suicide data commenced, until 1994, data for young males and females were not reported separately. In addition, until 1994, data were reported for the age group 18–29; in 1995 the age category was changed to 15–29; the categories were changed once again in 2014 when data were reported for 14–17 and 18–29 year olds. Including a significant group of younger Indians produces a lower overall suicide rate.

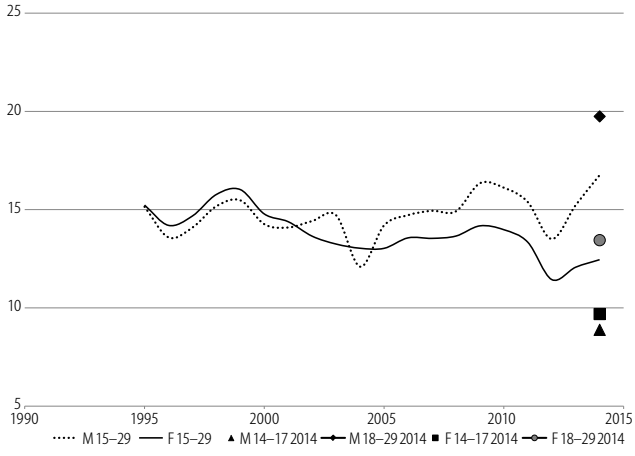
Figure 6: Suicide Rate for Males and Females in India (1967–2009)



Source: Computed by the author on the basis of NCRB data and Census of India, 2001.

Looking at Figure 6, we can see that, in broad terms, the youth and young adult suicide rate in India has been relatively constant at around 15 per lakh since 1967.[6] There was a pronounced dip which occurred in the late 1970s after which the 18–29 line started to rise continuously until the series was interrupted in 1994. When the new 15–29 series begins, it is—as explained—at a lower level at around 15 per lakh.

Figure 7: Suicide Rates for Males and Females in India (1995–2014)



Source: Computed by the author on the basis of NCRB data and Census of India, 2011.

In 1995, for the first time we are able to see the trends for males and females separately (Figure 7). As might be inferred from the relatively steady figures for all in the age group, there is little change in the rates since 1995. Although the rates for young women were slightly higher in the late 1990s, they were below those for young men in most of the subsequent years. Between 2004 and 2010, the rate for young men began to edge upwards; after a brief downward trend in 2011 and 2012, it appears once more to be increasing. The introduction of new age categories in 2014 allows us to see that while the rates for males and females between 14 and 17 are relatively low (8.9 and 9.7 respectively), the rates for the 18–29 age group are much higher. For males, the rate is 19.7 per lakh, for females, 13.4 per lakh.

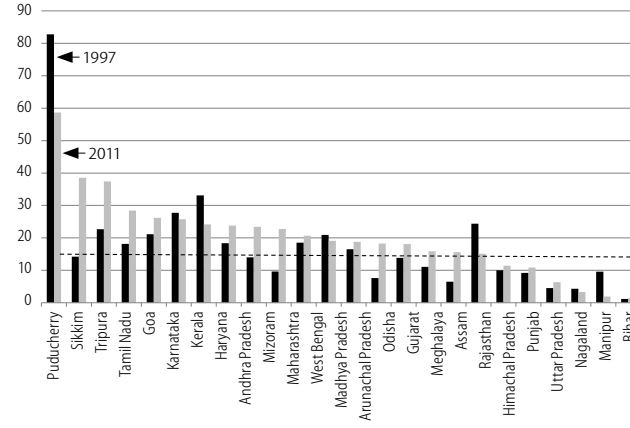
As relatively high as these rates based on official data are, they are lower than those computed by Patel et al (2012). Using the psychological autopsy method on survey data collected by the Registrar General of India, they have estimated the all-India suicide rate in 2010 for males aged 15–29 to be 25.5 per lakh; for females, the estimated rate was 24.9 per lakh (Patel et al 2012: 2345). They do not present separate estimates for individual states, presumably because of the limitations of the sampling method used to collect their data.

State-level Suicide Rates

So far, besides noting that youth and young adult rates in India are relatively high, there appears little worthy of note in the Indian data. However when we look at the data for individual states, quite a different story emerges.

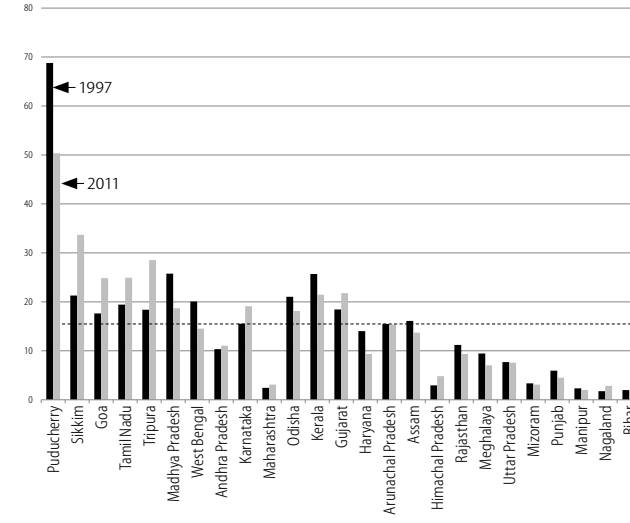
In the first article in this series, Mayer (2016), I presented a map which demonstrated that there is a very distinct regional pattern to completed suicides in India (something quite different from the narrow differences we find in Australia). Rates are lowest in the Gangetic Plain (except for West Bengal) and, are somewhat higher in the band of Deccan states (construed to include Gujarat and Odisha as well as Maharashtra, Madhya Pradesh and Andhra Pradesh). Finally, they are highest in the Dravidian south with the highest rates in Kerala and the Union Territory of Puducherry. Curiously, West Bengal has suicide rates which make it much more like the south than any of its neighbours.

Figure 8: Male Suicide Rates, Age 15–29, India, 1997 and 2011



Source: Computed by the author on the basis of NCRB data and Census of India, 2011.

Figure 9: Female Suicide Rates, Age 15–29, India, 1997 and 2011

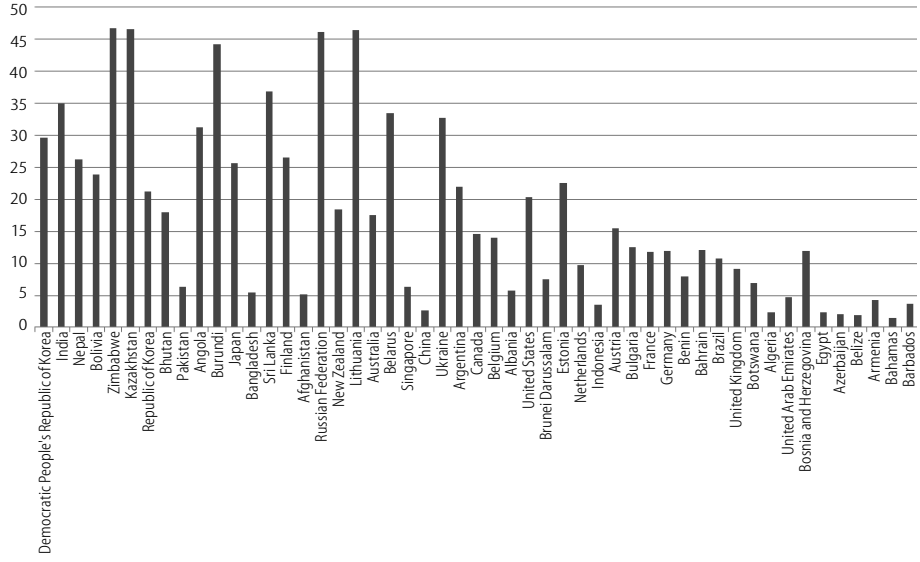


Source: Computed by the author on the basis of NCRB data and Census of India, 2011.

Figure 8 presents the youth suicide rates for teenaged and young adult males aged 15–29 in 1997 and in 2011. It can be seen that the rates in Puducherry in both years were astonishingly high and are very high in Kerala; however, the rates for both states were noticeably lower in 2011. The rate in Karnataka in 1997 was virtually the same as that in Australia at the peak of the youth suicide epidemic there; the rate for 2011 is somewhat lower. In Andhra Pradesh and Tamil Nadu, by contrast, rates had increased considerably by 2011.[7] Other states in which young male rates have increased are Arunachal Pradesh, Gujarat, Himachal Pradesh, Haryana, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Odisha, Punjab, Rajasthan, Sikkim and Tripura. Indeed, if we bear in mind the "15 per lakh equals crisis" rule of thumb, then young male suicide rates in 17 of the Indian states and territories were just below, or well above that rate. As usual, it is the Hindi belt—with the exception of Madhya Pradesh—which, in this case, lowers the national average.

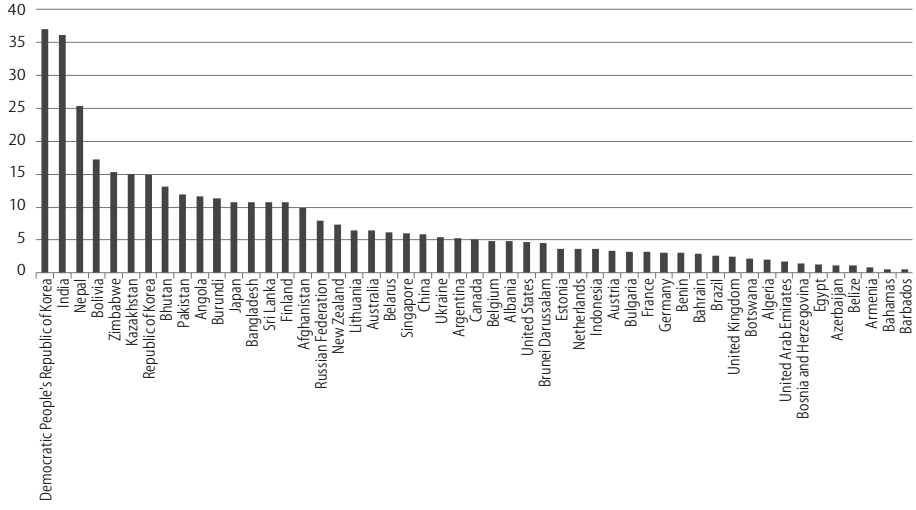
Figure 9 shows that the female suicide rates are at nearly the same high rates as those for males. In Puducherry, again, the rates are astonishingly high: in 1997 they were nearly 70 per lakh; they had come down to 50 in 2011, still an exceptionally high rate. In Karnataka and West Bengal, rates were about

Figure 10: WHO Estimated Age-specific Suicide Rates for Males 15–29, Selected Nations, 2012



Source: Computed by the author on the basis of WHO 2014b (Annex 1).

Figure 11: WHO Estimated Age-specific Suicide Rates for Females, 15–29, Selected Nations, 2012



Source: Same as Figure 10.

25 per lakh in 1997; they had fallen somewhat by 2011. In 1997, 13 states had rates at or above 15 per lakh; in 2011 there were 12 states at that level. The contrast with female suicide rates in Australia is pronounced: Australian rates for female suicides were more like those for Uttar Pradesh or Punjab. Thus, another notable fact about youth suicides in India is the comparatively high rates for young women. This is a sharp contrast with what is found in industrialised countries.

Indian Youth Suicide in the International Context

On the basis of data from around 2000, if individual Indian states were nations, then the 15 highest youth female suicide rates in the world would all have been Indian. Estonia, which had the highest non-Indian young female suicide rate (10.6), would have been number 16 (Mayer et al 2011: 120). Puducherry which had the highest young male suicide rate in the world (82.7) was far higher than Lithuania (44.9). Six of the 20 "countries" with the highest young male suicide rates in the world in 2000 were Indian.

Another, more recent international comparison can be made using World Health Organization (WHO) estimates of suicide rates for those aged between 15 and 19 for 2012 (WHO 2014b: Annex 1). Because the WHO data for India do not derive from NCRB records, it is not possible to interpolate our state-level calculations of rates.[8] With that caveat in mind, the WHO data for young male suicides indicates that the rates for young Indians were among the highest in the world. (Figure 10 presents data from an idiosyncratic but relevant selection of nations with which India may be compared.)

The WHO data for young females in the same selection of nations demonstrates that young Indian women take their own lives at rates which are nearly equal to the rate of North Korea, which is estimated to have the highest young female suicide rate in the world.

A further way to consider the seriousness of the burden of suicide is to compare it to other causes of death. According to the Registrar General (2002: statement 7), suicide deaths among young people aged 15–24 in India are almost five times higher than they are for the next most important cause, tuberculosis. For rural women, both young and in middle age (15–44) suicide is described by the Registrar General (2002: 35) as "the top killer in India."

What Is to Be Done?

We have seen that in Australia, when the rising trend of young male suicides began to be unmistakable, there was a broad professional, social and governmental response. The media drew public attention to the seriousness of the problem and made the findings of researchers available to a wider audience. Psychiatrists and relevant state and Commonwealth ministries sought to devise effective suicide prevention strategies. In particular, government commissioned major reports such as that headed by Gail Mason to advise on suicide prevention strategies. On the basis of that advice, national demonstration programmes were established, and successful models were then replicated on a national basis.

The seriousness of India's high youth and young adult suicide rates requires a vigorous and sustained response, a point which has been made by respected Indian authorities such as Vijayakumar (2007) and Patel et al (2012). Devising an effective

suicide prevention strategy will require experimentation and adaptation to local cultures and circumstances (Jacob 2008). Nevertheless, there is a rich literature on the experiences of many different countries from which it is possible to draw promising strategies.[9] These will necessarily need to focus on many different facets of the known causes of suicide. The WHO has collected data from many nations with suicide prevention programmes and has underscored the finding that prevention of suicide involves the management and treatment of mental health disorders, reducing abuse of alcohol, restricting access to pesticides and responsible reporting of suicide deaths by the media—in addition to tackling social inequality (WHO 2014b: 11).

The provision of mental health treatment will be a major challenge in circumstances when even the availability of preventive public health measures is not always adequate. International evidence indicates that better provision of antidepressant medicines could reduce suicides by almost 20% over a decade (Ludwig and Marcotte 2005: 257). There is a need to greatly increase the availability of doctors and psychological services, as well as an expansion of the provision of helplines and counselling by heroic suicide prevention non-governmental organisations (NGOs) such as Sneha, Maitreyi, Sumaitri, Samaritans and Lifeline. In addition, traditional attitudes which stigmatise mental illness will need to be addressed.

India has had many experiments with alcohol prohibition, but the evidence suggests that there have not been reductions in the incidence of suicide when prohibition has been in force (Mayer et al 2011, ch 13).

There is ample evidence which indicates that many suicides and suicide attempts are impulsive; this is especially true of adolescents (for a review of the literature, see Rimkeviciene et al 2015). In a frequently cited article, Brown et al (1991: 96) found in a study cohort aged between 12 and 17 that 66% of attempted suicides were impulsive. Reviewing earlier studies, Williams et al (1980) found impulsive suicides comprised between one-third and four-fifths of all suicides, with a modal proportion of two-thirds. Their own study found that 40% of their sample had acted on less than five minutes premeditation (Williams et al 1980: 90). Thus removing access to readily available means of self-harm should be part of any suicide prevention strategy.

Ingestion of pesticides is the means used in about 11%–15% of suicides in India. Thus methods of restricting ready access to pesticides must be part of any prevention strategy. Sri Lanka's experience in restricting the use of the most toxic varieties of pesticides is likely to be relevant to India (Gunnell et al 2005a). Vijayakumar et al (2013) and Vijayakumar and Babu (2008) have shown that both village pesticide lockers and "no pesticide" farming practices have the potential to reduce rural suicide rates in India.

Hanging is the means adopted in around 40% of cases in India. It is, obviously, virtually impossible to restrict access to attachment points. Gunnell et al (2005b) suggest that "the most fruitful approach to tackling the rise in hanging suicides may therefore be through population-based initiatives to reduce the popularity of this method." They suggest that the media may play a critical role here "to reduce the portrayal of fictional sucidies by hanging and the reporting of hanging suicides" (Gunnell et al 2005b: 439).

More broadly, the role of India's media will be critical to the success of suicide prevention strategies. By contemporary international journalism standards, too much reporting of suicide in India is seriously outdated and potentially dangerous. There appears to be little, if any, awareness of guidelines for responsible reporting, such as those developed by the Reporting on Suicide (2015) and Mindframe (2016). It will be essential to develop appropriate resources for India's diverse media. This is important as responsible media coverage of suicide has been shown to have a positive impact on reducing suicide rates (Gould et al 2014). In addition to avoiding sensationalist headlines and specification of methods used in suicide deaths, responsible media coverage should provide information on suicide prevention, such as sidebars on warning signs, and should also provide links to suicide prevention NGOs to anyone who may entertain suicidal thoughts.

In addition to the facets highlighted by the WHO, there are important aspects from existing prevention programmes which are important. To recapitulate some from the Australian experience alone, these include: educational information and programmes for parents; educational materials for schools and young people; the provision of information and advice for primary health workers and the dissemination of materials and information which increase community knowledge about the warning signs of suicide.

Underlying all of these potential approaches must be accessible factual information. In this article, I have presented information on youth and young adult suicide rates at the national and state levels in India which I have calculated. The NCRB does—let it be said loudly—an outstanding job of reporting statistics on crime, accidental deaths and suicides, but it does not currently report suicide rates by age, gender and state.[10] As with their figures for farmer suicides, these are reported as raw numbers, not as rates per lakh. In addition, the reported age categories often change for reasons which are not well explained. This makes it difficult to compare "like with like" and to readily study trends. The provision of this important health information on suicide rates by internationally comparable age categories should be routinely included in the annual reports prepared by the NCRB.

In addition, the scope of suicide reporting should be greatly expanded. At present, the NCRB reports crimes such as homicide by state, major city and district. Suicides are only reported at state and major city levels. Yet, in 2014 there were 33,981 homicides compared with 1,31,666 suicides—a ratio of almost 1:4. District-level data are essential in framing a national suicide prevention strategy. One further desirable policy change would be for the NCRB to report data on occupations using the categories established by the Census of India.

Conclusions

I began this paper by considering the rising wave of scholarly investigation, media discussion, public anxiety and policy responses by governments, both state and Commonwealth, which occurred in Australia when young male suicide rates

rose over 15 per lakh in the 1980s. I wondered why—despite young male suicide rates which in some instances are higher than those in Australia and female suicide rates which in most cases are far higher than those elsewhere in the world—there is no comparable focus or intensity of public concern in India?

I think there are at least two plausible explanations. The first has to do with the way the media "frames" the issues it chooses to cover, a subject which was the focus of the first article in this series. As I noted earlier, my impression is that the attention which the media give to farmer suicides, for example, is not principally directed at suicide prevention. Rather it is a journalistic convention, if you will a cliché, used to highlight rural distress. There is in such stories often an implied (and sometimes an explicit) criticism of the agricultural policies of the government, especially of market liberalisation. I have searched in vain for media articles which discuss what kinds of programmes aimed at suicide prevention might be successful and effective in the Indian context. While there have been a number of thoughtful studies of farmer suicides, I am not aware of any media articles which have proposed regulating the toxicity of pesticides, educating rural Indians about the warning signs of suicide or proposed greater investment in rural mental health or the provision of services to counsel those contemplating taking their own lives (Bhalla et al 1998; Iyer and Manick 2000; Dandekar et al 2005; Vidyasagar and Chandra 2003). In this regard, the contrast with the response to youth suicide in Australia is very evident.

The second reason why youth suicides do not receive the concern and attention, which in my opinion as an outsider, they urgently require is, as I have noted, that the information required to grasp the gravity of the issue is not readily available. Straightforward changes to the way the NCRB presents its annual suicide reports would render the hitherto invisible, instantly visible. This should be done as a matter of urgency.

If we attempt to project trends into the future, the picture is possibly a bleaker one. There was a reasonably strong correlation between rates of literacy, especially female literacy, and overall rates of suicide (r =0.72, significant at .002) in the Indian states in the early 1990s. At that time, the south, especially Kerala, led the nation in the progress of literacy and as we have seen, also had the highest suicide rates. As levels of literacy have risen in once lagging states, primarily in central India, the level of correlation has fallen. As we have seen, in central India, youth suicide rates have tended to increase between 1997 and 2011. If the trend we observe in central India "moves north," it may be reasonable to anticipate that levels of youth suicide, especially in the rest of the Hindi belt, will rise in the future. And, as I have argued in this paper, if youth suicide levels in southern India are already at or above crisis levels, then the nation may have only a few years to prevent a nation-wide youth suicide catastrophe. The one trend which may offer a spark of hope is that the very high rates once prevalent in Puducherry and Kerala have tended to moderate in recent years.

Let me end by citing the WHO, "Suicides are preventable. For national responses to be effective, a comprehensive multisectoral suicide prevention strategy is needed" (WHO 2014a: 9). One can only hope that if the national and state governments and the media do begin to respond to this serious issue with the urgency it requires, much can be done in the Indian context to prevent the senseless loss of young lives.

NOTES

1 We may note, in passing, that as in most industrialised countries, young female suicide rates are between one-third and one-quarter of those for young males (WHO 2014a: 11) for a map of male:female suicide ratios in the world.

2 Olijnyk cited an article from *Age* in 1979 which reported "that suicide rates among young people are increasing thoughout the 1970s." Olijnyk (1979) also reported a study by the Victorian Mental Health Authority in 1977 which reported very high rates of attempted suicide among those who were unemployed.

3 An earlier conference on the theme *Youth Suicide: The Australian Experience* was held in Sydney in 1987. I have not been able to locate any papers presented at that earlier conference.

4 For a detailed summary of the various reports presented during the 1990s, see Mitchell (2000).

5 There is a minor amount of double-counting here. There were 34 male suicides by farmers in the 14–17 age group and 1,131 in the 18–29 age group. In the corresponding age groups, there were 22 and 169 females.

6 I have explored some possible causes of the late 1960s fall in suicide rates in Mayer et al (2011).

7 Joseph et al (2003) conducted verbal autopsies in 85 villages in the Kaniyambadi taluk in the Vellore district in Tamil Nadu for the period 1994–99. They found that the mean suicide rate for the period was 95.2 per lakh, several times higher than officially reported rates. For males aged 15–24, the average suicide rate was 96 per lakh; for females in that age-group, the rate was 164 per lakh.

8 The NCRB reported 1,35,445 suicides in 2012. The WHO estimated the number at 2,58,075 (2014b: 83).

9 Among many sources, see Appleby (2012); Beautrais et al (2005); Cheng and Lee (2000); Crane et al (2005); De Leo and Milner (2010); Goldney (2013); Lapierre et al (2011); Martin and Page (2009); Phillips et al (2008); Vijayakumar L et al (2005); Wu et al (2012); Stoney (2002); WHO (2010).

10 Indeed, *Accidental Deaths and Suicides in India, 2014* (NCRB 2014), the tables for age and gender by state are not available in the published report and are only available online.

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