Financial Aspect of Indian Suicides in 2015

Poduri Gopala Sarma

ABSTRACT

Background: There is an increasing need for cost computation of every aspect of human behavior for planning. Objective: This objective of the study was to compute the cost of suicide in India in 2015. Materials and Methods: Official data on suicides and life expectancy in 2015 formed the basis for computation of years of presumed life lost and total years of life lived (TYLL). Market rate and official estimates of various expenditures – pre- and post-suicide – formed the basis for loss and gain computation. The difference between income and expenditure formed the total cost. Results: A total of 133,623 persons committed suicide in 2015. They lost 4,349,158 years in total while living for slightly more period of 4,777,293 years. Postsuicide, the expenses were 152,233.8 trillion with a saving of 29,200 trillion. During the lifetime they lived, these people generated an income of 1,672,198 trillion and cost 320739.3 trillion. The net cost of suicide was ₹ 149,313.9 trillion. Conclusions: Although suicide cannot be prevented completely, much monetary loss can be minimized with adequate preventive tailor-made strategies.

Key words: Assets-years of presumed life lost, suicide-cost-short-term, total years of life lived

INTRODUCTION

Ever since the money came into existence, it started progressively controlling humans in all aspects. Money is ubiquitous and necessary all through the life. Money impacts live and dead alike. If it is not there, even the dead are deprived of due procedural ceremonies. Suicide is a public health hazard and ranks high among deaths in India. With such a high rate and consequent wastage of human resources' and investment, the cost of suicide is bound to be high. Presumed years of life lost, till now formed the basis for cost computation of suicides. The financial aspect of years lived was not taken into consideration. The person cannot enjoy his/her earnings which become a waste due to premature death by suicide. There were no major reports on financial aspects of suicide from India so far. Hence, an exercise was undertaken to compute the net cost of suicide in India, for the year 2015.

MATERIALS AND METHODS

The latest data on suicides available from NCRB[1] formed the basis for analysis. Simple deduction of average of the age group from the life expectancy for the relevant period gave years of presumed life lost (YPLL). This in turn multiplied by the

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number of deaths in that age group gave total YPLL. Similarly, TYLL deducting YPLL from total possible years of life \(((\text{Average from the age group } \times \text{ life expectancy}) - \text{YPLL}) \times \text{suicides}\) gave total years of life lived (TYLL).

The computation followed broadly that of another study.\textsuperscript{3} The economic cost estimation involved taking liabilities (expenses) and assets (savings) into consideration of both YPLL and TYLL assets for the former become liabilities for the latter and vice versa. Some of the transactions can occur only postsuicide-police investigation, postmortem, transport, funeral, and recurrent death-related expenses, governmental compensation, and insurance. Market rate and official statistics formed the basis for computation. When the relevant years’ data were not available, the available data were computed for the index period. Most of the Hindus conduct ceremonies monthly in the first year and annually subsequently for the deceased. Not all people observe this practice, and for children and bachelors, this practice is generally not followed. Since other communities are also there among suicides and the above practice of annual ceremonies among Hindus is progressively decreasing, an arbitrary 40% of those between 18–60 years was taken for computation of recurrent death-related expenses.

**Income**
Income data given in NCRB statistics taking the middle of the income bracket formed the basis for computation. Based on the income, taxes followed presuming the use of exemptions from the prevailing rates.\textsuperscript{4} Routine maintenance expenses involved deduction of one-third income.\textsuperscript{5}

Productivity was computed based on gross domestic product (GDP) for the year using world bank statistics.\textsuperscript{6}

**Lost assets (potential organ transplants)**
The value of transplantable organs was computed by taking average rate of cadaver transplants in general population,\textsuperscript{7} excluding population below 18 years and above 60 and average market value for transplantation.

**Education**
The relevant age group (<18 years) and the average cost from KG to PG based on local averages apart from other sources\textsuperscript{8} were used to compute the education costs. This was adjusted to literacy rate as per NCRB data. One-year expenditure of this study was multiplied by average study period taken as 12 years. For TYLL, depending on the education as given in NCRB statistics, number of study years was computed.

**Medical expenses were computed under three categories**

**General medical expenses**
The national spending of 4% of GDP, both governmental and private, formed the basis for computation.\textsuperscript{9}

**Illness treatment**
Eighteen percent committed suicide due to illness. They must have spent on an average 1 Lakh rupees on treatment during their lifetime and would have continued to spend the same amount further had they lived.

**Treatment expenses for the attempt that led to death**
About one-fifth of patients might have had treatment in AMC/emergency setup before dying for the unsuccessful treatment of the attempt that culminated in death, it must have costed a minimum of 1 Lakh per patient.

**Insurance**
From official insurance statistics\textsuperscript{10} coverage and from settlements, proportionate amounts formed the basis for calculation of insurance amount paid.

**Governmental compensation**
Telangana Government gives compensation for farmers’ suicides to families of the victim. This formed the basis for compensation computation for all persons with agriculture as occupation as per the NCRB statistics.

All computations were done in Excel spreadsheet.

**RESULTS**
There were 133,623 suicides in the year 2015. If all those who have committed suicide lived up to the possible life expectancy of 68.3 years, it would have been total years of life of 9,126,451, but they lived for 4,777,293 years only (TYLL).

The net cost of suicide was 149,313.9 trillion.

Table 1 gives details of gain and loss account of suicide.

Compared to the suicide cost, presuicide period was productive with a net gain of 135,145.9 trillion.

**DISCUSSION**
Financial experts may question the rationale for considering the money earned and spent, in the presuicide period (TYLL) in cost computation of suicide, but in Layman’s financial reasoning, the premature death by suicide has made this a waste and hence should be considered as a financial burden of the act. Further, the person was prevented from enjoying the fruits of his earnings. Keeping the financial technicality
Table 1: Gain and loss account of suicide years of presumed life lost

| Loss                                                                 | Million (£) |
|----------------------------------------------------------------------|-------------|
| Treatment expenses for the attempt that led to death (20%)          | 2673        |
| Treatment of 18% (illness suicides)                                 | 2405        |
| One visit by 20% before attempt                                     | 15          |
| Police investigation postmortem and transport expenses               | 2004        |
| Funeral expenses                                                    | 8017        |
| Recurrent death-related expenses                                    | 8259        |
| Compensation paid by insurers                                       | 19          |
| Compensation paid government                                        | 3781        |
| Lost income/wages                                                   | 87,598,348,400 |
| Lost productivity                                                   | 64,635,425,620 |
| Lost assets (potential organ transplants)                            | 382         |
| Lost taxes                                                          | 818         |
| Total                                                               | 152,233,802,390 |

| Gain                                                                |             |
|----------------------------------------------------------------------|-------------|
| Education (YPLL)                                                    | 31,122      |
| Medical expenses (YPLL)                                             | 23,528      |
| Maintenance (YPLL)                                                  | 2,919,944,947 |
| Total                                                               | 2,919,999,600 |
| Excess loss over savings (net loss)                                 | 123,034,290,270 |
| Total                                                               | 152,233,802,390 |

Net cost: (cost savings) = 152,233,802,390 – 2,919,999,600 = £149,313.9 trillion. YPLL – Years of presumed life lost.

in view, they were not clubbed but given separately to understand the cost involved.

Discounting\(^{(11)}\) or age restriction in the computation was not done to compensate for the changes in income, productivity, cost, etc., over the years.

Income data given in the official statistics and not per capita income formed the basis for computation of loss of projected income, tax, and maintenance. Projection could be wrong because computation did not take periodic wage and tax changes into consideration. If the costs of abetment of suicide cases are included such as police, court, lawyer, legal expenses to persons, and prison costs if convicted, etc., the cost of suicide will go up.

Likewise, if the lost commission to agents, insurance company’s profits loss and proportionate reduction in bonus and dividends to the shareholders are also included, the financial cost will go up.

If YPLL and TYLL were calculated based on sex and life expectancy at different ages instead of total years of life expectancy, the lost years will go up with proportionate financial implication.

By paying only pension and not full salary, the savings will be half of the presumed total salary. This cannot be taken as saving because that post is to be filled by a family member on a compassionate ground or new person will occupy it. Hence, the pension paid to the family is a burden to the exchequer.

A person possesses valuable and harvestable organs - the list of these is increasing with research. These are liable to be used while alive or immediately after death. Apart from this, blood can be donated. All these are lost with premature death. The process of use of these parts is costly. The concept organ donation is increasing due to public awareness.\(^{(3)}\) In the future, computation of the lost assets should be organ based to arrive at the correct cost of suicide.\(^{(3)}\)

Unemployed (though unemployed does not mean unproductive) constituted 7.5% among victims and 53.5% were educated up to middle class only. The bulk of them have income < 1 Lakh per annum. Nearly one-fifth (18%) was ill most of them requiring costly and chronic treatment. Apart from this, 2.8% belong to drug abuse/addiction category. All the above, barring a few, are dependent on others financially. Taking all these into consideration, the burden on the caregiver is heavy, which was not included.

This is a theoretical economic cost approach to suicide that does not involve emotions, sentiments, finer human values. Analysis of cost-effectiveness of various programs does not involve emotions, sentiments, and finer human values.

Suicidal persons have less dense social networks, a sign of fewer potential grievers than in the case of natural deaths.\(^{(12)}\) As most of these cases to some extent were unwanted, the emotional loss to the family is largely not much. Further, a financial computation is not warranted on the basis of the author’s experience where caregivers expressed the hope that the person is better dead than alive. This, to a considerable extent, is substantiated by mushrooming old age homes where persons are kept to languish. Further if one considers the unemployed (7.5%); ill persons (18.0%); addiction (2.8%); students (6.1%), etc., one can understand the financial strain on the family. Thus, in most of the cases, there are less or no grievances for them.

Further, the results are to be interpreted keeping the following also in mind:

Older people are finding more employment in view of their experience, stability, and tendency of not jumping jobs unlike younger people.

Females have a more longevity compared to men.
Longevity is increasing along with attendant physical ailments and consequent financial stress due to heavy medical bills.

The above was not incorporated into the present computation. If they were also incorporated, the financial cost will be more.

Bijou Yang and David Lester were the first to see savings for society from suicides.[13] Many persons survive on the health and death of others more so by suicide. Medical and allied pharmaceutical industry, law and its implementing agencies, death-related ceremonies performing people, etc., are all beneficiaries financially of death by suicide. This is the other dimension of the financial aspect of suicide that needs attention. Taking the official statistics is the biggest drawback of the study as suicides are grossly under reported. Since this is a theoretical exercise, there is no option but to fall back on it and for comparison purpose, official statistics are the only way.

Even though one should realistically live in a post-truth world and not get emotions dictate opinion, one should follow welfare economics from the discipline of economics.[14] Investment in educating the vulnerable, crisis intervention, expansion, and easy access to psychiatric services will bring down the number of suicides even if it cannot be eliminated.[3] As the present computation shows a heavy financial burden, there is no need to fall back on welfare economics in India, to vigorously pursue suicide prevention measures.

CONCLUSION

Suicide costs heavily and tailor-made remedial measures to minimize them are needed to be taken on a war footing.

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Conflicts of interest
There are no conflicts of interest.

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