Assignment 2

EVERY PROBLEM HAS A SOLUTION AND
SUICIDE IS CERTAINLY NOT ONE OF THEM.

"...SPEAK UP..."
"...REACH OUT..."

This Exploratory analysis report concerns a dataset about Suicide in India. There are interesting follow-up questions the analysis pursuit.

Dataset: Suicide India Data

This dataset contains four sheets, first sheet contain data- Category (Male/Female), Cause of Suicide, Row ID, State / UT, and No. of Deaths, second sheet contain data - Age Group and No. Of Deaths, third sheet contain data - Contributing Factors and Percentage (%) and fourth sheet contain data - Year, %Change and Total No. of Suicides critic (Rotten Tomatoes) ratings. The source of dataset is Kaggle.
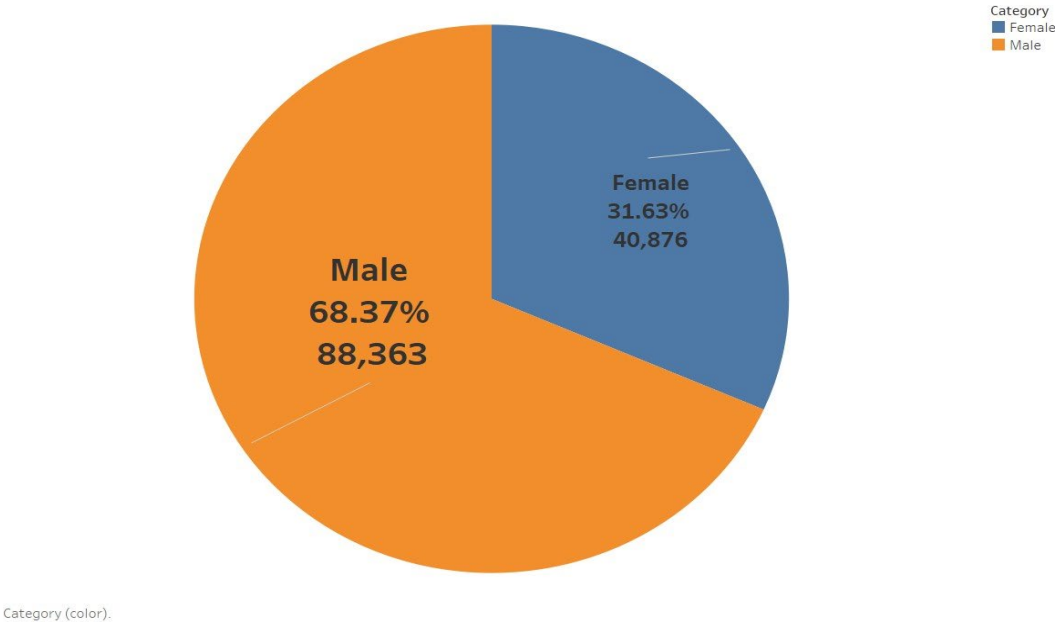
Initial Analysis Questions

1. How is the Distribution of suicide among gender?
2. What are the leading ways/cause of suicide?
3. How is the distribution number of suicide deaths among different states of India?
4. How is the Distribution of suicide among age?
5. What is the trend of suicide over the years?
6. What are the contributions of different reasons for suicide?

Discoveries & Insights

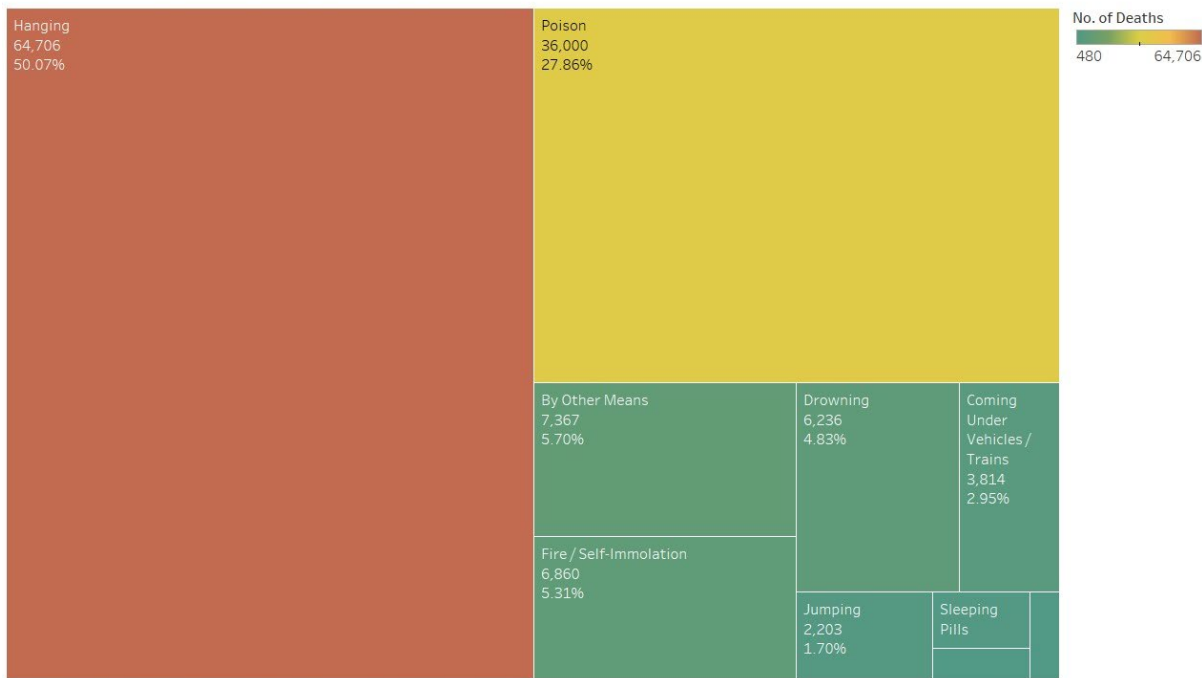We start by analysis the distribution of suicide among gender.

% of male-female suicide of total suicide

Female
31.63%
40,876

Male
68.37%
88,363

Category (color).

Pie chart clearly shows that Men are at higher risk, rate of suicide in men stands is **x2 times** more as compared to rate of suicide in women.

Now, we further analyse the leading ways/cause of suicide.

% of Cause of suicide of the total suicide

Hanging
64,706
50.07%

Poison
36,000
27.86%

No. of Deaths
480   64,706

By Other Means
7,367
5.70%

Drowning
6,236
4.83%

Coming Under Vehicles / Trains
3,814
2.95%

Fire / Self-Immolation
6,860
5.31%

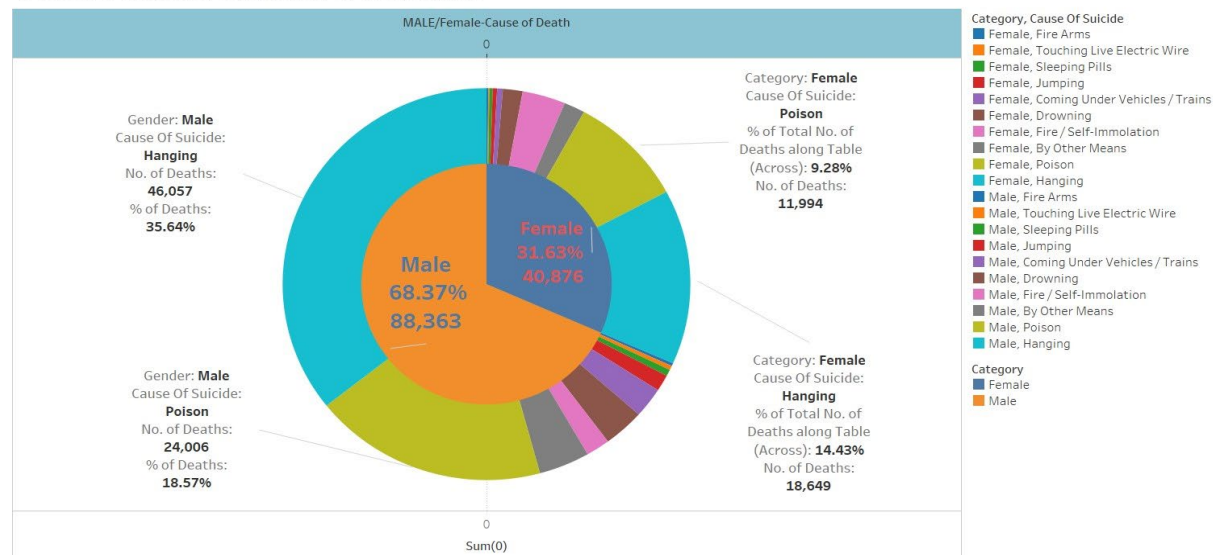Jumping
2,203
1.70%

Sleeping Pills

Cause Of Suicide, % of Total No. of Deaths and sum of No. of Deaths. Color shows sum of No. of Deaths. Size shows sum of No. of Deaths. The marks are labeled by Cause Of Suicide, % of Total No. of Deaths and sum of No. of Deaths.

Tree map clearly shows approx. half of the suicide is committed by hanging followed by consuming poison.

In answering first two questions and after analysing both the graph a followed-up question rises how is cause of suicide distributed among gender.

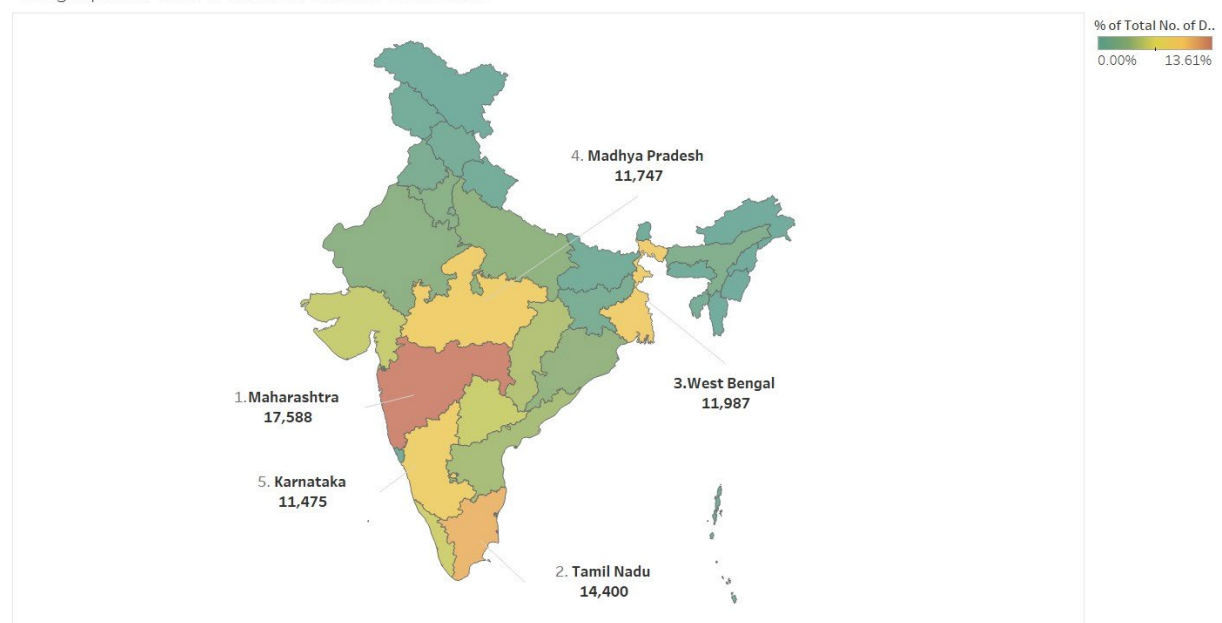% Cause of suicide of each gender of total suicide

Sum(0) and sum(0). Color shows details about Category. For pane Sum(0): Color shows details about Category and Cause Of Suicide. The view is filtered on Category, which keeps Female and Male.

Embedded pie chart clearly shows that the distribution of cause of suicide same in gender as in total population i.e., hanging followed by consuming poison.

Now we further analyse distribution number of suicide deaths among different states of India.

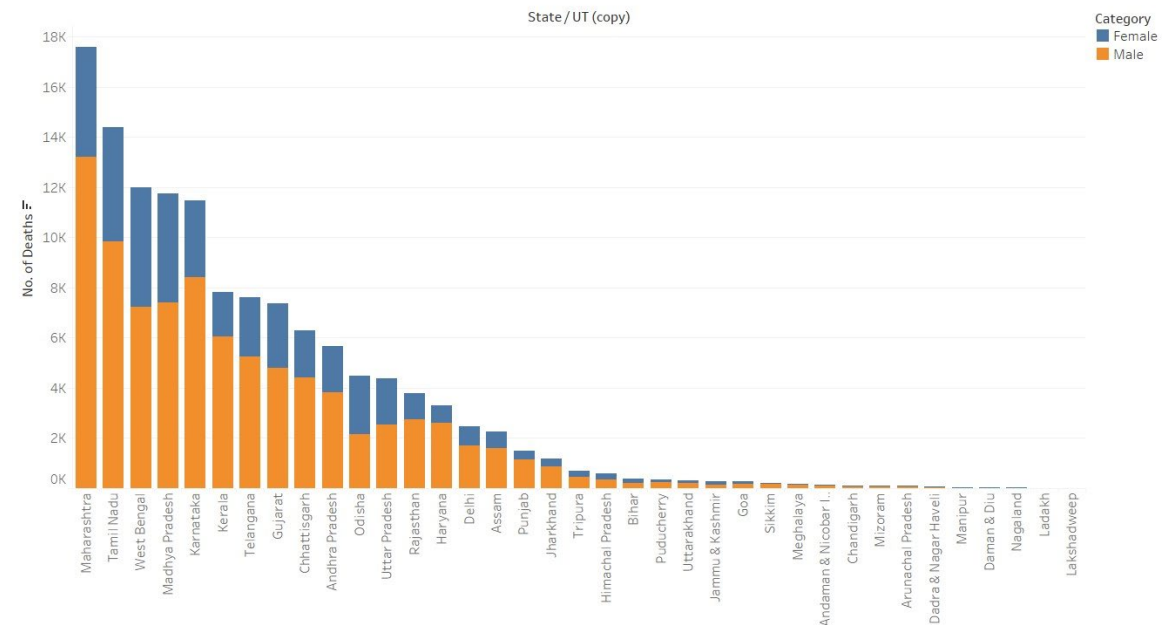Geographical distribution of suicide statewise

Map based on Longitude (generated) and Latitude (generated). Color shows % of Total No. of Deaths. Details are shown for State / UT. The data is filtered on Action (Category,State / UT (copy)), which keeps 74 members.

Symbol map clearly shows that Maharashtra recorded the highest number of Suicides followed by Tamil Nadu, West Bengal, Madhya Pradesh, and Karnataka. And L

This further lead to analyse the total number of suicide and gender distribution in it for each state of India.

Gender distribution in total suicide-statewise

Sum of No. of Deaths for each State / UT (copy). Color shows details about Category. The data is filtered on Action (Category,State / UT (copy)), which keeps 74 members.

Bar chart clearly shows the total number of suicide and gender distribution in it for each state of India.

Now this leads to further analyse the ratio of men suicide to the women suicide in each state of India.

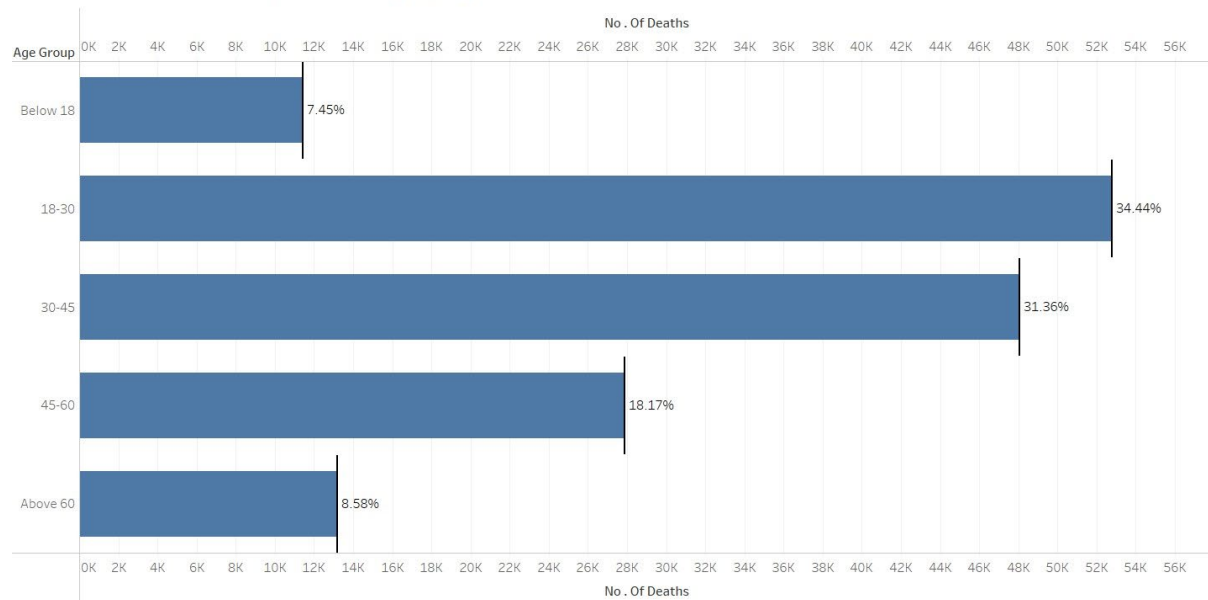% contribution of gender in statewise suicide

% of Total No. of Deaths for each State / UT (copy). Color shows details about Category. The data is filtered on Action (Category,State / UT (copy)), which keeps 74 members.

Horizontal Bar clearly shows that Odisha has more women doing suicide compared to men opposite to the overall trend. Also, Mizoram has the highest proportion men suicide to the women suicide.

Now we further analyse distribution of suicide among age.

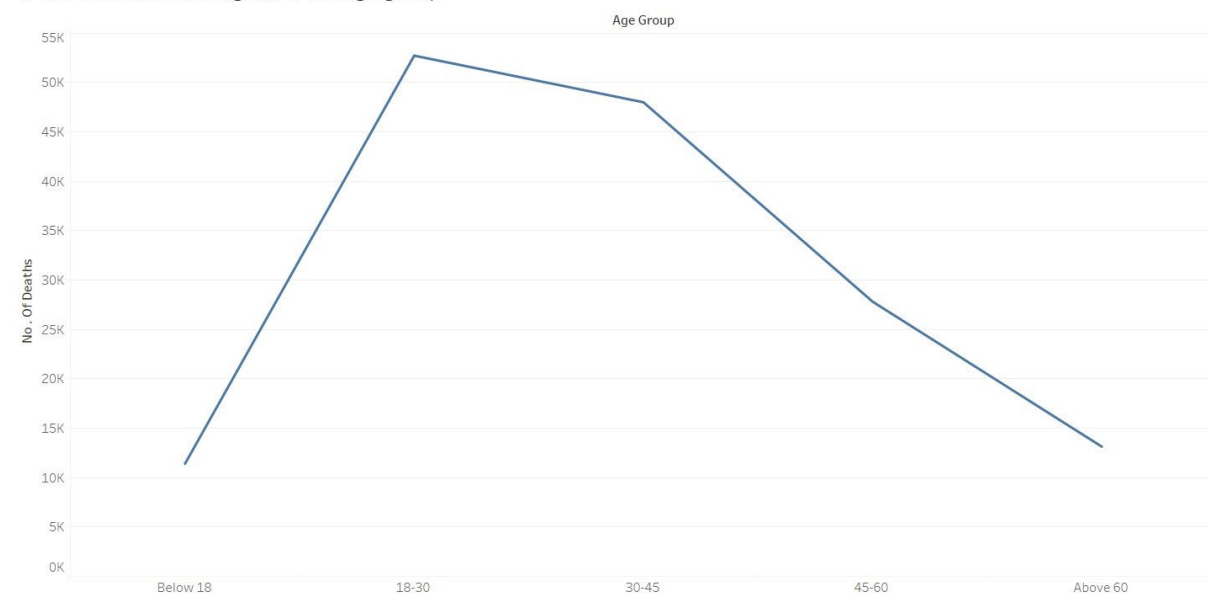Suicide distribution among different age group

Sum of No . Of Deaths and sum of No . Of Deaths for each Age Group.

Suicide is top leading cause of death for people falling in the age group of 18-30 Years followed by. About 34% of the Youth who committed Suicide were between the Ages 18 and 30.

Now this leads to further analyse the trend in suicide in ages.

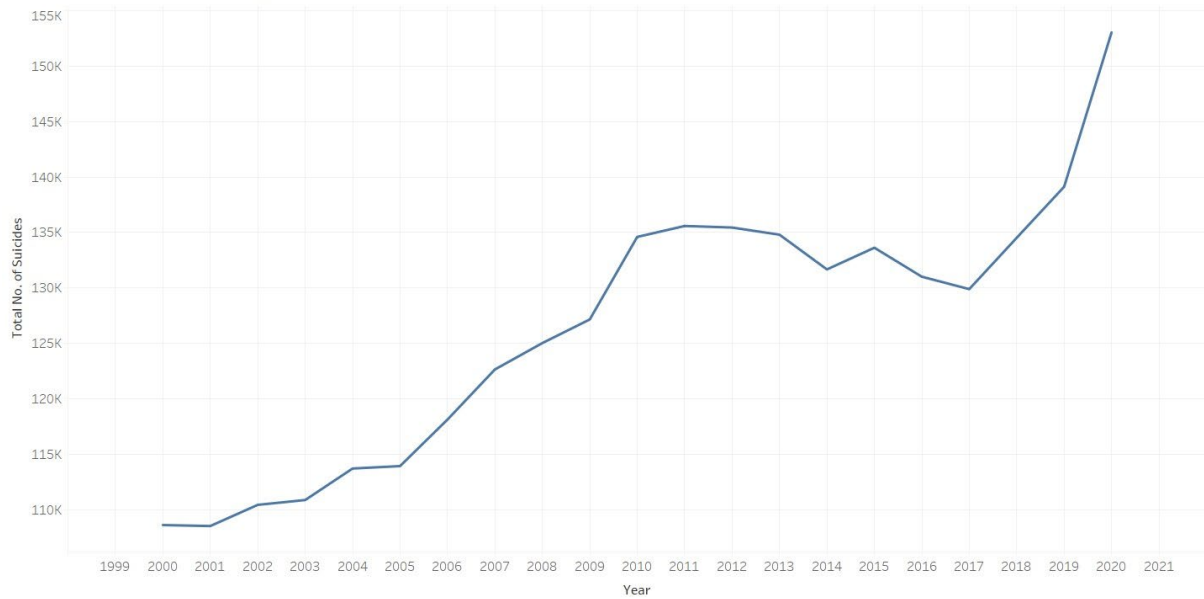Trend of suicide among different age group

The trend of sum of No . Of Deaths for Age Group.

Line chart clearly shows how suicide rises among age 18-30 and starts to fall as age increases.

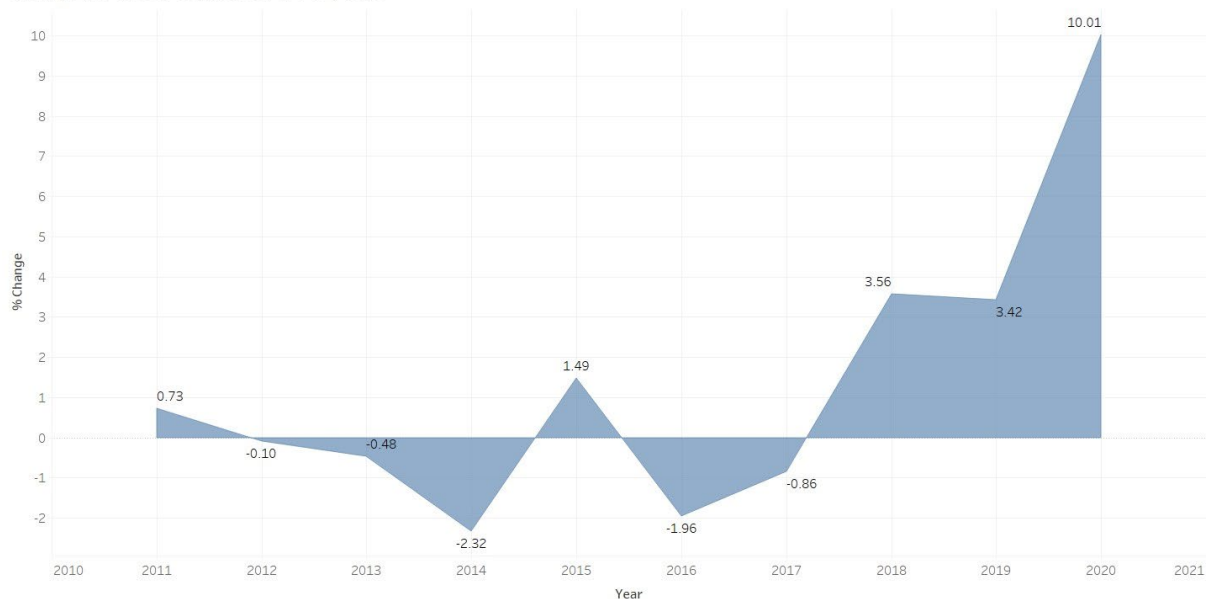Now we further analyse the trend of suicide over the years.

The trend of sum of Total No. of Suicides for Year.

Line chart clearly shows there is rise in suicide over the years but slight dip in 2014, 2016 and 2017 and again it further rose rapidly after 2017 and more rapidly after 2019.

Now this leads to further analyse the of rate of change of suicide over the years.

Change in rate of suicide over 10 years

The plot of sum of % Change for Year. The view is filtered on Year, which ranges from 2011 to 2020.

Area chart clearly shows how rate of suicide has increased after 2017 and 2019 which was year of demonetization and covid-19 respectively. Therefore, it can be loosely inferred that Demonetization & Covid-19 caused rise in the suicide rate. Although this cannot be said for sure and need further analysis but referring the %change area graph it seems so that Covid-19 caused a 10% rise in the Suicide Rate in 2020 as compared to 2019 and Demonetization (Nov 2017) caused a 3.56% increase in the suicide rate in 2018 as compared to 2017.

Now we further analyse the contributions of different reasons for suicide.

Family Problems 32.40		Other Cause 11.10		Causes Not Known 10.30		Percentage (%) 0.30 32.40

Contributing Factors and sum of Percentage (%). Color shows sum of Percentage (%). Size shows sum of Percentage (%). The marks are labeled by Contributing Factors and sum of Percentage (%).

Tree map clearly shows that family problems is the top cause for suicide, accounting for 32% of all the suicides in India followed by illness (17%) & drug abuse (5.6%).

Summary

By analyse all the above charts we were able to answer all our initial questions, and few follow up questions. But more data and further analyse require for complete understanding of suicides in India.

Few points to summarise for analysis:

- Every problem has a solution and suicide is certainly not one of them.
- Men are at higher risk, rate of suicide in men stands is **x2 times** more as compared to rate of suicide in women.
- Hanging is the most common way to commit suicide followed by consuming poison.
- Maharashtra recorded the highest number of suicides followed by Tamil Nadu, West Bengal, Madhya Pradesh, and Karnataka.
- Odisha has more women doing suicide compared to men opposite to the overall trend. Also, Mizoram has the highest proportion men suicide to the women suicide.
- Suicide is top leading cause of death for people falling in the age group of 18-30 Years. About 34% of the youth who committed suicide were between the ages 18 and 30.
- Family problems is the top cause for suicide, accounting for 32% of all the suicides in India followed by illness (17%) & drug abuse (5.6%).
- Demonetization & Covid-19 caused rise in the suicide rate. Although this cannot be said for sure and need further analysis but referring the %change area graph it seems so that Covid-19 caused a 10% rise in the Suicide Rate in 2020 as compared to 2019 and Demonetization (Nov 2017) caused a 3.56% increase in the suicide rate in 2018 as compared to 2017.