

# **Suicide Analysis Dashboard**

## **Brief Description of Data report**

The **WHO** Suicide Dataset gives insights on the suicide/mortality rate over the span of 37 years from 1979-2016 by country, age groups, population and gender.

These statistics can be used to know the causes of suicides in various countries & curb/reduce the suicide rates by implementing measures.

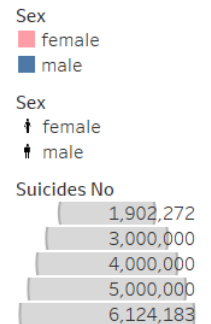
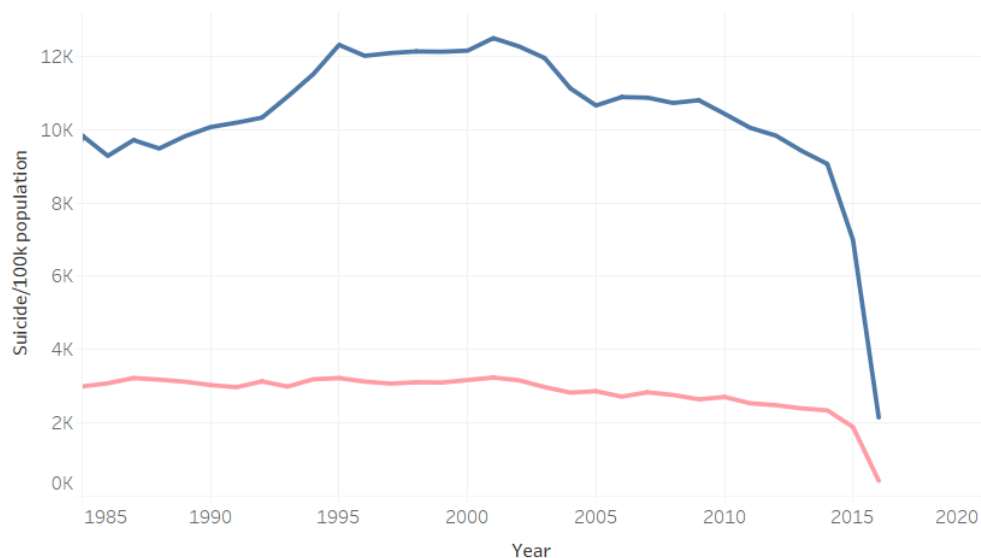
## **Insights:**

### **Simple queries that can be answered from the dataset**

- The distribution of suicide rate across the globe in terms of country.
- The distribution of suicide rate across the globe over the term span.
- Gender wise suicide count.
- Suicide count across different age groups

### **Observations from Dataset**

- An interesting observation from the suicide statistics is that, suicide rate is less in females than compared to males.
- The suicide rate is highest in the middle aged group of 35-54 years in both men and women.
- In general, the suicide rate is higher in the old age group above 75 years
- As the population increased the number of suicide rates also increased. However, we see a decline in the suicide rate from the year 2001 despite a gradual increase in the population.

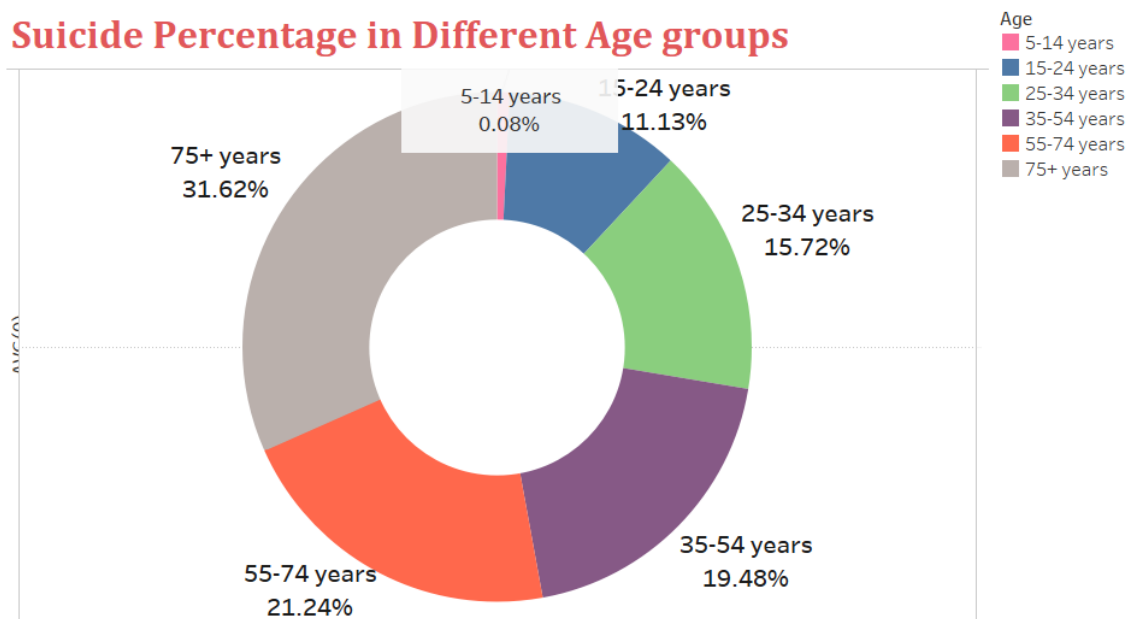
**Proceeding with the dataset & analyzing:****Static Charts (Dashboards)****→ Male Vs Female Suicide Ratio****Female Vs Male  
Suicide Ratio****Suicide Trend overtime in 3 decades**

The above dashboard shows the Female vs Male Suicide ratio per 100k population which clearly indicates that men commit more suicide from the size of female to male.

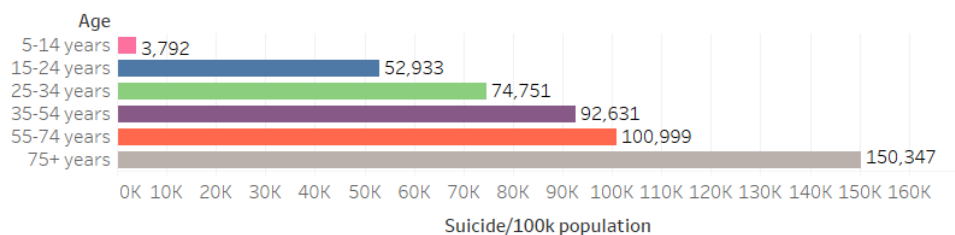
The suicide trend over 3 decades also indicate that female have a lesser suicide rate. We can also decipher that suicide rates have decreased over the years & the last decade considerably in both male & female.

## → Age-wise Suicide statistics

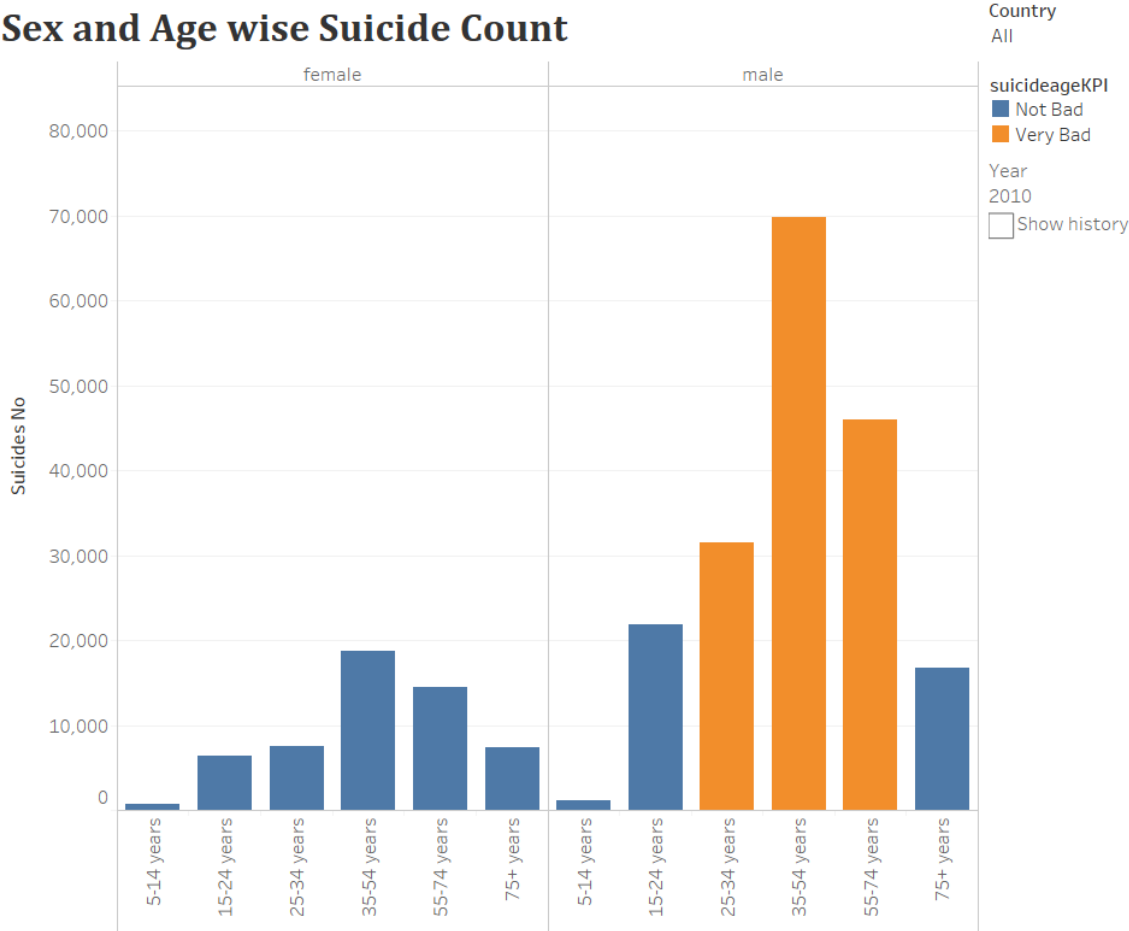
### Suicide Percentage in Different Age groups



### Agewise Suicide rate per 100k Population



The age-wise suicide statistics dashboard indicates the suicide percentage in 6 age groups. Both the donut chart & the horizontal bar chart indicates that suicide % is highest in old age groups above 75 years & is least in 5-14 years. Young population like children & infants tend to commit lesser suicide. Disease, monetary decline, climate change & survival etc can be the causes. Reasons as to why 75+ commit suicide can be looked into.



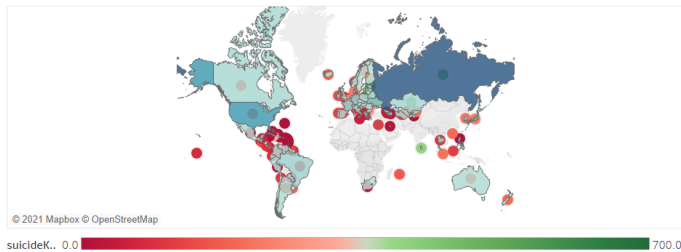
However, in the above, we can find that suicide rate is highest among middle aged men of 35-54 years. Combining datasets help us find gather better insights.

## → Global Suicide statistics

### WHO Suicide Count 1979-2016

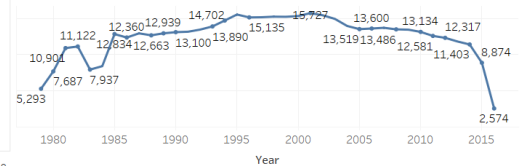
1. Select Country on Bottom Left Chart to highlight data on Map and see the corresponding suicide count

#### Count and Suicide Rate in year 1996 across Globe

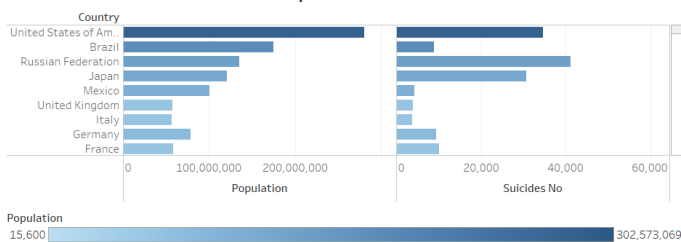


Year  
1996

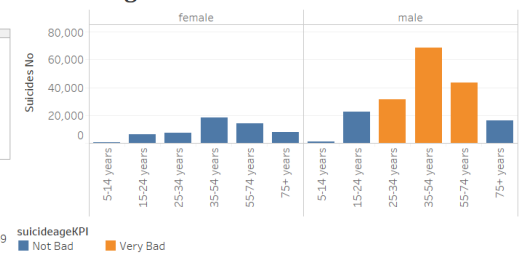
#### Year Wise Distribution of Suicide Rate Per Million World Wide



#### Countries Wise Sum of Population and Suicide

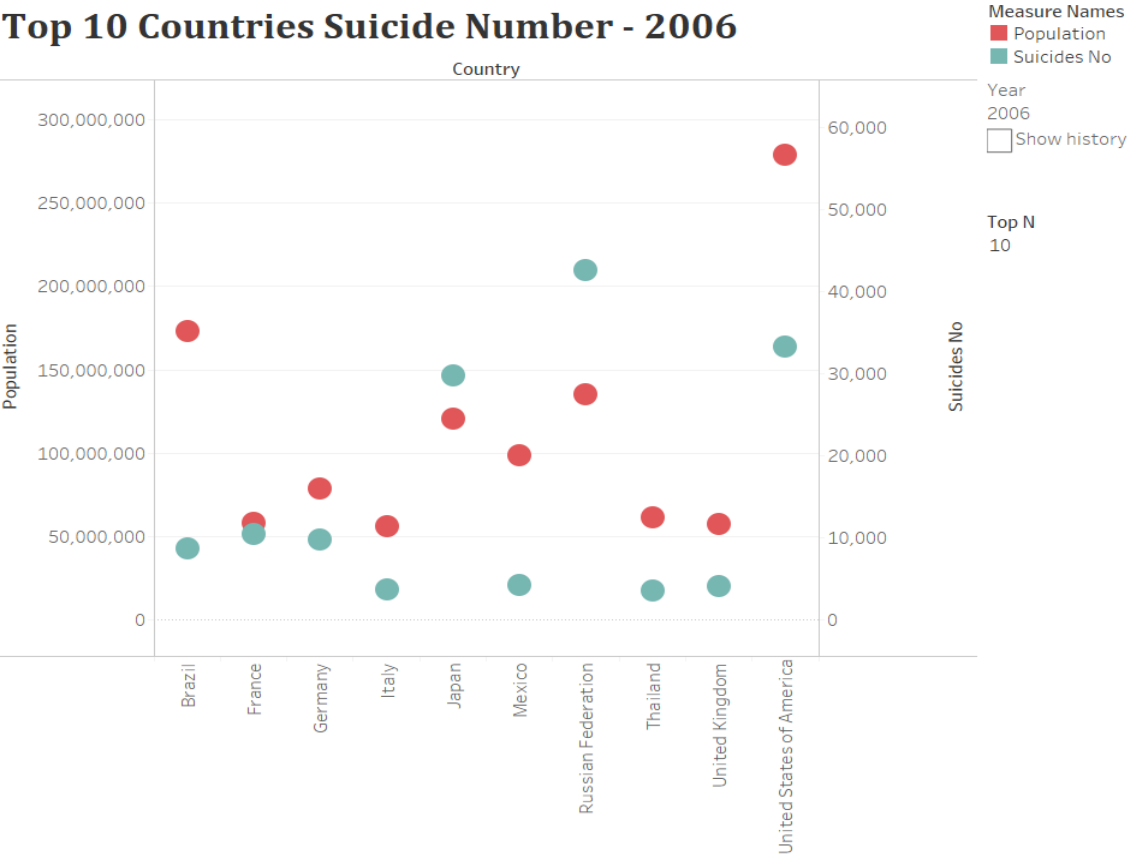


#### Sex and Age wise Suicide Count

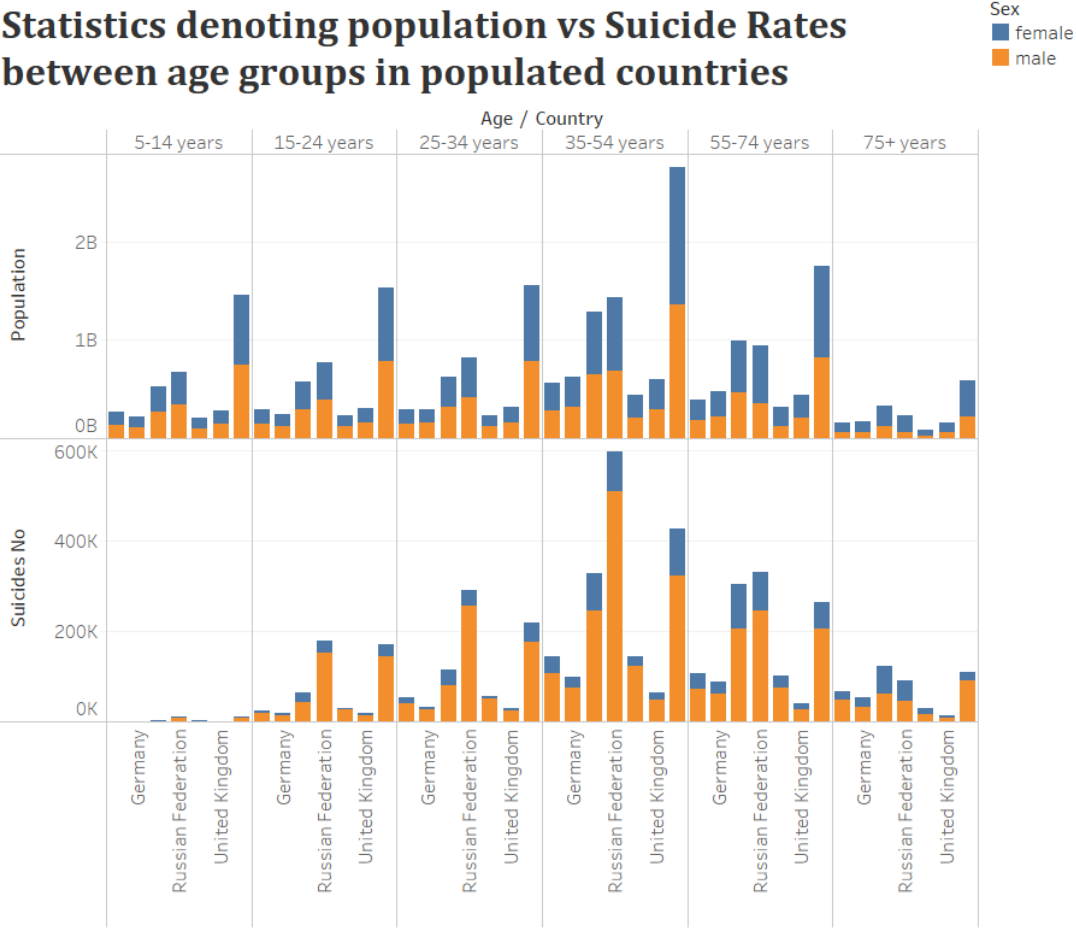


The above dashboard indicates a detailed information on the Who suicide count from 1979 to 2016 across the globe, the year wise distribution, country wise population & suicide rates & the gender-age suicide count too. The year can be altered to view population & suicide count in general, age-wise & gender-wise to gain better knowledge.

Top 10 Countries Suicide Number - 2006



Statistics denoting population vs Suicide Rates between age groups in populated countries



The above indicates which has highest & lowest suicide & population numbers, along with the age-wise count ,country wise. It provides a clear vision stating how populated places had more suicide count, with more middle ages men committing suicide.

**Difficulties in assessing Worldwide suicide statistics:**

- ▶ There are missing data for suicide number and population.
- ▶ Countries like China, Canada, India, Bangladesh, Pakistan and most of the African countries were not taken into consideration.
- ▶ Data about Gross GDP, Profession, Sick people, Climate, etc could also be included.

**References from outside sources:**

**REFERENCE 1:**

<https://www.who.int/data/gho/data/themes/mental-health#:~:text=Age%2Dstandardized%20suicide%20rates%3A%20There,10.5%20per%20100%20000%20population.>

**EXECUTIVE SUMMARY**

**Suicide Count:** 800K

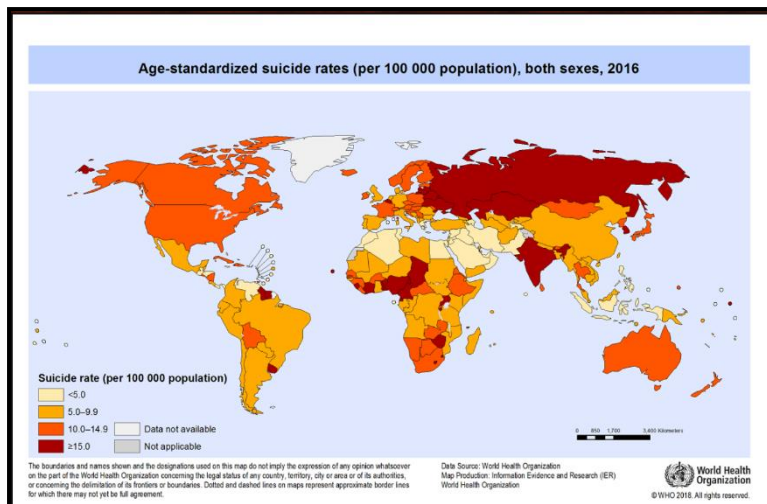
As per WHO survey, the suicide could in the world estimated to eight hundred thousand in the year 2016. This indicates an annual global age standardised suicide rate of 10.5 per hundred thousand population.

**Financial Support to Mental Health:** <2%

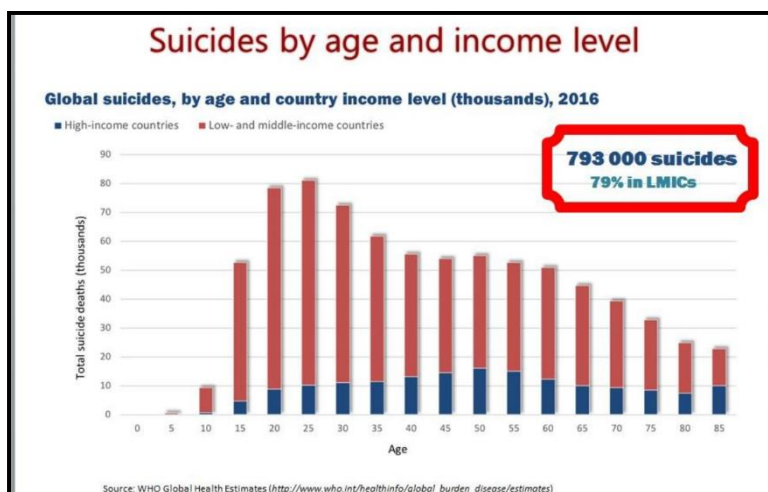
Less than 2 percent of the global median of the health budget was allocated in 2017 to the mental health which was the main/only reason for the suicide count.

**Human Resource:** 0.0009% is the percentage of mental health workers among one hundred thousand people.

The key insight from the survey was between the high and low/middle income groups countries. Middle aged men in High income group countries have much higher suicide rate as per compared to their counterpart in Low Income group countries. Contrary, young aged and elderly women in Low Middle Income Countries have much higher suicide rates as compared to their counterparts in High Income Countries.



From the above graph we can see that suicide rate is highest in countries like India, Russia and few African and South American countries. Followed by USA, Canada, Australia and a lot of European and African countries. It is least in Middle Eastern and few north African countries.



From the graph we can see that the suicide rate is 4 times in Low Middle Income countries as compared to High Income Group countries. Specifically, it is much higher in people of young age 20-30 years age group.

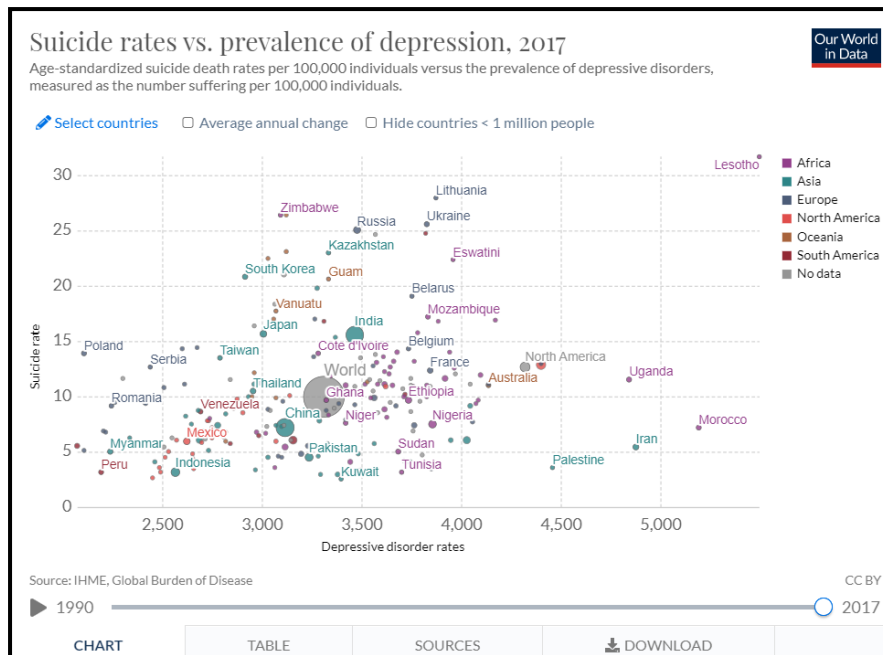
### **INFERENCE & RELEVANCE TO DATA**

We can infer from this data that people have so much pressure of getting a good job or having an education from a reputed college, that their mental health is affected so much they tend to suicide.

### **REFERENCE 2**

<https://ourworldindata.org/suicide>

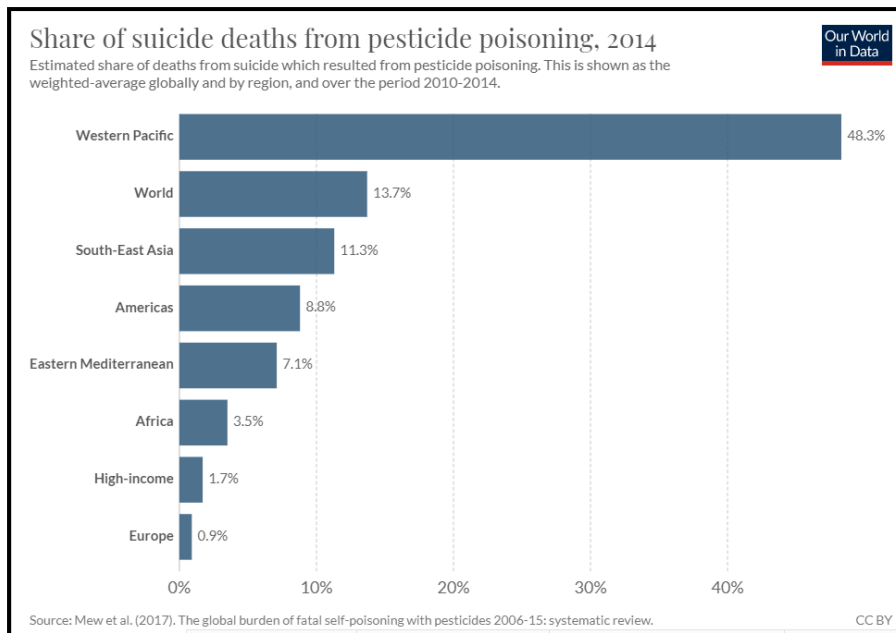




## **EXECUTIVE SUMMARY**

We can see the distribution of suicide rate from various countries in comparison to the worldwide data for the year 2017. Lithuania, a European country tops the world in terms of suicide rate followed by Zimbabwe, Russia and Ukraine. But we consider the number of suicide deaths due to suicide then India has the highest number followed by China. India's suicide rate is even higher than the world suicide rate which is an alarming concern.

If we consider depression as the primary source of suicide then Morocco has the highest depressive rate followed by Iran and Uganda.



Pesticide poisoning is one of the major contributors in suicide rate. 1 in 7 suicide deaths are from pesticide poisoning. But in some parts of the world, it was much higher almost half: across the Western Pacific (such as Malaysia, China, Vietnam). It is also very common in South East Asia and Latin America.

Partially banning the pesticides have seen a decline in suicide rate, which is why it is very low in Europe and Africa and other high-income countries.

### **RELEVANCE TO DATA**

Pesticide poisoning & soil erosion have played a crucial role in suicide rates. This data can be included to our data set too.

### **REFERENCE 3:**

[https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_suicide\\_rate](https://en.wikipedia.org/wiki/List_of_countries_by_suicide_rate)

WHO region	Crude rate	Crude male rate	Crude female rate	Male-female ratio
Europe	15.4	24.7	6.6	3.74
Southeast Asia	13.2	14.8	11.6	1.28
Global	10.6	13.5	7.7	1.75
Western Pacific	10.2	10.9	9.4	1.16
Americas	9.8	15.1	4.6	3.28
Africa	7.4	9.9	4.8	2.06
Eastern Mediterranean	3.9	5.1	2.7	1.89

### **EXECUTIVE SUMMARY**

We have a tabular representation of the suicide rate from different regions of the world gender wise. Europe has the highest suicide rate 15.4 followed by Southeast Asia 13.2. In terms of male suicide rate Europe still tops the chart with 24.7 which is the highest number in all statistics followed by Americas with 15.1. But when it comes to female suicide rate Southeast Asia has the highest rate of 11.6 followed by Western Pacific 9.4. Eastern Mediterranean or we can say the Middle east countries have the lowest suicide rate of 3.9. They are also at the bottom for male and female suicide rate at 5.1 and 2.7 respectively.

### **RELEVANCE TO DATA**

This dataset covers more regions like Europe, Southeast Asia etc. We can see that suicide rates in men are much higher here too, just like in our dataset.

### **REFERENCE 4**

<https://www.registerednursing.org/articles/suicide-rates-profession/>

#### **Suicide by Profession:**

The construction sector experiences the most suicides which is 52.1 deaths per 1,00,000. It is 200% times higher than the average working professionals.























#### **Suicide rate for occupation versus salary:**

There is a small trend showing that the higher paying jobs tend to have lower suicide rates.

### **SUMMARY**

The report shows the suicide rates of working professionals in USA for the year of 2015 and is further divided by profession. As per the report, by registered nursing, the working men tend to have three times more suicide rate as of working women. It further shows that how suicide rates are affected by professions and their salaries.

## Professions based Suicide rates:

Rank	Professions	Suicide Rate	
1	Construction and Extraction	52.1	
2	Installation, Maintenance, and Repair	37.8	
3	Arts, Design, Entertainment, Sports & Media	27.3	
4	Transportation and Material Moving	26.8	
5	Production	24.3	
6	Protective Service	24.2	
7	Farming, Fishing, and Forestry	18.7	
8	Building & Grounds Cleaning & Maintenance	18.2	
9	Architecture and Engineering	17.6	
10	Food Preparation and Serving Related	14.8	
11	Sales and Related	14.2	
12	Computer and Mathematical	14.0	
13	Legal	13.8	
14	Life, Physical, and Social Science	12.8	
15	Health Care Practitioners and Technical	12.5	
16	Management	12.5	
17	Health Care Support	11.9	
18	Personal Care and Service	10.1	
19	Community and Social Service	9.0	
20	Office and Administrative Support	8.6	
21	Business and Financial Operations	8.5	
22	Education, Training, and Library	5.3	

Data Source: CDC Report from 2018 showing 2015 results in 22 states



The suicide rate of working professionals per 1,00k is shown above. The highest suicide rates are from the Construction and Extraction followed by the professionals of Maintenance and repair field. The lowest rates of suicide are to seen in Education, Training and Library field.

### Occupation Versus Salary:



The above graph shows the rate of suicide broken down by the respective salaries. There is a small trend seen, i.e. the higher paying jobs have a lower number of suicide rates than that of lower paying.

### **RELEVANCE TO DATA**

Younger generation have well paid jobs than older age groups. Middle aged men work in construction rather than young men, which has highest suicide rates.

No. of men in Construction have been higher recently & more women have been in higher & well paid jobs. This also contributes to the fact of age-wise & female-male suicide rates with relevance to our data.

### **REFERENCE 5:**

<https://www.sciencedirect.com/science/article/pii/S2210600616300430>

### **Suicide rates of Males as per HDI (Human Development Index):**

Out of every 1,00,000 males almost 16 males committed suicide at different levels of Human Development Index in the year of 2013.

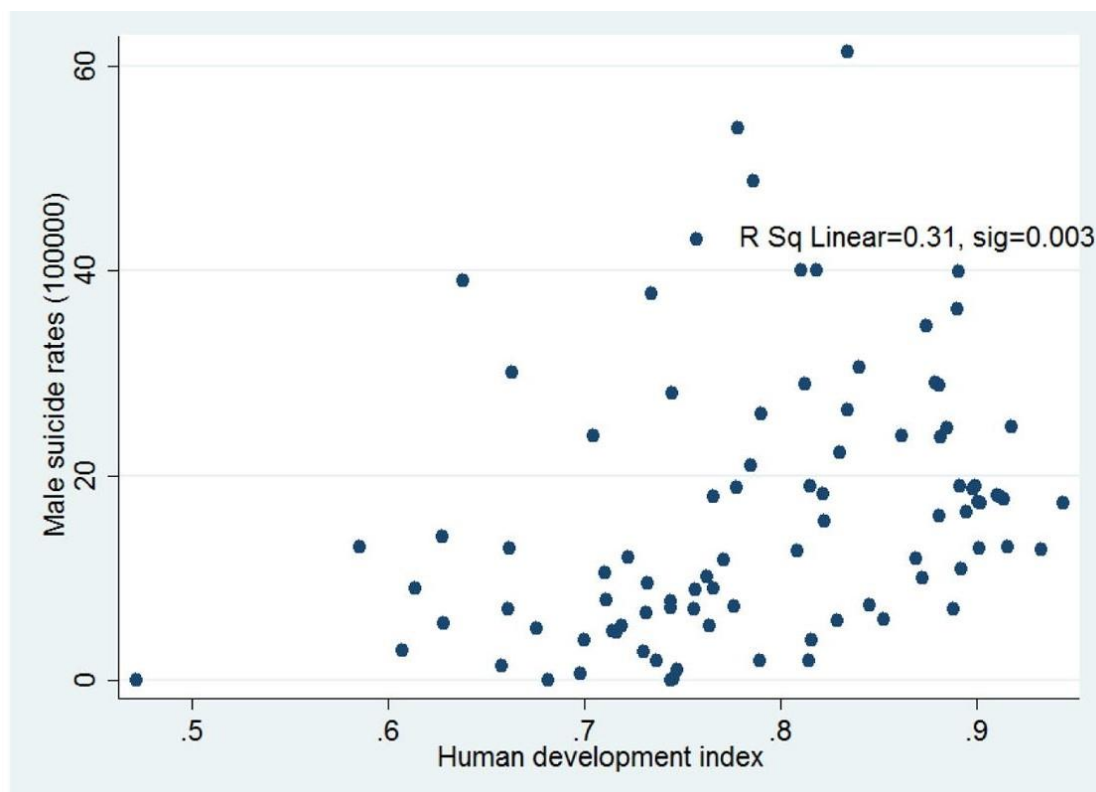
### Suicide rates of Females as per HDI (Human Development Index):

Out of every 1,00,000 females almost 8 females committed suicide at different levels of Human Development Index in the year of 2013.

#### Summary:

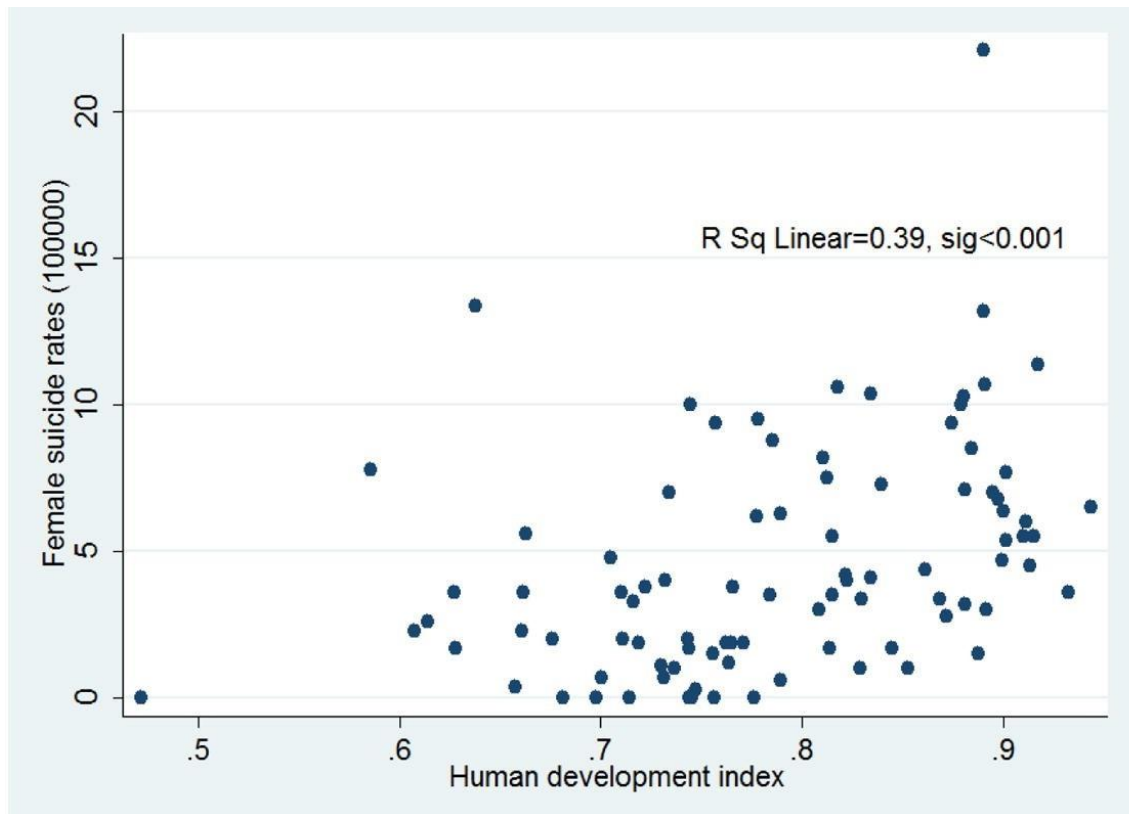
As per the report, the number of suicides committed by the person of any country is directly proportional to the development index of the country. The countries having high Human Development Index had higher rates of suicides as compared to the countries having medium and low Human Development Index.

### Suicide rates For Men:



The above graph shows the suicide rate of men as compared the Human Development Index of the country. As of this graph, it can be seen that the men of higher Human Development Index committed more suicide than that of the men with lower Human Development Index.

### Suicide rates For Women:



The above graph depicts the number of women committing suicide as of the Human Development Index of the country. It can be seen that the countries having higher Human Development Index had more women committing suicide as compared to the countries with lower HDI.

### **RELEVANCE TO DATA**

The HDI & population of men have been higher than women & suicide committed by women are still lower than men according to the scatterplot. This is the common relevance with our dataset & this.

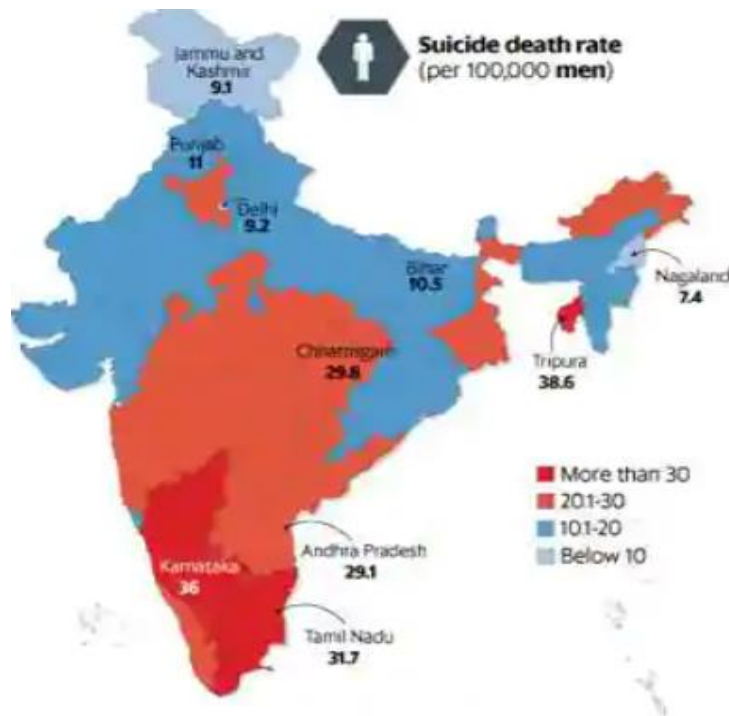
### **REFERENCE 6**

<https://www.livemint.com/Politics/YCw8vC0qZUzAYkWSEVXS9N/Suicides-in-India-What-data-shows.html>

### **Summary:**

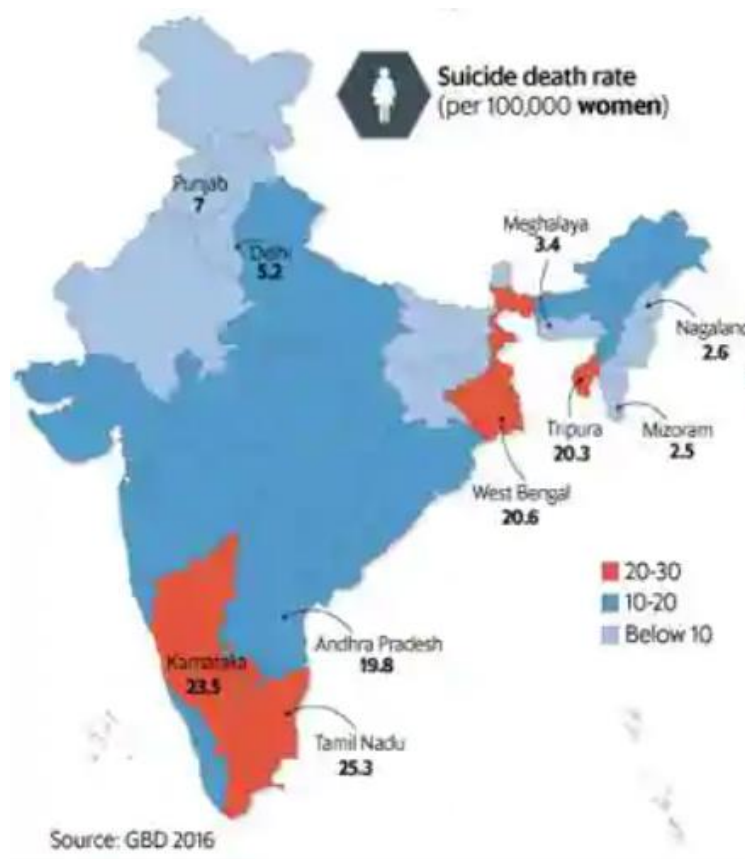
The report throws light on the number of suicides committed by men and women in Southeast Asia. According to the report, the suicide rates for both genders are higher than the global average. It can be seen that the rates of suicide for men are high all over the world but in case of India the rates for suicide for women are also very high as compared to other countries.

### **Suicide Rate for Men:**



The graph shows the rate of suicide for men in the year 2016. It can be clearly seen that the southern and the middle part of the country has more suicide rate as compared to the northern part.

### Suicide for Women:





The graphs show the rate of suicide committed by females in the country.

**RELEVANCE TO DATA**

This again proves that suicide rates in females is much lesser than males, country wise & across the globe.

**RECOMMENDATION:**

Statistics on how climatic conditions, health, disease rate, pandemics, profession, income & wealth distribution, environmental pollution, personal reasons, GDP, etc could have been further used to assess the reasons as to why a particular age group or gender has more suicide rates.

More territorial areas can be included too.

Mental health programs & awareness campaigns can be implemented according to insights from these statistics. For eg, mental health programs can be initiated for people above 75+. Suicide awareness programs & mentors can be provided for middle aged men & people in highly risky jobs.