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## SPATIAL AND CAUSAL DIMENSIONS OF SUICIDE IN INDIA

**Avanesh Kumar Singh**

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**Abstract:-** Suicide is a major global concern as each suicide is not only personal tragedy that prematurely takes the life of an individual but also has a continuing ripple effect, dramatically affecting the lives of families, friends and communities. Every year, more than 800 000 people die by suicide – one person every 40 seconds. It is a public health issue that affects communities, provinces and entire countries. Young people are among those most affected; suicide is now the second leading cause of death for those between the ages of 15 and 29 years globally. The numbers differ between countries, but it is the low- and middle-income countries that bear most of the global suicide burden, with an estimated 75% of all suicides occurring in these countries.

**Keywords:** Spatial and Causal Dimensions ,global suicide burden.

### INTRODUCTION

Suicide issue in India is alarming as compared to world level. In 2013, estimated people committed suicide is 842000 (WHO) while total number of suicide cases registered in India in the same year was 134799. India accounts the highest estimated number of suicides in the world (WHO). Most suicides in the world occur in the South-East Asia Region (39 per cent of those in low- and middle-income countries in South-East Asia alone) India has by far the largest number of suicides in the world, accounting for nearly more than twice as many as China, which is second on the list. India in 2009 had nearly 2.6 lakh suicides, dwarfing China's 1.2 lakh. It also has the highest rate of suicides among young people; those aged 15 to 29 years. According to the National Crime Records Bureau, suicide is among the top ten causes of death in India. Suicide is also among the top 3 causes of death in India between 16 and 35 years. The number of suicides in the country has risen from 40,000 in 1968 to 1.3 lakh in 2013 which means an increase of more than 300 percent in five decades. The national incidence rate stands at 11 per 1 lakh per year. Pattern of suicide in a region depends upon variety of factors, ranging from availability and access of the method, to the socio-economic status of the individual and also not to forget the prevailing cultural and religious influences. Knowing the pattern of suicide in an area not only helps in early management of such cases but also suggests taking earliest preventive measures. It is necessary for the death investigators to be aware of the common scenarios, risk factors, methods and victims as well as pitfalls that may be encountered.

Therefore, it is a question of geographical interest to analyse spatial and demographic variation of suicide in India.

### 1.2: OBJECTIVES OF THE STUDY:

Aim of the study is to give an overview about the current status of suicide mortality in India by region, and age, and gender.

**Major objectives of the study are as follows –**

- To analyse spatial patterns of suicide in India at state level
- To describe age and gender variation of suicide victims in India
- To highlight major causes of suicide in India

### 1.3: DATABASE AND METHODOLOGY

Present study is based on secondary sources of data; mainly Census of India, 2011, National Crime Bureau Report of India, 2013 and WHO Publications on Suicide. Inadequacy of data in this field is a challenge for researchers and policy makers. With the efforts of WHO since 2005, only a third of the world's countries have complete civil registration systems that yield adequate cause-specific mortality data for health policymaking and monitoring (Rao) Since the improvements of 2 decade efforts have been visible as more countries report data and worldwide estimates are regularly made.

Using suicide data of 2013 and 2011 population census data, the study first described the spatial patterns of Suicide in India at state level. Mapping of age-standardised suicide rates across states in India is next part of the study.

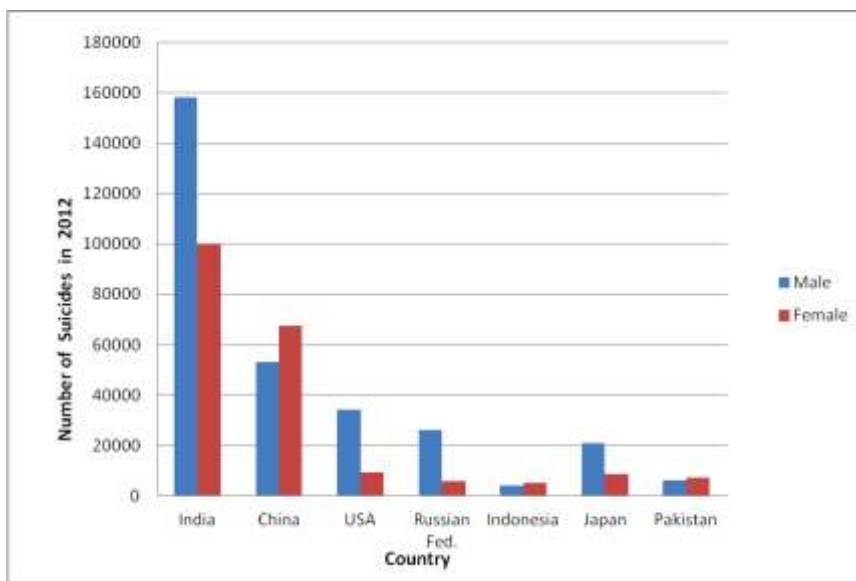
### 1.4: LITERATURE SURVEY:

There are not that many publications that attempt to analyse the statistics of completed suicides in the whole world. The main reasons for that are probably the deficiencies in the availability and reliability of data. In 1989 Diekstra published suicide rates in 62 countries in connection with analysing socio-demographic trends proposing explanatory theories for international differences. Out of nine top countries only Hungary and Sri Lanka were not from Western Europe. Due to political changes during the past 20 years the number of countries reporting to the European region of the WHO has grown nearly by half. In 1999 Schmidtke et al. gave an update about suicide rates in the world and reflected this change. The main improvement in data had been in Europe. In 2002 Bertolote and Fleischmann included improved material from the WHO to make predictions about perspectives of suicide far into the future. They followed it up with several articles and summarised their findings in an article about the global perspective of suicide mortality in 2009.

With hindsight it seems that efforts to provide data about injury mortality were stepped up considerably from 2000. Injury mortality includes accidents, suicides, homicides, deaths of undetermined intent and war-related deaths. Reza et al. Publication and Krug's report about violence and health in the world documented the new approach. While a lot of data about injury mortality in the world is still lacking or is of questionable quality and according to Rao of the WHO in 2005 only a third of the world's countries have complete civil registration systems that yield adequate cause-specific mortality data for health policymaking and monitoring, the improvements on 20 years ago have been visible—more countries report data and worldwide estimates are regularly made. The aim of the study is to give an overview about the current status of suicide mortality in the world in general and India in special.

### 1.5: DISCUSSION AND ANALYSIS:

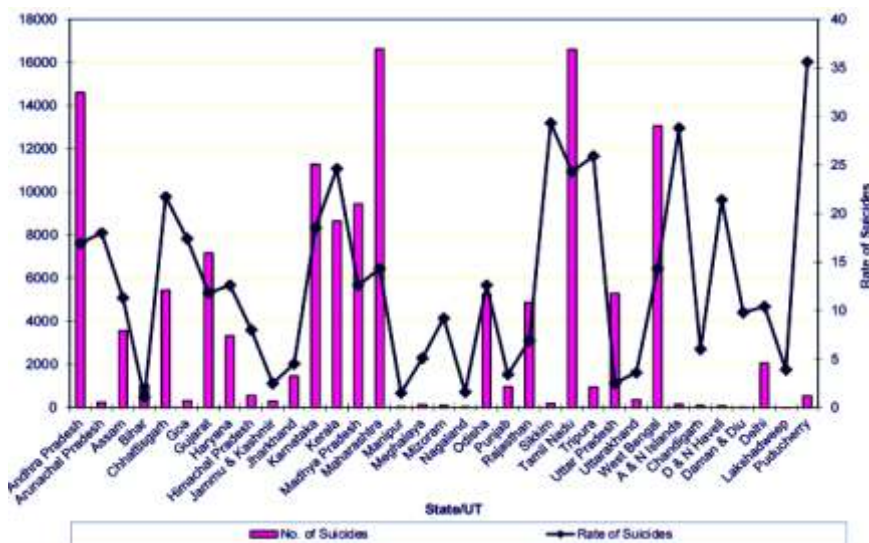
On the global scenario, data of suicide in India is very alarming. The spatial mapping of suicide rates across the world exhibited a different pattern between males and females. While the highest suicide rates tended to cluster in most populous countries of the world. First of all, the present study describes the severity of suicide problem in India. According to the recent WHO report (2014), India seems to be suicide capital of the world. If we compare the suicide data with China, India register above double suicide cases than second largest country of suicides. The suicide case of male population in India is more alarming. Total registered male suicide (2013) in India is 158098 that are more than top five other countries of the world i. e. China (53188), USA (34055), Russian Fed. (26212) Japan (20888).



**Figure 1.1: Suicide in different countries of the World**  
(Source: Suicide Prevention, WHO, 2014)

**1.5.1: Spatial Distribution of Suicide in India:**

The highest incidents of 16,622 suicides were reported in Maharashtra followed by 16,601 suicides in Tamil Nadu accounting for 12.3% each of total suicides. Andhra Pradesh (14,607 suicides), West Bengal (13,055 suicides) and Karnataka (11,266 suicides) accounted for 10.8%, 9.7% and 8.4% respectively of the total suicides reported in the country. These 5 States together accounted for 53.5% of the total suicides reported in the country. The remaining 46.5% suicides were reported in the rest of 23 States and 7 UTs. The most noticeable fact is that Uttar Pradesh, the most populous state (17.0% share of country population) as well as Bihar has reported comparatively lower percentage share of suicidal deaths, accounting for below 5% of the total suicides reported in the country. It may be safely concluded that southern India have registered more suicide than northern states because 8 states have suicide number is more than 8000. Six of them are from southern part of India and only two northern states (West Bengal and Madhya Pradesh) are from Northern part of the country. Delhi has reported the highest number of suicides (2,059) among UTs, followed by Puducherry (546). Seven UTs together accounted for 2.2% of total suicides in the country.



**Figure 1.2: Total Number & Rate of Suicide in India at State Level**

The absolute number of suicide cases does not represent the real status of suicide in states. Rather it is better represented by rate of suicide that the number of suicides per one lakh population, has been widely accepted as a standard yardstick. The All India rate of suicides was 11.0 during the year 2013. Again, Southern India register higher suicide rates compared to Northern India. Maximum suicide rate of 35 has been registered in Lakshadweep. Andhra Pradesh, Tamilnadu, Kerala , Karnataka and Maharashtra have registered suicide rates over national average while bigger states of Northern India such as Uttar Pradesh, Bihar, Rajsthan have registered lower level of suicide rate compared to national average. It is noted that states with low population base has registered higher suicide rate. Main reason seen to be average of low population resulted into fluctuated rate of suicide.

### 1.5.2: Suicide Victims by Sex and Age Group in India

It is very important to analyse suicide incidence among different age and sex groups because tendency of suicide tend to indicate age and sex specific inclination. Usually, children and old people shows less suicidal tendencies compared to young people. In Indian scenario, child and people over 60 years have registered least number of suicides.

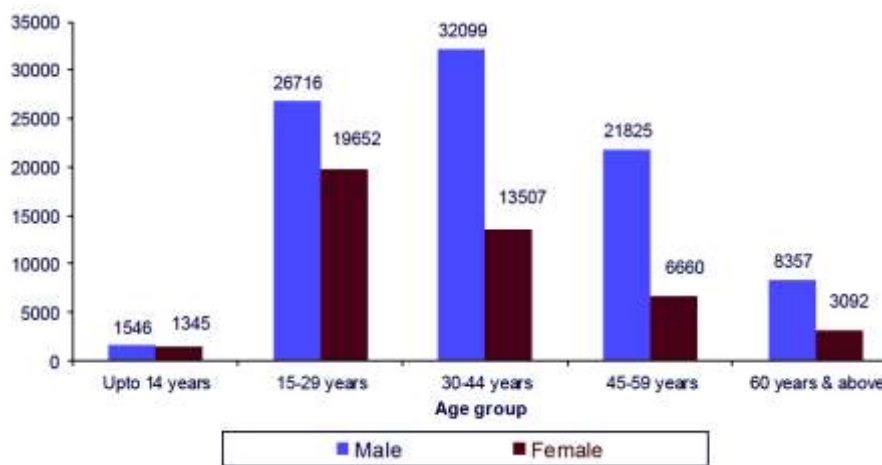


Figure 1.3: Suicide Victims by Age and Sex Group (2013)

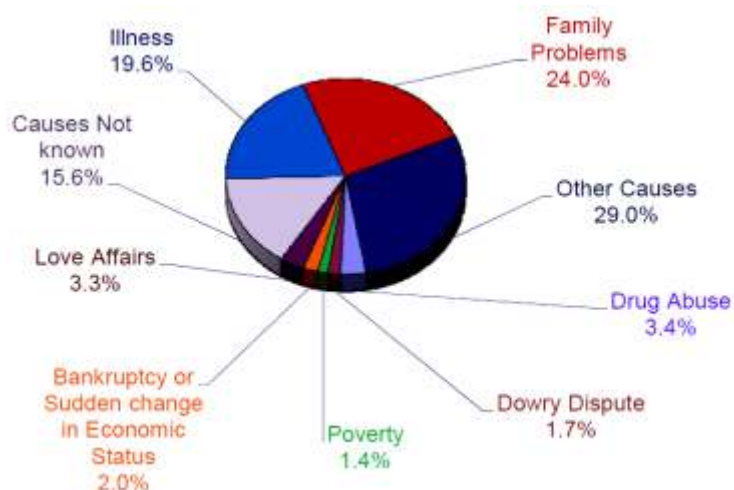
However, old male people register more than double number compared to old ladies suicide numbers. Gap between male/ female suicide are high in old age category.

Most sensitive age category in terms of suicide is 15 to 29 years and 30 to 44 years.

Most suicidal age for male is 30 to 40 years but for female; it is 30 to 44 years age group. It is notable that female are very less vulnerable to suicide in 44 to 59 age group while suicide number of male are still very high.

### 1.5.3: Various Causes of Suicide in India

Most people who choose to end their life do so for complex reasons and in many cases, suicide is also linked to feelings of hopelessness and worthlessness. These feelings are associated with myriad of external factors. The present study trying to figure those different factors associated with incidence of suicide. In Indian scenario, major factor of suicide is family problems. Complexity of modern day life and vanishing family ties and crisis of relation is resulting into major cause of suicide. More than quarter of suicidal cases in India is associated with family problems. Second single major factor of suicide in India is Illness. Complexity of modern day life is creating not only complex life style but alteration of environment is also deteriorating living condition resulting into critical physical and mental illness to human being. Sick mental and physical condition induces suicidal thoughts in human being. Poverty, unemployment, bankruptcy etc also induce suicidal tendencies but



**Figure 1.4: Factors of Suicide in India**

their role is less significant in Indian scenario. Due to complexity of suicidal cases more than 15 % cases are yet to be identified and more than 29 % cases are result of complex factors.

#### **1.6: Limitations of the Study and Implication for Further Research:**

Understanding the spatial distribution of suicide can inform the planning, implementation and evaluation of suicide prevention actions. No previous study has assessed spatial clustering of the different methods of suicide in India. The pattern of suicide rate was different among men and women. These findings suggest that it is important to take geographical variations into account in national policy and health services planning. But reliability and adequacy of data is big pitfall. There are not that many publications that attempt to analyse the statistics of completed suicides in India. The main reasons for that are probably the deficiencies in the availability and reliability of data. In Indian scenario, it seems underreporting if suicidal issues are big problem. This is shown by very low figure of suicide cases of big populous states of Uttar Pradesh and Bihar. Therefore reliable data collection and authenticity of registration is very important at government level to highlight the alarming issue of increasing suicide cases in India for further research and mitigation.

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