New evidence of suicide epidemic among India's 'marginalized' farmers

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Agriculture is the backbone of India Credit: Vinoth Chandar

A new study has found that India's shocking rates of suicide are highest in areas with the most debt-ridden farmers who are clinging to tiny smallholdings – less than one hectare – and trying to grow 'cash crops', such as cotton and coffee, that are highly susceptible to global price fluctuations.

The research supports a range of previous case studies that point to a crisis in key areas of India's agriculture sector following the 'liberalisation' of the nation's economy during the 90s. Researchers say that policy intervention to stabilise the price of cash crops and relieve indebted farmers may help stem the tide of suicide that has swept the Indian countryside.

This latest work follows on from a recent *Lancet* study by researchers from the London School of Hygiene and Tropical Medicine (LSHTM), which showed Indian suicide rates to be among the highest in the world – with suicide the second leading cause of death among young adults in India.

In 2010, 187,000 Indians killed themselves – one fifth of all global suicides.

However, while the *Lancet* study revealed suicide rates in rural areas to be almost double those of urban areas, and the most common method of suicide to be deliberately ingesting pesticide, the LSHTM authors did not believe they had enough evidence to show suicide rates are higher in farmers.

Suicide rates vary sharply across the different Indian states. Building on the LSHTM study, researchers from Cambridge and UCL analysed suicide figures of 18 Indian states – as well as national crime and census statistics and surveying done by the Ministry of Agriculture – to create data models that investigated whether case studies of "farmer suicide" that concentrate on a few suicide hotspots could be generalised across India.

The team, from the Cambridge University's Department of Sociology and University College London's Department of Political Science, say they have found significant causal links showing that the huge variation in suicide rates between Indian states can largely be accounted for by suicides among farmers and agricultural workers.

Farmers at highest risk have three characteristics: those that grow cash crops such as coffee and cotton; those with 'marginal' farms of less than one hectare; and those with debts of 300 Rupees or more. Indian states in which these characteristics are most prevalent had the highest suicide rates. In fact, these characteristics account for almost 75% of the variability in state-level suicides.

The researchers say the results of their statistical analysis support many case studies and reports from the field and suggest there is a suicide epidemic in marginalised areas of Indian agriculture that are at the mercy of global economics. The study is recently published online in the journal *Globalisation and Health*.

"Many believe that the opening of markets and scaling back of state support following the liberalisation of the Indian economy led to an 'agrarian crisis' in rural India – which has resulted in these shocking numbers of suicide among Indian agricultural workers," said lead author Jonathan Kennedy.

"Small scale farmers who cultivate capital-intensive cash crops – which are subject to massive price fluctuations – are particularly vulnerable to accruing debts they can't repay. Many male farmers – who are traditionally responsible for a household's economic well-being – resort to suicide because they can't support their families."

The researchers found that suicide rates tend to be higher in states with greater economic disparity – the more unequal the state, the more people kill themselves – but inequality as a predictor of suicide rates paled in comparison with cash crops and marginalised, indebted farmers.

The state of Kerala – one of the most developed in India – has the highest male suicide rate in India. If Kerala were a country, it would have the highest suicide rate in the world.

Areas such as Gujarat, in which cash crops are mainly cultivated on large-scale farms, have low suicide rates. This is because wealthy cash crop farmers have the resources to weather difficult economic periods, says Kennedy, without falling into debt and ruin.

Another outlier is West Bengal, which has high numbers of smallholders but an average suicide rate: but this is an area in which the Communist Party of India (Marxist) – who have an "unrivalled commitment" to improving the lot of poor farmers – have had a strong political influence over the past four decades.

The researchers say their study points to a vicious cycle of Indian smallholders forced into debt due to market fluctuations. While 300 rupees – the debt figure analysed in the study – only amounts to $5, the government defines a mere 25 rupees as an adequate daily income in rural India.

The shame and stress of no longer being able to provide for their families has resulted in hundreds of thousands of male farmers, and in many cases their wives too, taking their own lives by drinking the modern pesticides designed to provide them with bountiful harvests – a truly horrific end as the chemicals cause swift muscle and breathing paralysis.

Added Kennedy: "The liberalisation of the Indian economy is most often associated with near-double digit growth, the rise of India as an economic powerhouse, and the emergence of wealthy urban middle classes. But it is often forgotten that over 833 million people – almost 70% of the Indian population – still live in rural areas.

"A large proportion of these rural inhabitants have not benefited from the economic growth of the past twenty years. In fact, liberalisation has brought about a crisis in the agricultural sector that has pushed many small-scale cash crops farmers into debt and in some cases to suicide."

Provided by University of Cambridge