ANALYSIS OF SUICIDE RATE IN THE WORLD

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Python Track

ABSTRACT:

Every year 8,00,000 people take their own life (one deaths per every 40 seconds) and there are many more people who attempt suicide. Every suicide is a tragedy that affects families, communities and entire countries and has long-lasting effects on the people left behind. Suicide is an emerging and serious health issue. There may be many causes which are leading a person to commit suicide. Analysis of the number of suicides, causes of suicides, methods used for suicides are required for preventing them. In this report a detailed analysis is done on suicides occurred in the world and as well as in India.

DATA COLLECTION

The analysis is done two datasets collected from www.kaggle.com. These datasets provide information about the suicides data in the world from 1986 to 2015. The dataset which reveals the reasons for suicides and the methods used for suicides in India from 2002 to 2012 are also collected.

APPROACH

- ❖ The various python libraries such as NumPy, pandas, Matplotlib are used for the purpose of mathematical calculations, extraction of data and visualization respectively.
- ❖ The extracted dataset was found to have null values which are effectively handled to achieve accurate analysis rather than removing them from the dataset.

INTRODUCTION

What is suicide?

The Government of India classifies death as suicide if it meets the following criteria:

- ❖ It is an unnatural death,
- ❖ The intent to die originated within the person,
- ❖ There is a reason for the person to end his or her life. The reason may have been specified in a suicide note or unspecified.

If one of these criteria is not met, the death may be classified as death because of illness, murder or in another statistical.

Analysis of suicides in world wide.

Data Pre-Processing

The dataset consists the data in the following way.

```
       country  year     sex          age  suicides_no  population
0       Albania  1985  female  15-24 years          NaN    277900.0
1       Albania  1985  female  25-34 years          NaN    246800.0
2       Albania  1985  female  35-54 years          NaN    267500.0
3       Albania  1985  female   5-14 years          NaN    298300.0
4       Albania  1985  female  55-74 years          NaN    138700.0
...         ...   ...     ...          ...          ...         ...
43771  Zimbabwe  1990    male  25-34 years        150.0         NaN
43772  Zimbabwe  1990    male  35-54 years        132.0         NaN
43773  Zimbabwe  1990    male   5-14 years          6.0         NaN
43774  Zimbabwe  1990    male  55-74 years         74.0         NaN
43775  Zimbabwe  1990    male    75+ years         13.0         NaN

[43776 rows x 6 columns]
```

The dataset consists of null values in suicides number and in population. The null values in suicide number are been replaced with 0 expecting they are no suicides occurred and the null values in population are replaced with the mean value.

```
country         0          country         0
year            0          year            0
sex             0          sex             0
age             0          age             0
suicides_no  2256          suicides_no     0
population   5460          population      0
dtype: int64              dtype: int64
```
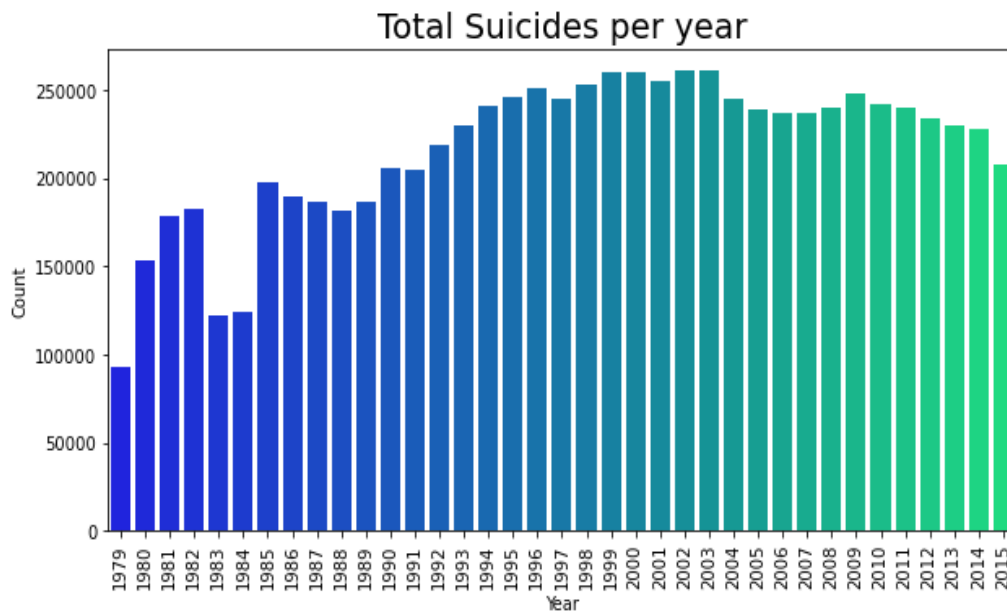
ANALYSIS AND VISUALIZATION

1. **Number of suicides in each year.**

PURPOSE

➢ Suicides is an emerging health issue and number of suicides occurring per year have to be known for planning accordingly.

Total Suicides per year

INFERENCE

➤ From the above analysis it is evident that the total number of suicides have been increased in the period 1988 – 2002 but after 2002 we can see there is a decrease in the total number of suicide cases in the world. Proper prevention measures can decrease the total suicide count in further years.

2. Top ten and least ten countries in total number of suicides from 1986 to 2015.

PURPOSE

➤ To know the countries which are having highest and lowest number of suicides in the past two decades.

country	suicides_no		country	suicides_no
Russian Federation	1500992.000000		Montserrat	1.000000
United States of America	1201401.000000		Falkland Islands (Malvinas)	1.000000
Japan	937614.000000		Anguilla	2.000000
France	395500.000000		Iraq	3.000000
Ukraine	365170.000000		Sao Tome and Principe	4.000000
Germany	291262.000000		Saint Pierre and Miquelon	5.000000
Republic of Korea	261730.000000		Turks and Caicos Islands	6.000000
Brazil	250824.000000		Mayotte	6.000000
Poland	172562.000000		British Virgin Islands	8.000000
United Kingdom	166314.000000		Antigua and Barbuda	11.000000

Top 10 Countries in Suicides
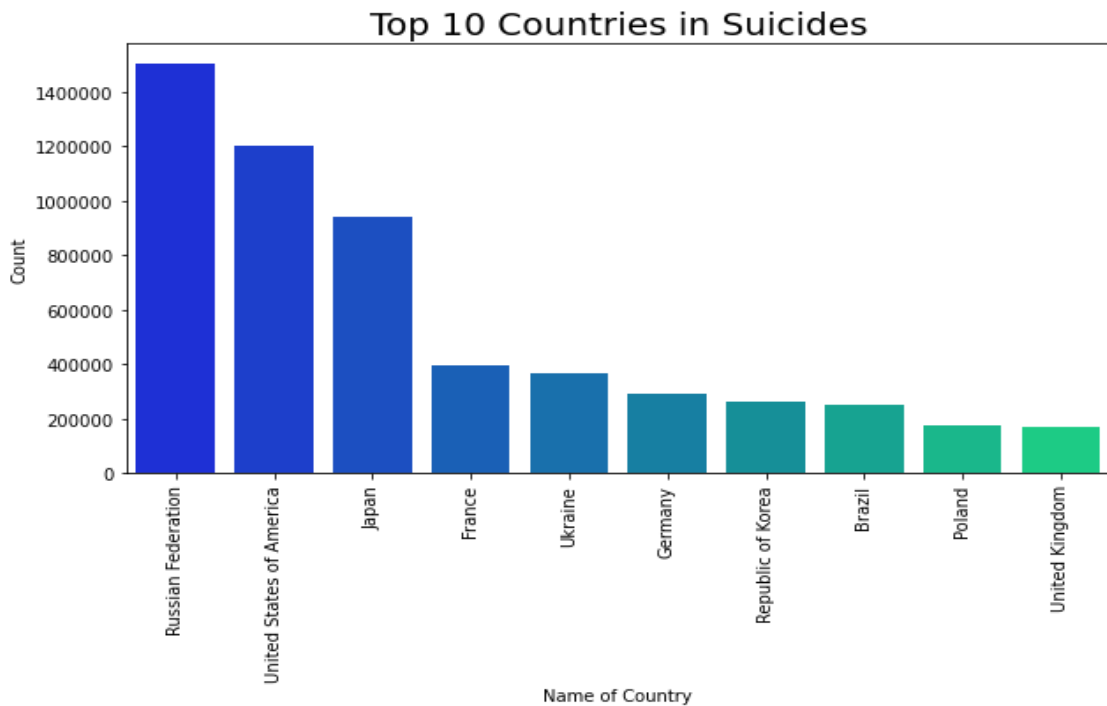
INFERENCE

➢ From the above analysis it is evident that total number of suicides are highest in Russian Federation and United States of America. This may be due to various causes like improper treatments, health care and stress levels.


Least 10 Countries in Suicides
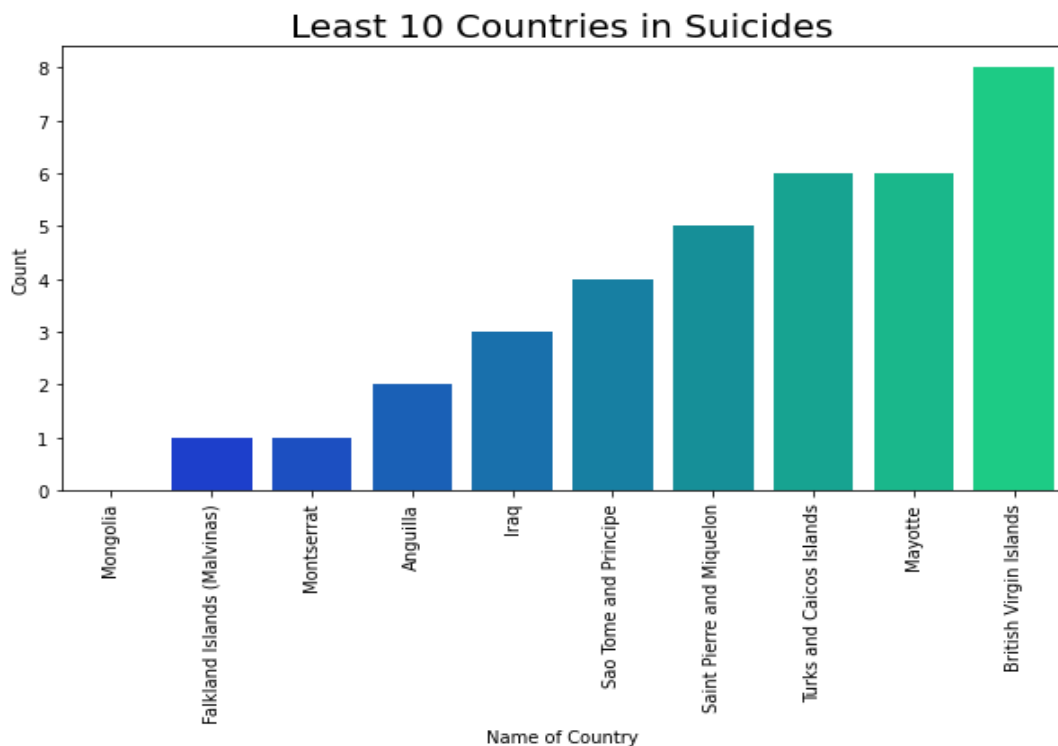
INFERENCE

➤ From the above analysis it is evident that total number of suicides are least in Montserrat, Maldives. This may be due to better well-being of the people without any mental illness.

3. Total number of suicides in the world with respect to gender.

PURPOSE

➤ To know about the total number of suicides with respect to gender in the past two decades.

Distribution of suicides with respect to gender
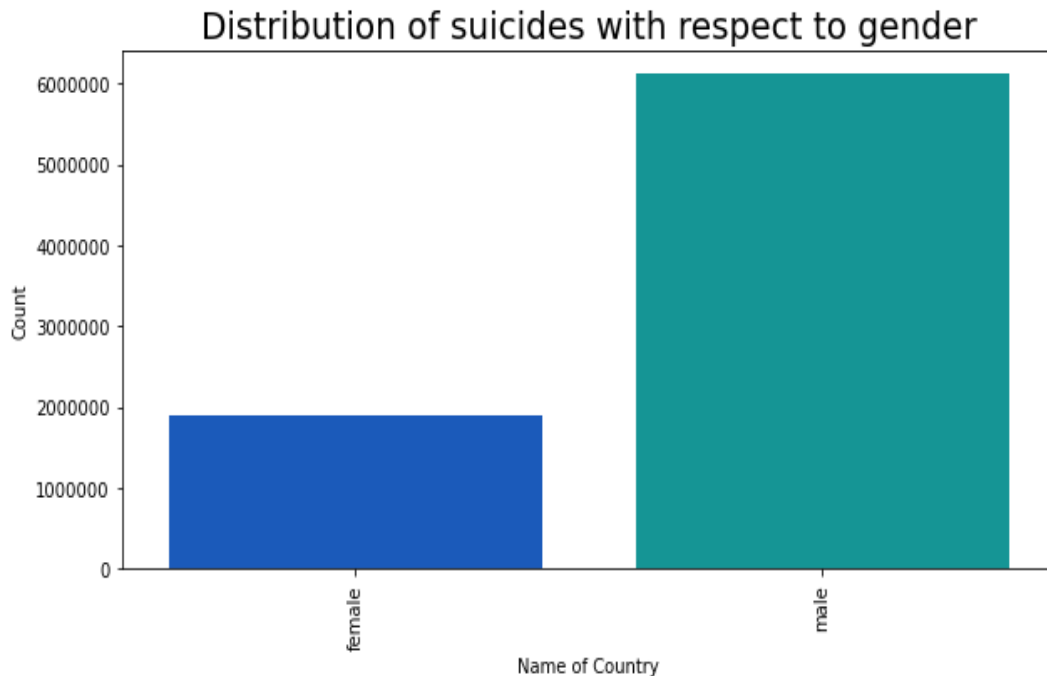
INFERENCE

➤ From the above analysis it is clear that mostly males are committing suicides than females. 76% of the suicides are done by males itself and female only 24%. Males die by suicide three to four times more often than do females. While women more often have suicidal thoughts, men die by suicide more frequently. This is also known as the gender paradox in suicide.

4. Top ten countries in male and female suicides.

PURPOSE

➢ To know about the highest number of male and female suicides occurred in which countries.

country	suicides_no
Russian Federation	1221474.000000
United States of America	947792.000000
Japan	639281.000000
Ukraine	293561.000000
France	286881.000000
Germany	211555.000000
Brazil	194873.000000
Republic of Korea	179115.000000
Poland	145589.000000
United Kingdom	122935.000000

country	suicides_no
Japan	298333.000000
Russian Federation	279518.000000
United States of America	253609.000000
France	108619.000000
Republic of Korea	82615.000000
Germany	79707.000000
Ukraine	71609.000000
Brazil	55951.000000
United Kingdom	43379.000000
Italy	40517.000000

Top Countries in male suicides

Top Countries in female suicides

Top 10 Countries in male Suicides

Top 10 Countries in female Suicides
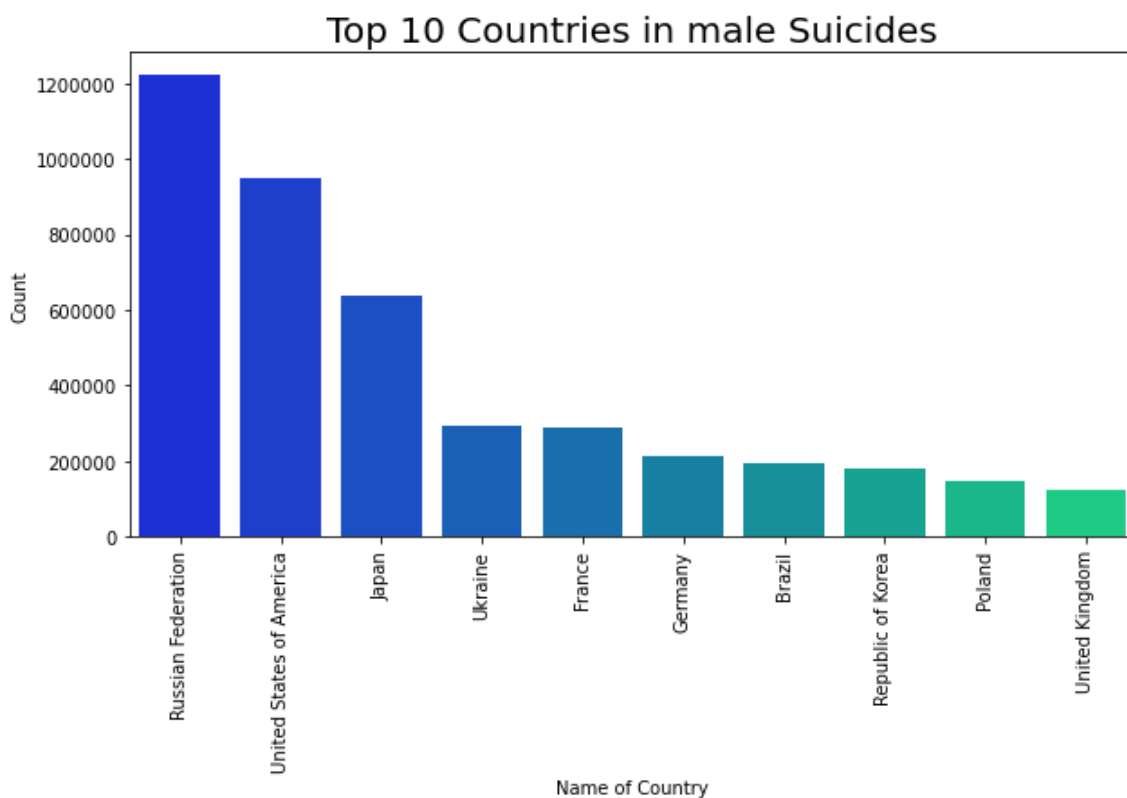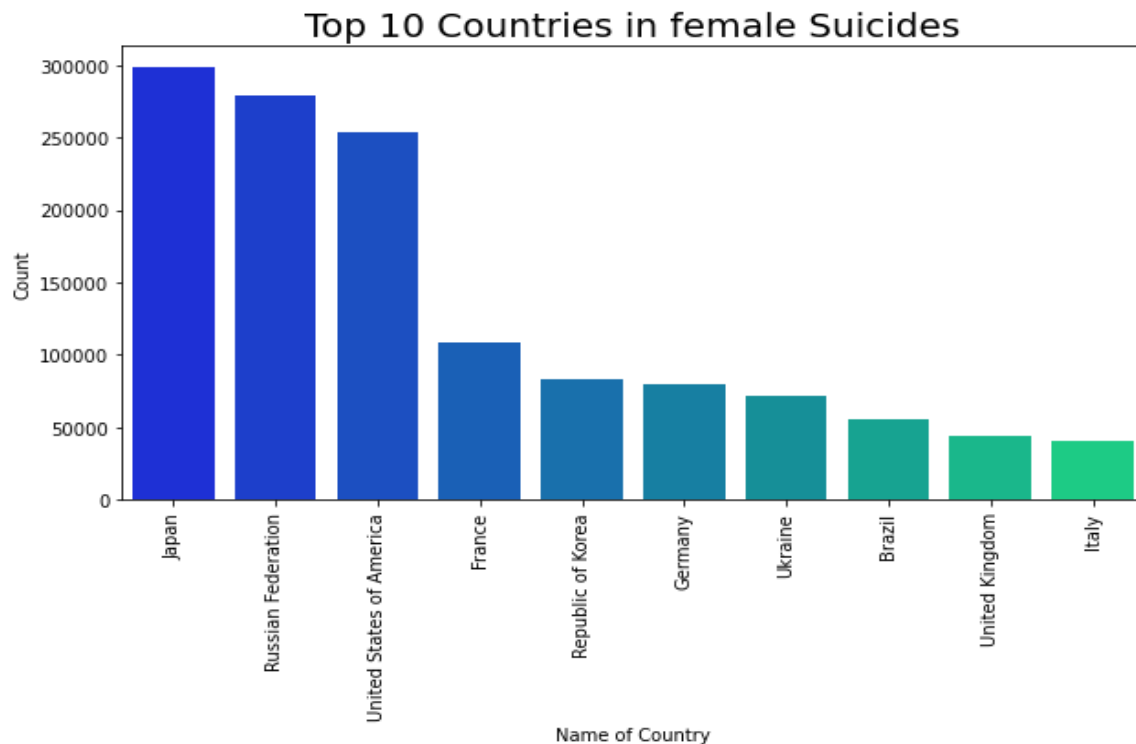
INFERENCE

➤ The countries which are having highest number of male suicides are Rusia and Unites States of America. The males in those countries are maybe having problems related to Unemployment, bullying, imprisonment, divorce, love affairs, etc.

➤ The countries which are having highest number of female suicides are Japan and Russia. The reason for most female suicides maybe Love affairs, physical or sexual abuse, harassing, Housewife problems, etc. These countries may not have strict laws on actions done against female which result in increase of crimes against females and then lead to suicides.

5. **Total number of suicides occurred in the world based on age group.**

PURPOSE:

➤ To identify which age group has more tendency in committing suicides and which age has less tendency.

	age	suicides_no
0	05-14 years	63216.000000
1	15-24 years	982981.000000
2	25-34 years	1365130.000000
3	35-54 years	2889302.000000
4	55-74 years	1953555.000000
5	75+ years	755788.000000

Distribution of suicides with respect to age
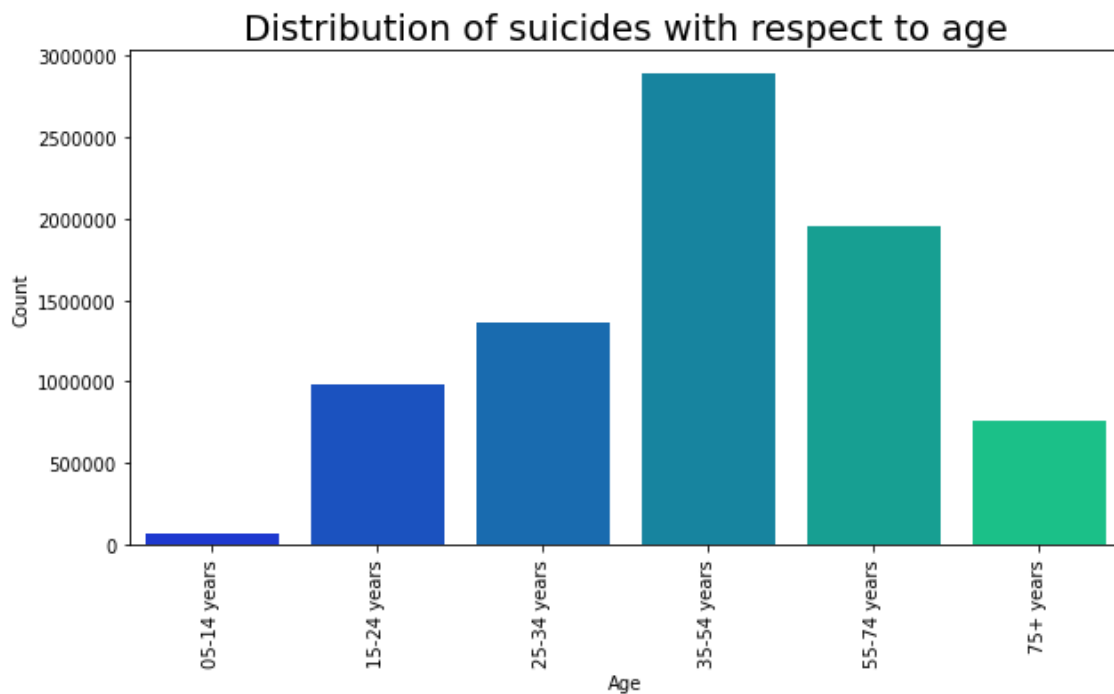
INFERENCE

➢ From the above analysis we can observe that most of the suicides in the world from 1986 to 2015 occurred within 35-44 age group which accounts 35.53% of the total suicides.

➢ Age group 55-74 also accounted 31.2% of total suicides. Mainly adults are involved in suicides than other age groups.

➢ 15-24 years age group accounts 15.7% of total suicides and the main reasons for this is lack of maturity and reacting to small incidents in a larger view.

➢ 75+ years age group accounts 12% of total suicides.

➢ The least number of suicides can be seen in 05- 14 years age group as they generally don't have any maturity and they don't have any problems at that age.

6. Comparison of total number of suicides age wise in Russia and United States of America in 2015.

PURPOSE:

➢ The top countries in the total number of suicides in world from 1986 to 2015 are Russia and America. Hence comparison is required on both the countries to know whether age group is depending as shown in above inference or not.
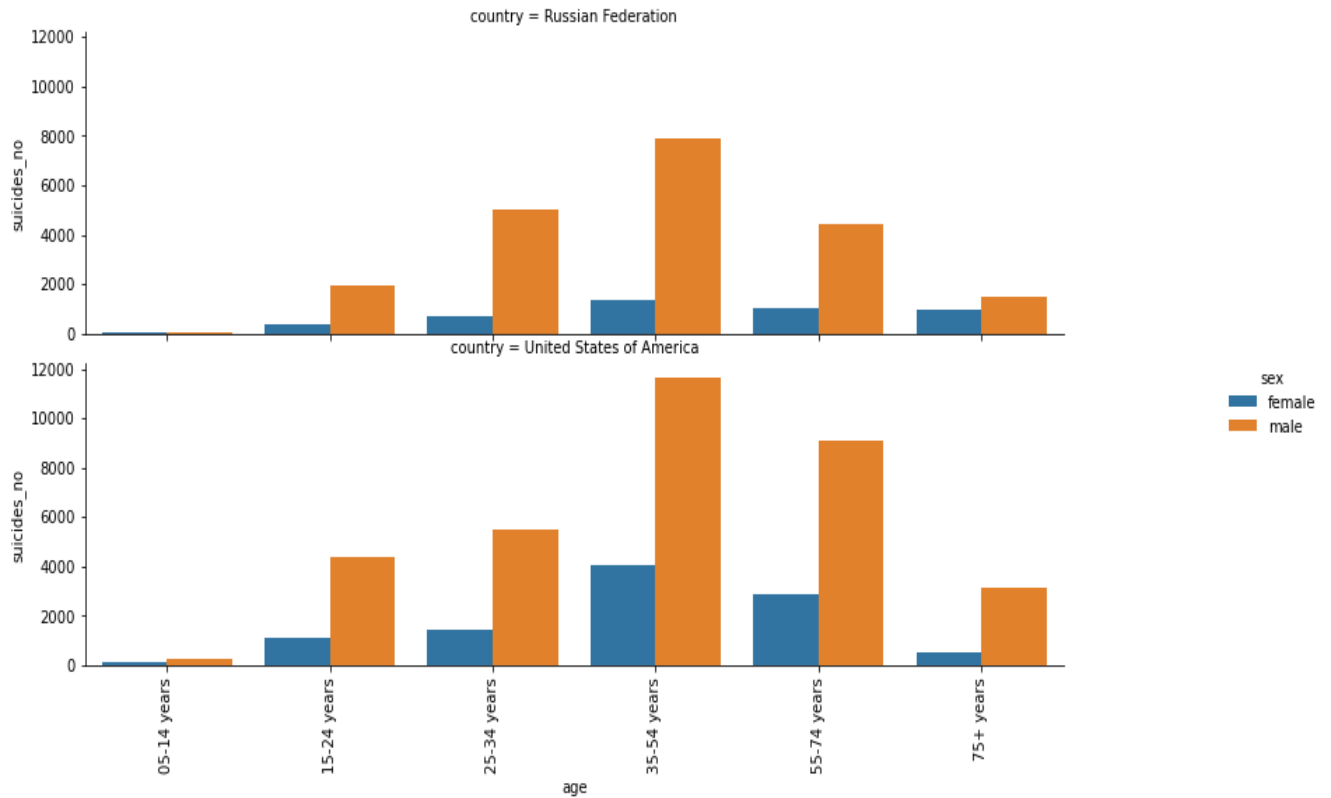
INFERENCE

➢ In both the countries almost, same trends are present with highest number of suicides in 35-54 years age group.
➢ In Russia second largest number of suicides in 2015 happened in 25-34 years age group but in USA second largest number of suicides are in 55-74 years age group.
➢ Based on this the above said inference on age groups can be applied to various countries and there may be slight changes observed but not a bulk change.

7. Analysis of suicides based on population:

PURPOSE

➢ Analysis of number of suicides must be done based on total population of the country. The crude rates per 100k people is been calculated from the given data. As the size of the country increases, population increases, thus number of suicides increases. Suicide rates vary considerably depending on demographic structure.

	country	year	sex	age	suicides_no	population	crude_rate_per_100k
0	Albania	1985	female	15-24 years	0.0	2.779000e+05	0.000000
1	Albania	1985	female	25-34 years	0.0	2.468000e+05	0.000000
2	Albania	1985	female	35-54 years	0.0	2.675000e+05	0.000000
3	Albania	1985	female	05-14 years	0.0	2.983000e+05	0.000000
4	Albania	1985	female	55-74 years	0.0	1.387000e+05	0.000000
...	...	...	...	...	...	...	...
43771	Zimbabwe	1990	male	25-34 years	150.0	1.664091e+06	9.013929
43772	Zimbabwe	1990	male	35-54 years	132.0	1.664091e+06	7.932258
43773	Zimbabwe	1990	male	05-14 years	6.0	1.664091e+06	0.360557
43774	Zimbabwe	1990	male	55-74 years	74.0	1.664091e+06	4.446872
43775	Zimbabwe	1990	male	75+ years	13.0	1.664091e+06	0.781207

43476 rows × 7 columns

	country	crude_rate_per_100k
119	Sri Lanka	28.324585
54	Hungary	22.138551
69	Lithuania	21.532582
68	Latvia	20.762600
38	Estonia	20.532618
116	Slovenia	20.111369
104	Russian Federation	18.603422
62	Japan	16.877394
28	Croatia	16.630770
64	Kazakhstan	16.630329

INFERENCE

➢ These are top countries in suicides rate per 100k based on the population of the country.
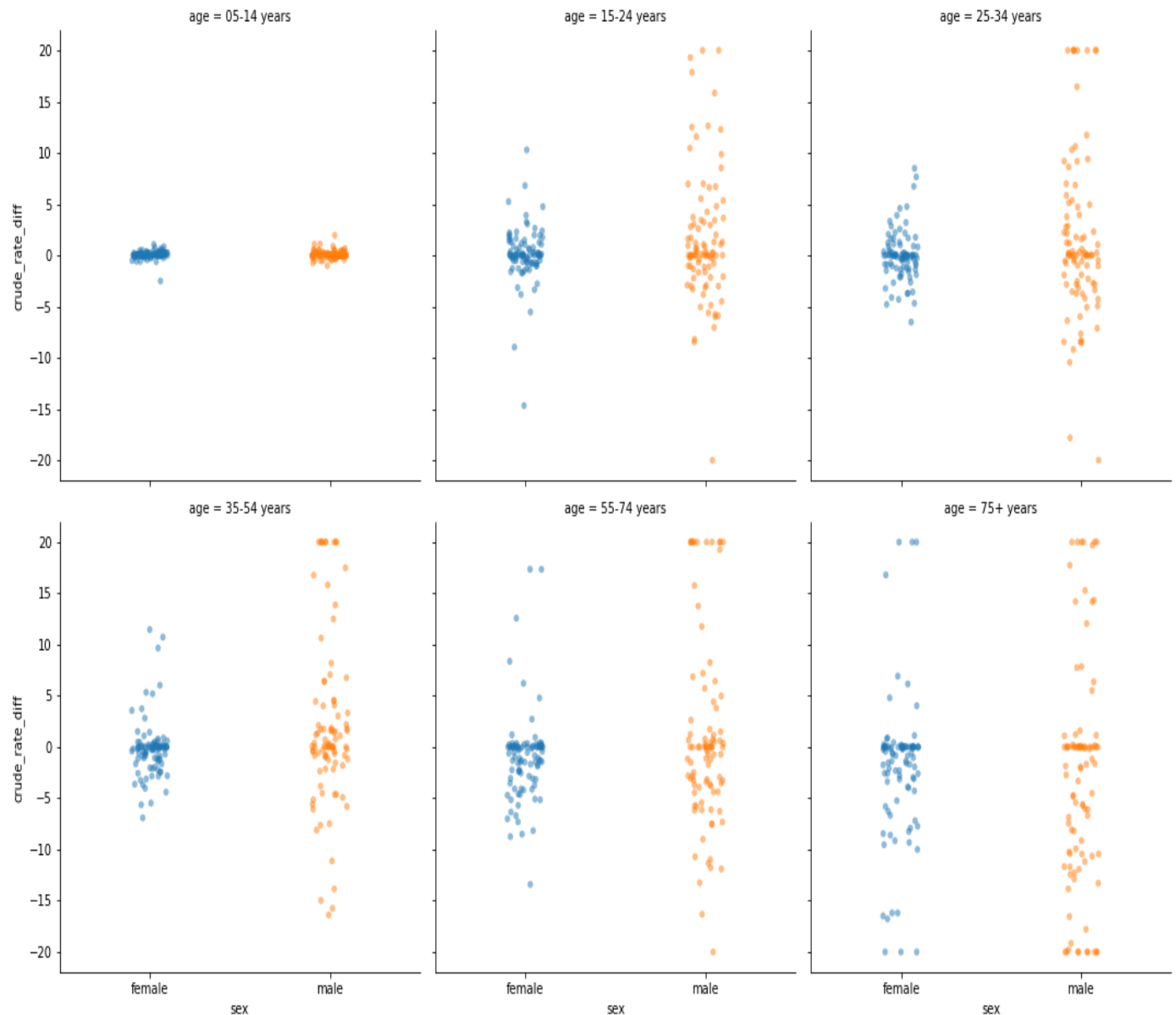
8. **Analysis of suicide rate in the first two decades 1986-1995 vs 1995-2005.**

PURPOSE

➢ To know about the changes that occurred in suicide rates from one decade to another decade.

	country	decade_decade1	sex	age	median_decade1	count_decade1	decade_decade2	median_decade2	count_decade2	crude_rate_diff
0	Albania	1986-1995	female	05-14 years	0.000000	10	1996-2005	0.278641	10	0.278641
1	Albania	1986-1995	female	15-24 years	2.258562	10	1996-2005	5.317182	10	3.058620
2	Albania	1986-1995	female	25-34 years	1.513933	10	1996-2005	3.682569	10	2.168635
3	Albania	1986-1995	female	35-54 years	1.012489	10	1996-2005	2.452446	10	1.439957
4	Albania	1986-1995	female	55-74 years	0.589583	10	1996-2005	1.779099	10	1.189516

➢ In this analysis suicide rates of countries are been considered in 1986-1996 and 1995-2005. Only the countries with at least five years in a decade are considered.

➢ The median rate from the years has been considered as this can help to protect the data from any noises if present.

➢ The difference between the suicide rate in 1986-1995 and 1996-2005 is been calculated for each country over each age group.

➢ The difference is been capped at +/-20 per 100k population.

➢ Analysis is done based on the suicide rate difference.

INFERENCE

➤ From the above analysis, it is clear that there is no clear trend observed in all the younger age groups.

➤ Mostly we can observe that there is little more density below zero which means that the suicide rate is a bit more in the past decade I.e., in 1986-1995.

➤ 35-54, 55-74 and 75+ age groups have a greater change compared to previous decade.

➤ Entire analysis of all age groups tells that there is decrease in the suicide rate from 1986-1995 to 1996-2005.

9. Analysis of suicide rate in the first two decades 1996-2005 vs 2006-2015.

PURPOSE

➢ To know about the changes that occurred in suicide rates from one decade to another decade.
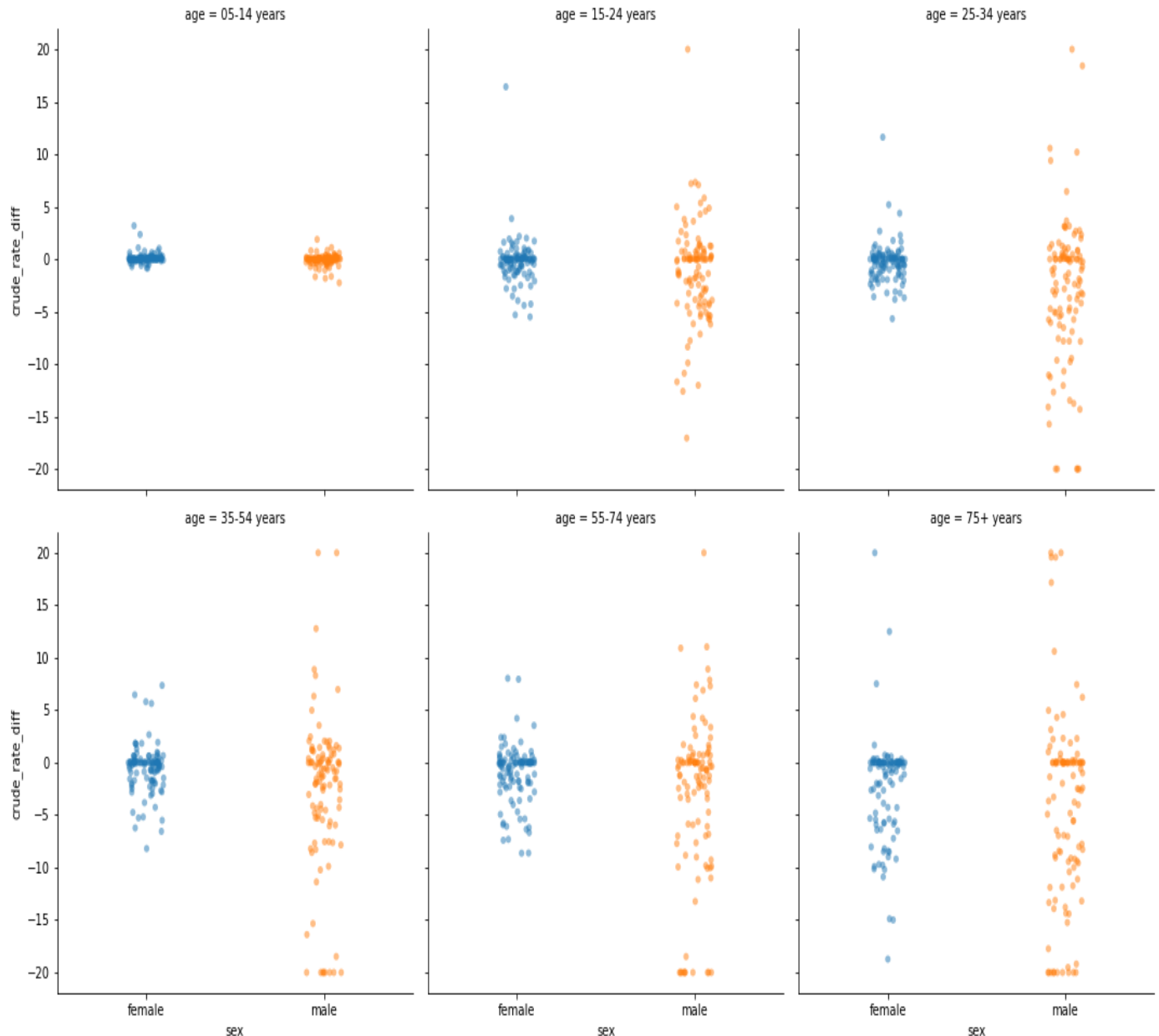
INFERENCE

➢ During the 2006-2015 decade, there is decrease in the suicide rates compared to the previous decade 1996-2005.

➢ The vast majority of the dots are either near zero meaning no change or below zero meaning fewer deaths per capita than in the previous decade.

ANALYSIS OF SUICIDES IN INDIA

Data has been collected from www.kaggle.com. Data consists of information about State, Year, Type_code, Type, Gender, Age_group and Total.

State: Describes the state name

Year: Year

Type_code: Describes the information and reason of the incident

'Causes' - The reason of the suicide

'Means_Adopted'- Way adopted for committing suicide.

'Educational_status'- Educational status of the person committed suicide.

'Professional Profile' and 'Social_status'

Type:

      1. Causes: Family Problems, Prolonged Illness, Insanity/Mental Illness, Love Affairs, Bankruptcy or sudden change in Economics, Poverty, Dowry dispute, Drug Abuse/Addiction, Unemployment, Failure in Examination, Property Dispute, Suspected/Illicit Relation, Fall in Social Reputation, Professional/Carrer Problem, Cancellation/Non-Settlement of Marriage, Death of Dear Person, Cancer, Illness (Aids/STD), Not having Children/Impotency, Paralysis, Divorce, Physical Abuse, Illegitimate Pregnancy, Ideological Causes/Hero Worshipping, Not having children.

2. Means_Adopted: Hanging, Consuming Insecticides, Consuming Poison, By Fire/Self Immolation, Drowning, coming under running vehicles/trains, Over Alcoholism, touching electrical wires, Overdose of sleeping pills, jumping from sites, Jumping of moving vehicles/Trains, fire arms, self-infliction of injury, machine.

3. Educational_Status: No education, Primary, Middle, Matriculate/Secondary, Hr. Secondary/Intermediate/Pre-University, Diploma, Graduate, Post-Graduate and Above.

4. Professional Profile: House Wife, Agricultural/Farming activity, Service (Private), Service (Government), Self-Employed (Business activity), Student, Professional Activity, Public sector undertaking, Retired person, Unemployed.

5. Social_status: Married, Never Married, Widowed/Widower, Separated, Divorce.

Gender: Male, Female

Age_Group: 0-14, 15-29, 30-44, 45-59, 60+

Total- Describes total number of suicides.

Data Pre-Processing

Handling missing values:

Dataset consists of 237518 rows and 7 columns.

	State	Year	Type_code	Type	Gender	Age_group	Total
0	A & N Islands	2001	Causes	Illness (Aids/STD)	Female	0-14	0
1	A & N Islands	2001	Causes	Bankruptcy or Sudden change in Economic	Female	0-14	0
2	A & N Islands	2001	Causes	Cancellation/Non-Settlement of Marriage	Female	0-14	0
3	A & N Islands	2001	Causes	Physical Abuse (Rape/Incest Etc.)	Female	0-14	0
4	A & N Islands	2001	Causes	Dowry Dispute	Female	0-14	0
...	...	...	...	...	...	...	...
237514	West Bengal	2012	Social_Status	Seperated	Male	0-100+	149
237515	West Bengal	2012	Social_Status	Widowed/Widower	Male	0-100+	233
237516	West Bengal	2012	Social_Status	Married	Male	0-100+	5451
237517	West Bengal	2012	Social_Status	Divorcee	Male	0-100+	189
237518	West Bengal	2012	Social_Status	Never Married	Male	0-100+	2658

237519 rows × 7 columns

Dataset doesn't contain any null values.

```
State        0
Year         0
Type_code    0
Type         0
Gender       0
Age_group    0
Total        0
dtype: int64
```

ANALYSIS AND VISUALIZATION

1. **Total number of suicide cases per year in India**

PURPOSE:

➢ To find out the total number of suicides happened from 2002 to 2012 in India.

Suicide rate per year
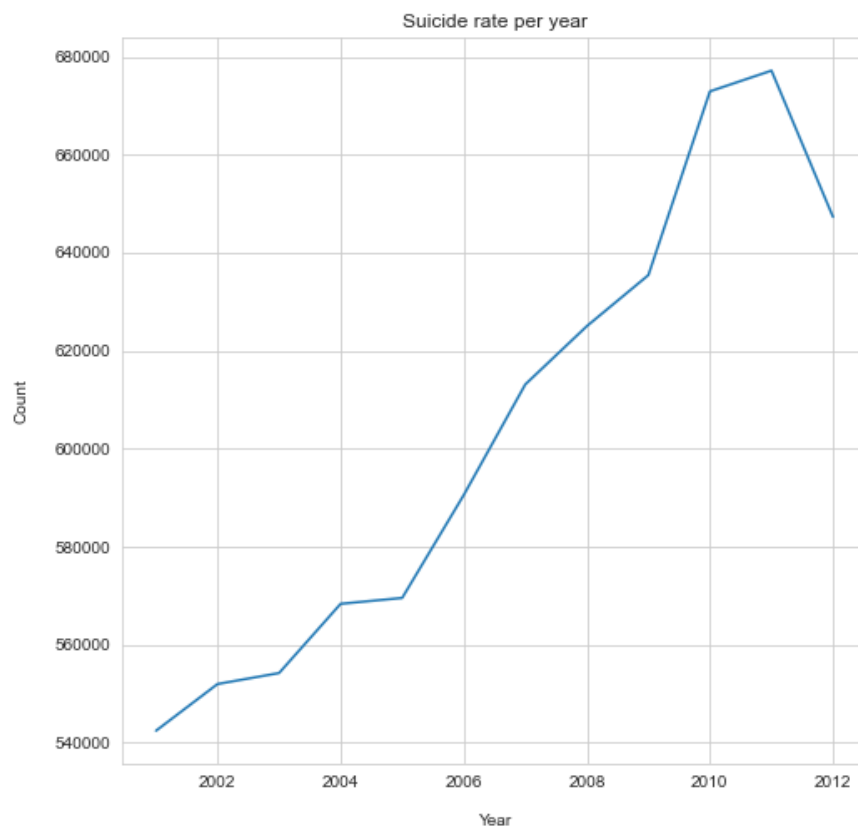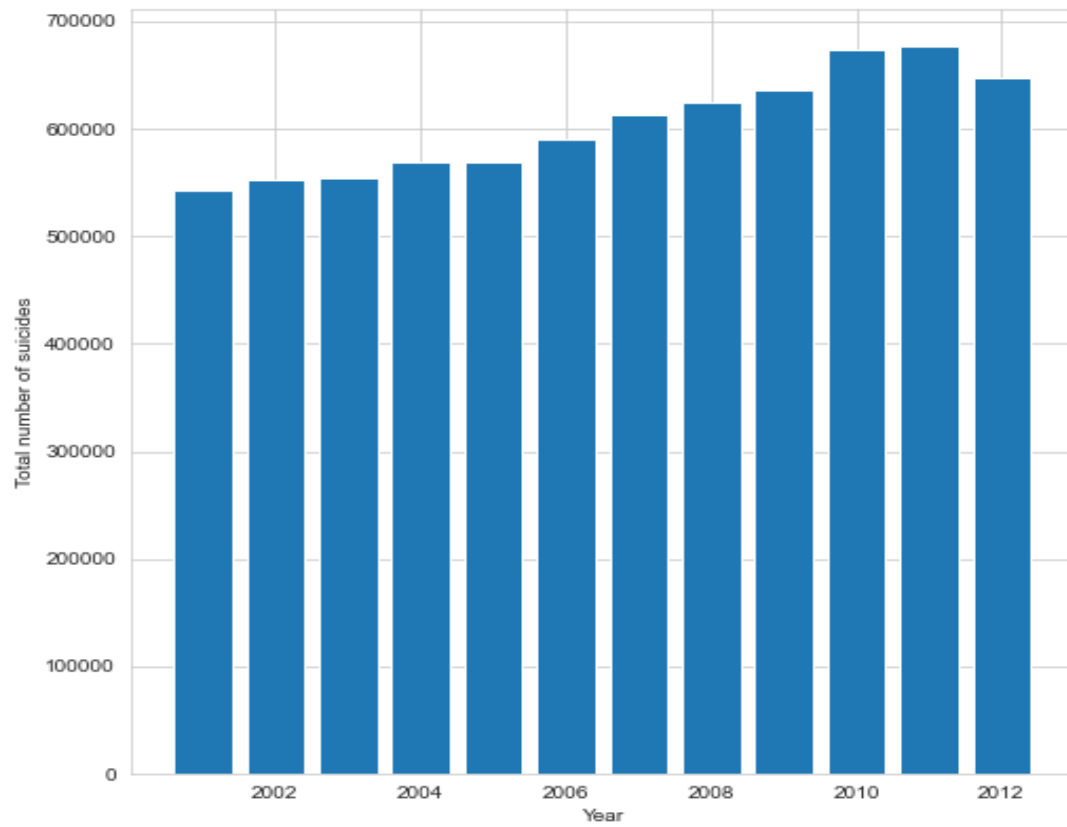
INFERENCE

➢ From the above analysis the total number of suicide cases are slightly increased from 2002 to 2011 but in 2012 decrease in number of total suicide cases is observed. Highest number of suicides happened in 2011 and least number of suicides happened in 2001.

2. Total number of suicides cases per each state in India.

PURPOSE

➢ To know the total number of suicide cases happened in each state in India from 2002 to 2012.
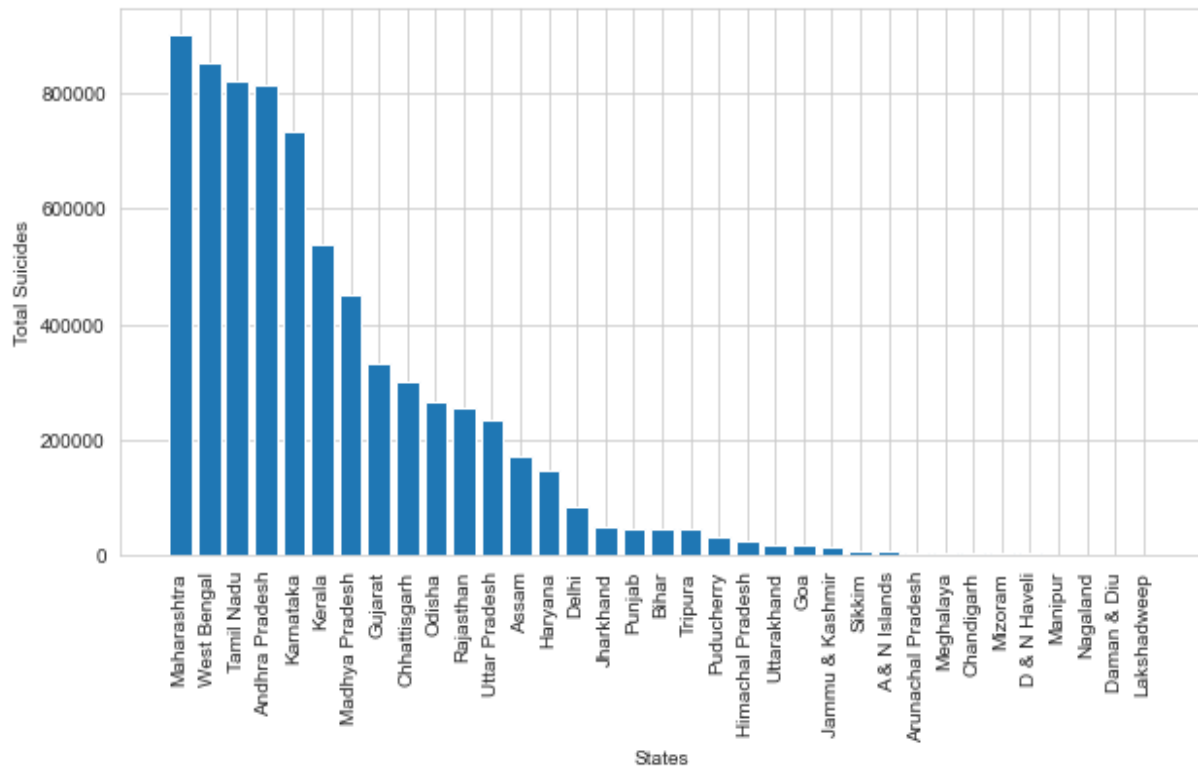
State	Total
Maharashtra	901945
West Bengal	849936
Tamil Nadu	818691
Andhra Pradesh	814059
Karnataka	734825
Kerala	538946
Madhya Pradesh	451535
Gujarat	330858
Chhattisgarh	302354
Odisha	267234

State	Total
A & N Islands	8109
Arunachal Pradesh	6633
Meghalaya	5415
Chandigarh	5164
Mizoram	4154
D & N Haveli	3430
Manipur	2102
Nagaland	1728
Daman & Diu	1391
Lakshadweep	50

Top 10 states in suicide cases   Least 10 states in suicide cases

INFERENCE

➢ From the above analysis it is evident that Maharashtra has a greater number of suicide cases than any other state in the country. Maharashtra, West Bengal, Tamil Nadu, Andhra Pradesh and Karnataka are the top five states in the country with a greater number of suicide cases.

➢ Mainly south Indian states have more cases than North Indian states.

➢ Least number of suicide cases from 2002 to 2012 are found in Lakshadweep with only 50 cases in entire 10 years period.

3. Total number of suicide cases by different causes

PURPOSE

➢ To know the total number of suicide cases per each cause in India from 2002 to 2012.
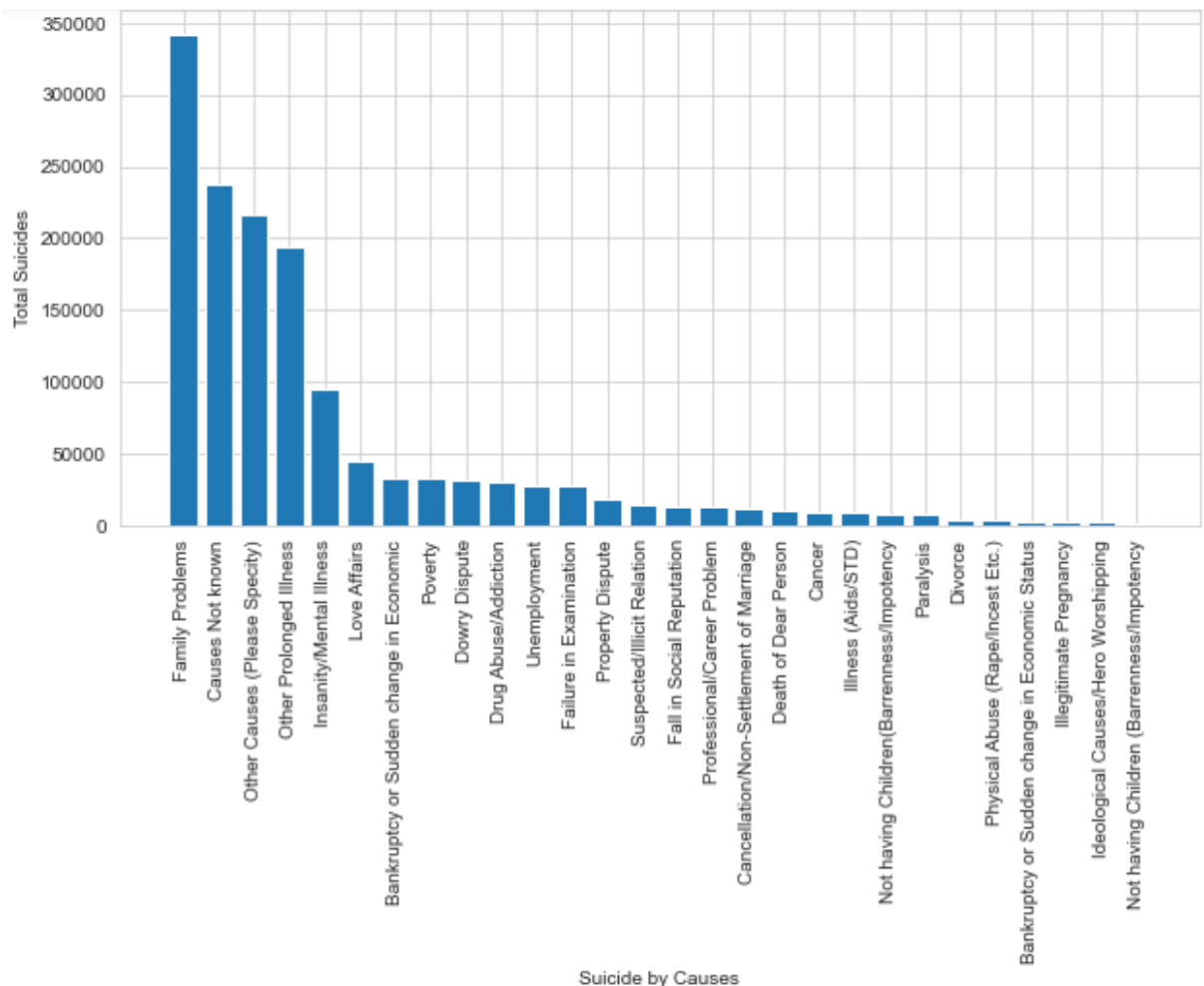
INFERENCE

➢ From the above analysis it is evident that there are 27 different causes which are leading to suicides.

➢ Family Problems are the main cause for suicides and there are many suicides occurring for which reasons are not known.

➢ The number of suicides occurred due to not having children are less than any other cause.

4. Total number of suicide cases based on educational status.

PURPOSE

➢ To know how education is been affecting the suicide cases in India from 2002 to 2012.

Suicide by Education_Status
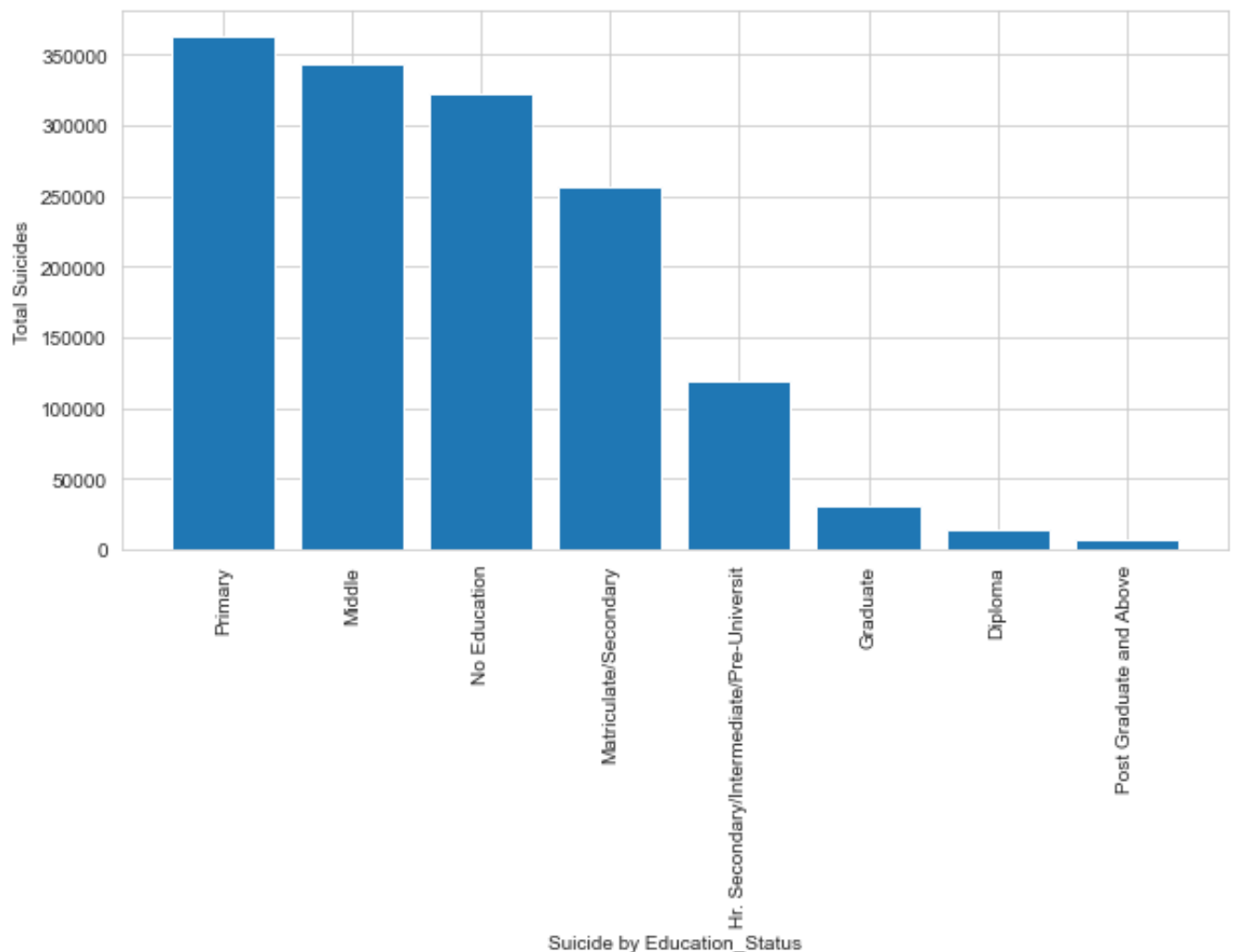
INFERENCE

➢ In the above analysis educational status of a person is divided into 8 different categories.
➢ It is been evident that persons who are having least educational knowledge are more likely to commit suicide than persons who are well educated.
➢ Persons with Primary, Middle and No Education are mainly involved in suicides and those who are done with Post Graduation are less likely to commit suicide.
➢ From this a conclusion can be made that education can impact the mental health of person and helps a person to go in a good direction.

5. **Total number of suicide cases by different means adopted for suiciding.**

PURPOSE

➢ To know which method is mainly used by a person to commit suicide in India from 2002 to 2012.
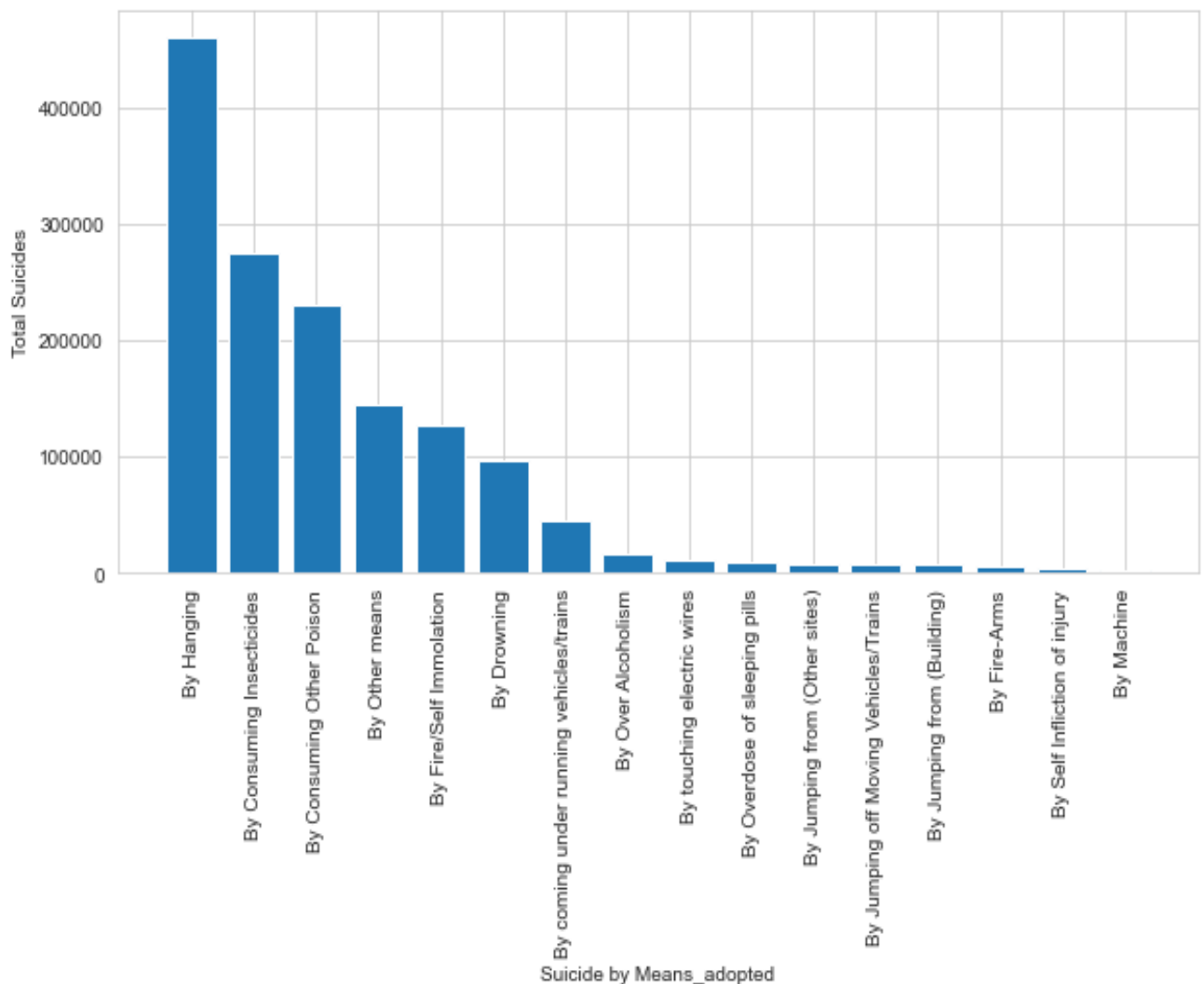
INFERENCE

➤ From the above analysis it is evident that most of those who are committing suicide by hanging.

➤ Consumption of insecticides and poison are also the leading methods adopted by people in committing suicides.

➤ The least preferred method for suicides is by machine or by self-infliction of injury.

6. Total number of suicide cases based on persons Professional Profile.

PURPOSE

➤ To know the total number of suicide cases based on person Professional Profile in India from 2002 to 2012.

Suicide by Professional_Profile
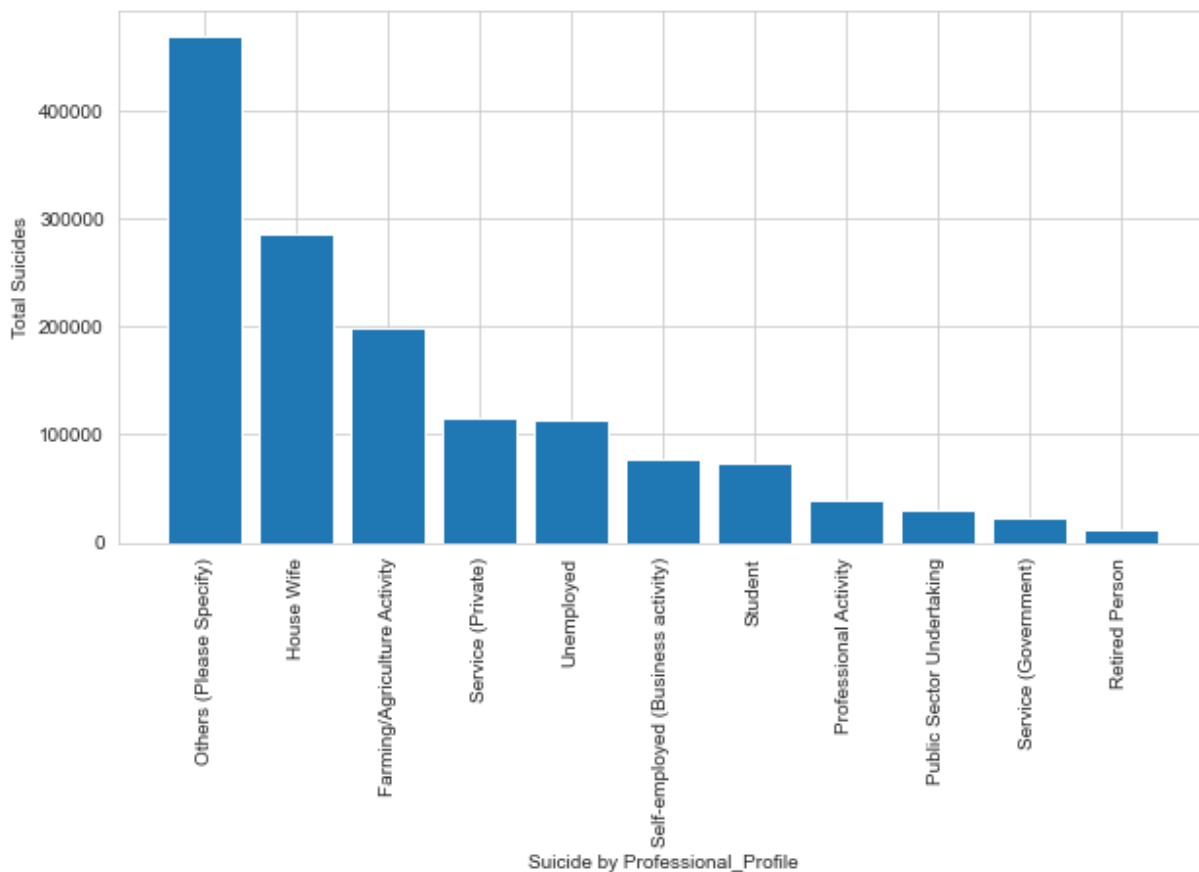
INFERENCE

➤ From the above analysis it is evident that most of the ones who committed suicide are house wives.

➤ Agriculture is one the main occupations in India. Most of the persons who committed suicide belong to Farming and Agriculture activity.

➤ Retired people are the one who are least involved in suicide.

7. Total number of suicide cases based on persons Social Status.

PURPOSE

➢ To know the total number of cases based on person social status in India from 2002 to 2012.
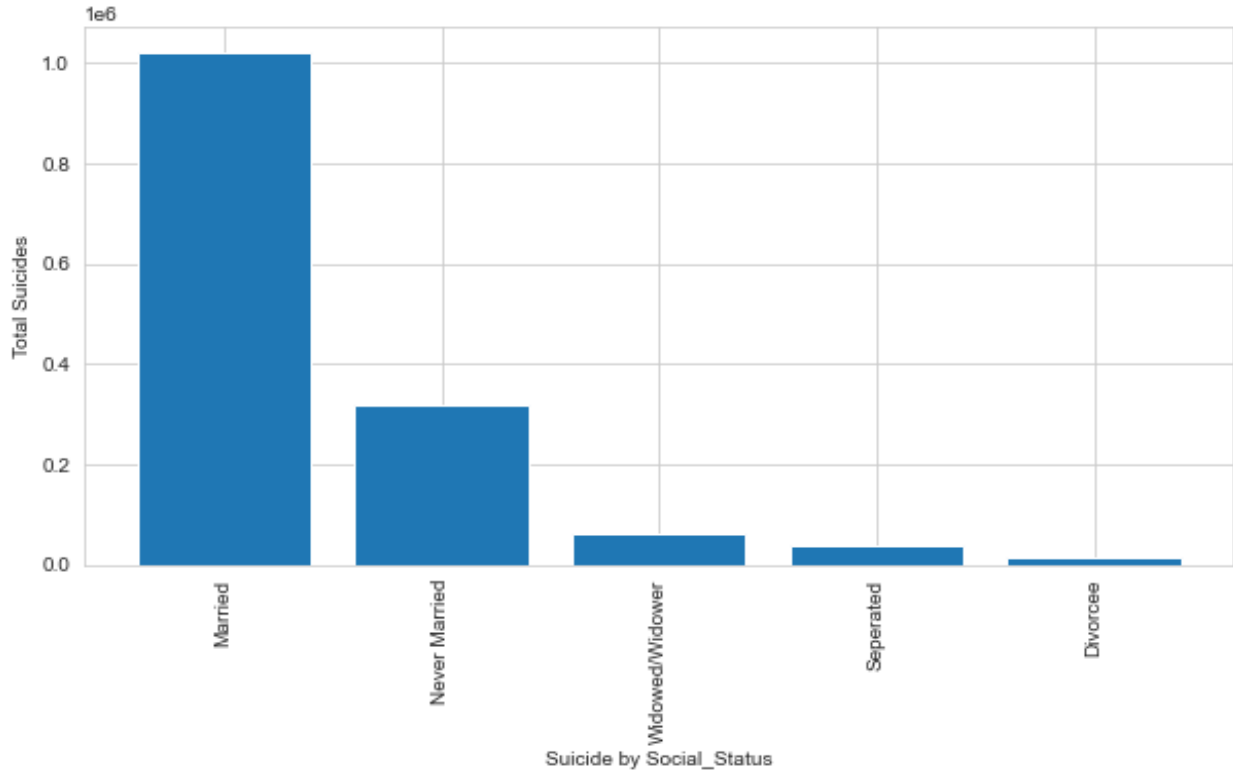
INFERENCE

➢ From the above analysis it is evident that the one who committed suicide are married.
➢ The one whose social status is widower/Widowed, Separated and divorced are involved lesser in suicides.

8. Total number of suicide cases based on age group

PURPOSE

➢ To know the total number of suicide cases per each group in India from 2002 to 2012.

Total_suicide_cases_vs_agegroup
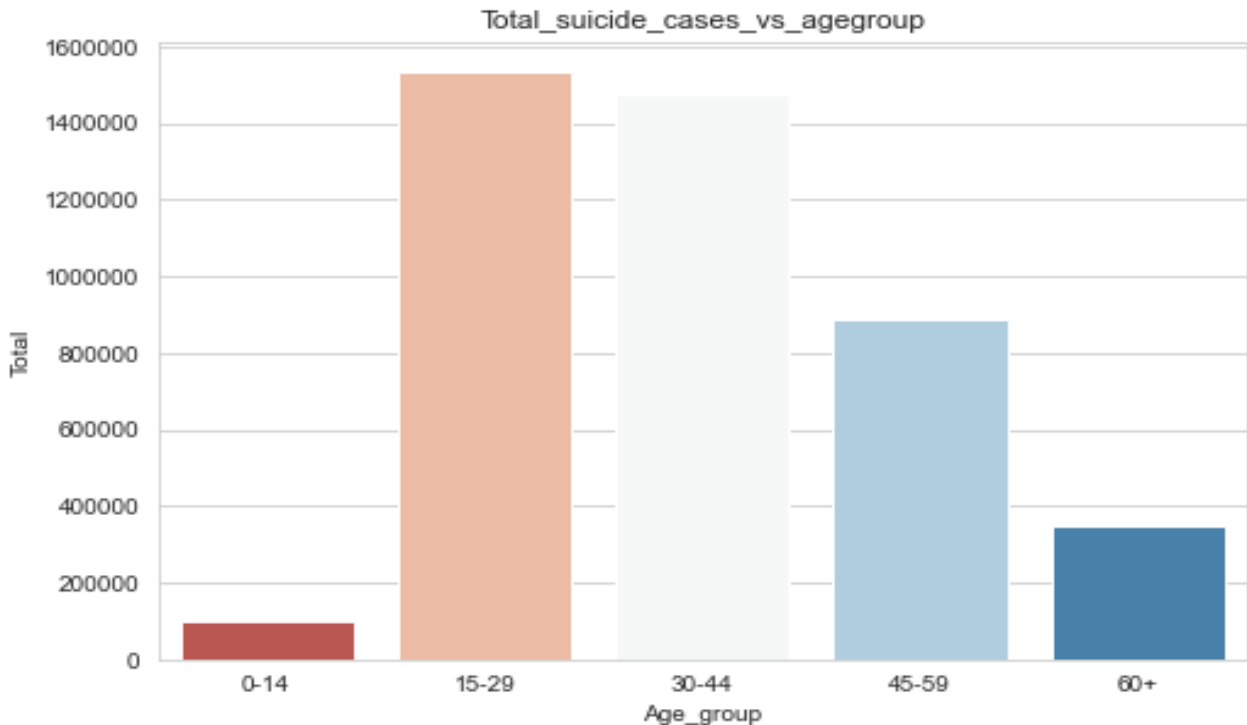
INFERENCE

➢ From the above analysis it is evident that most of the suicides are in 15-29 and 30-44 age group. Those who are in 15-29 age group generally have less maturity and tend very easily to take decision and commit suicide.

➢ The age group 30-44 may have problems related to finances, family problems, etc. are mostly involved in suicides.

➢ Age group 0-14 are the one who generally doesn't have any problem and are less intended towards suicides.

9. Total number of suicides cases per each age group as well as in each year.

PURPOSE

➢ To know how total number of cases are changing per each year and per each age group in India from 2002 to 2012.

Total_suicides_per_each_agegroup_2002_to_2012
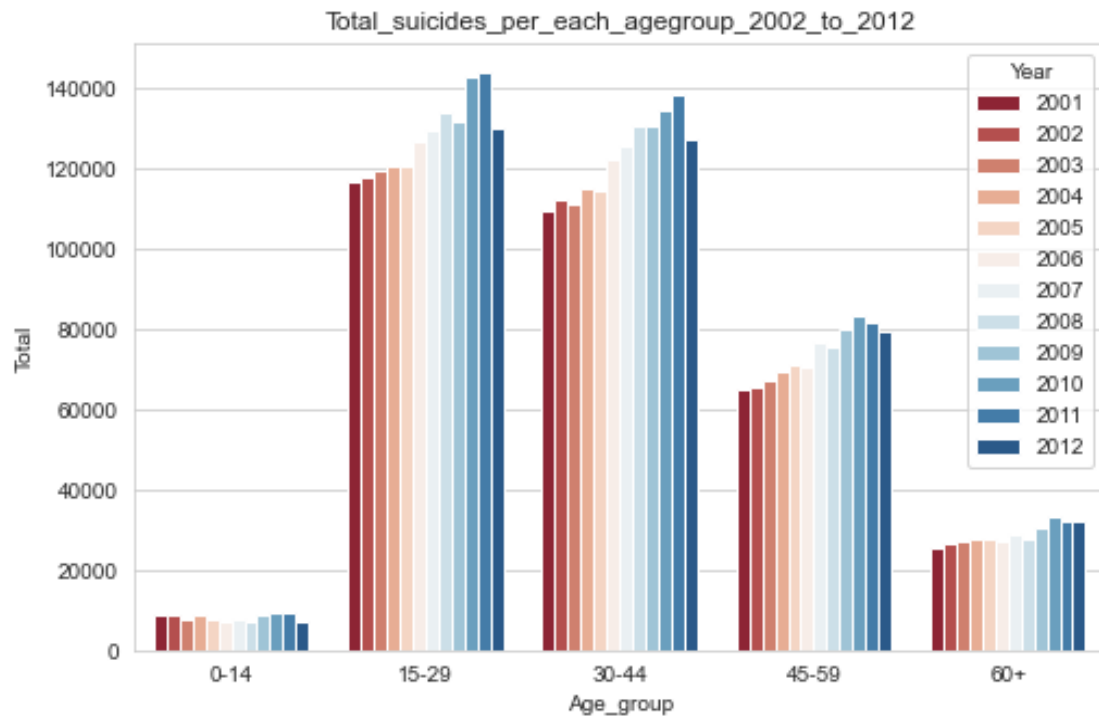
INFERENCE

➢ From the above analysis it is evident that almost there is equal change in number of suicide cases per each year in every age group.

➢ In all age group number of suicide cases have been increased almost each year from 2001 to 2011 and number of suicide cases decreased in 2012 in each age group.

10. Total number of suicide cases per each gender.

PURPOSE

➢ To know total number of suicide cases per each gender in India from 2002 to 2012.

Total_suicides_vs_gender
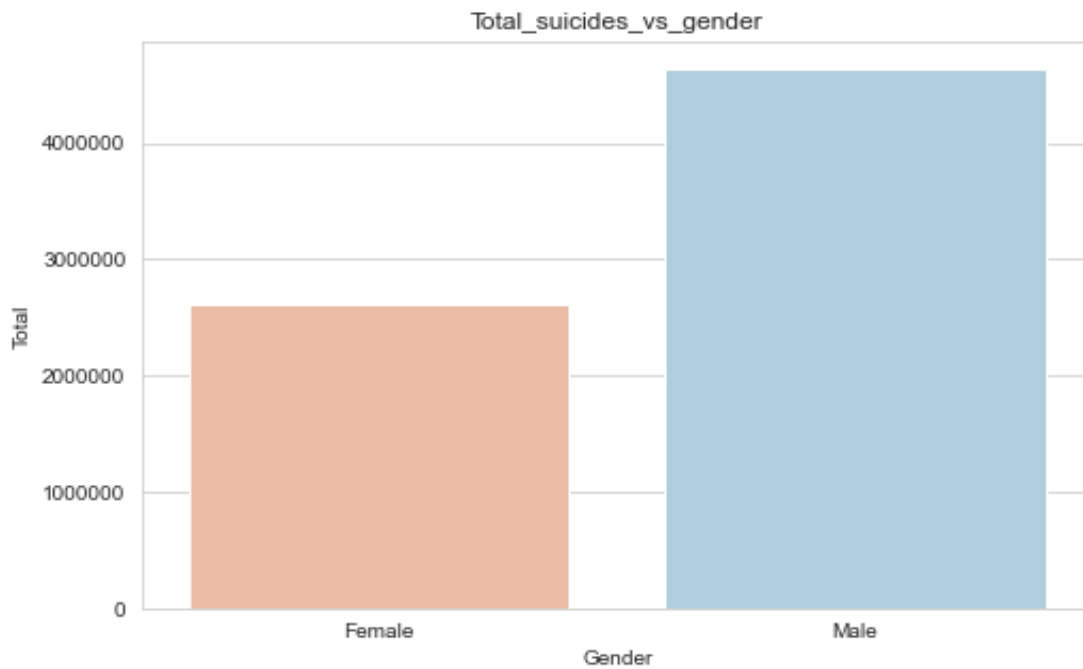
INFERENCE

➤ From the above analysis it is evident that mostly male are committing suicide than females.
➤ 66.7% of total suicides are done by males and 33.3% of total suicides are done by females.

11. Total number of male and female suicide cases per each year.

PURPOSE

➤ To know the total number of male and female suicide cases change per year from 2003 to 2012 in India.

Total_suicides_per_year_per_gender
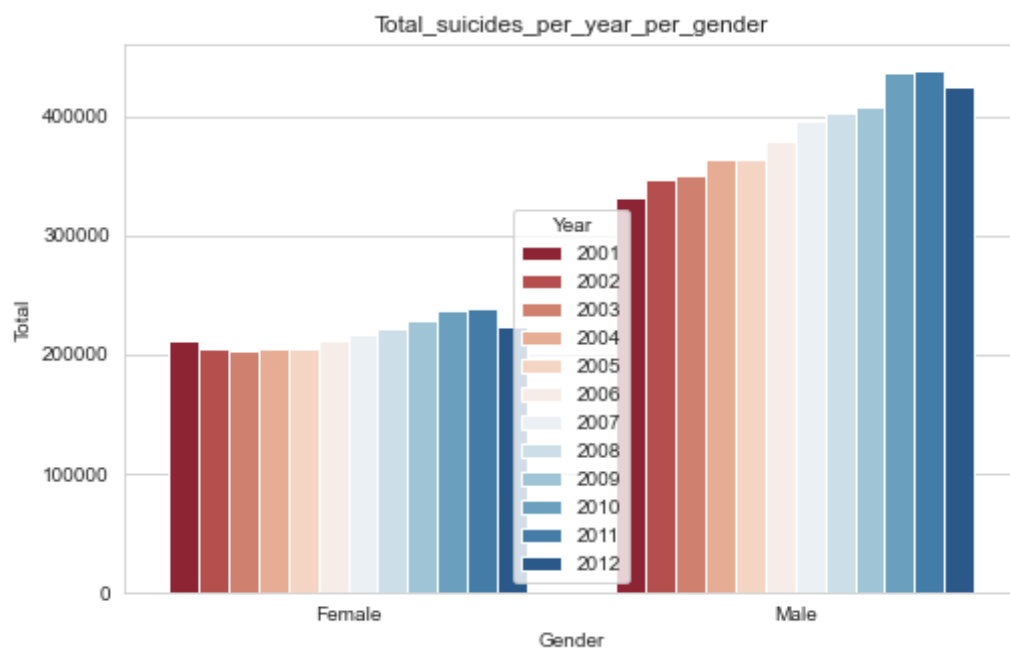
INFERENCE

➢ From the above analysis it is evident that there is slight change in female suicide cases each year from 2002 to 2012 whereas we can see that there is more change in male suicide cases each year from 2012 to 2012.

12. Total number of male and female suicide cases per each age group.

PURPOSE:

➢ To know the number of male and female suicide cases per each group in India from 2002 to 2012.
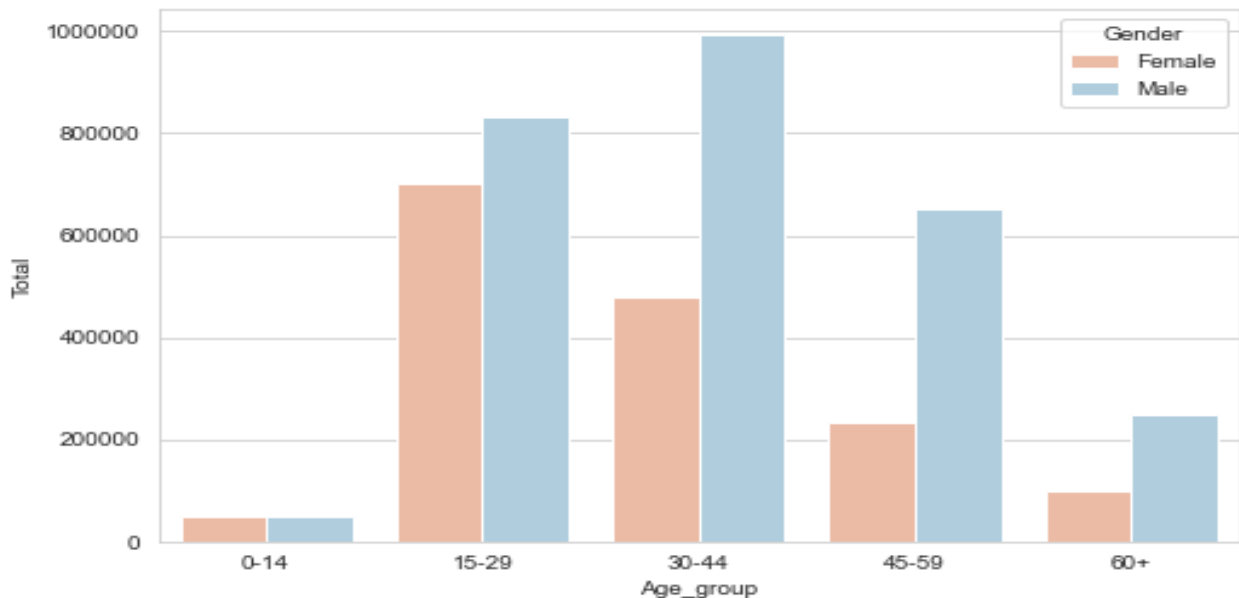
INFERENCE

➢ From the above analysis it is been evident that males of 30-44 age group are mostly committing suicide and females of 15-29 age group are committing suicide.

13. Total number of male and female suicide per each type.

PURPOSE:

➢ Analyzing the total number of male and female suicide cases per each type in India from 2002 to 2012.
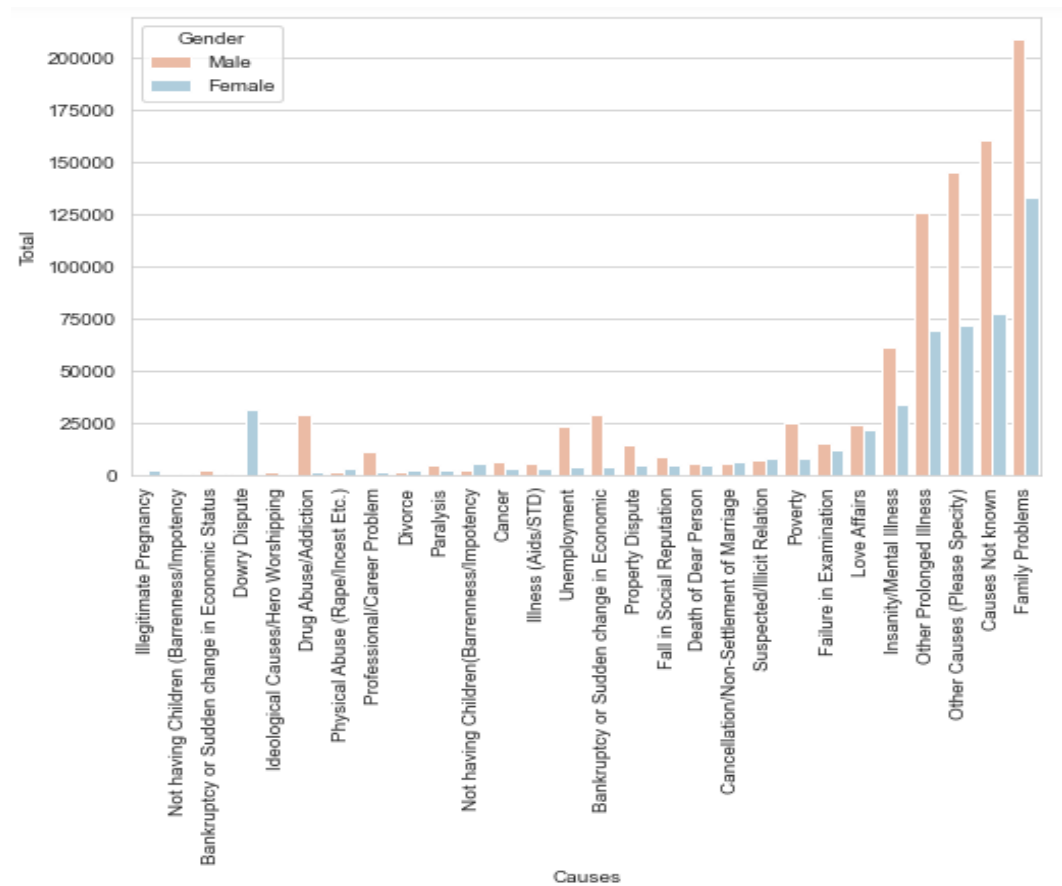
From the above analysis it is evident that both males and females are committing suicides due to family reasons only.
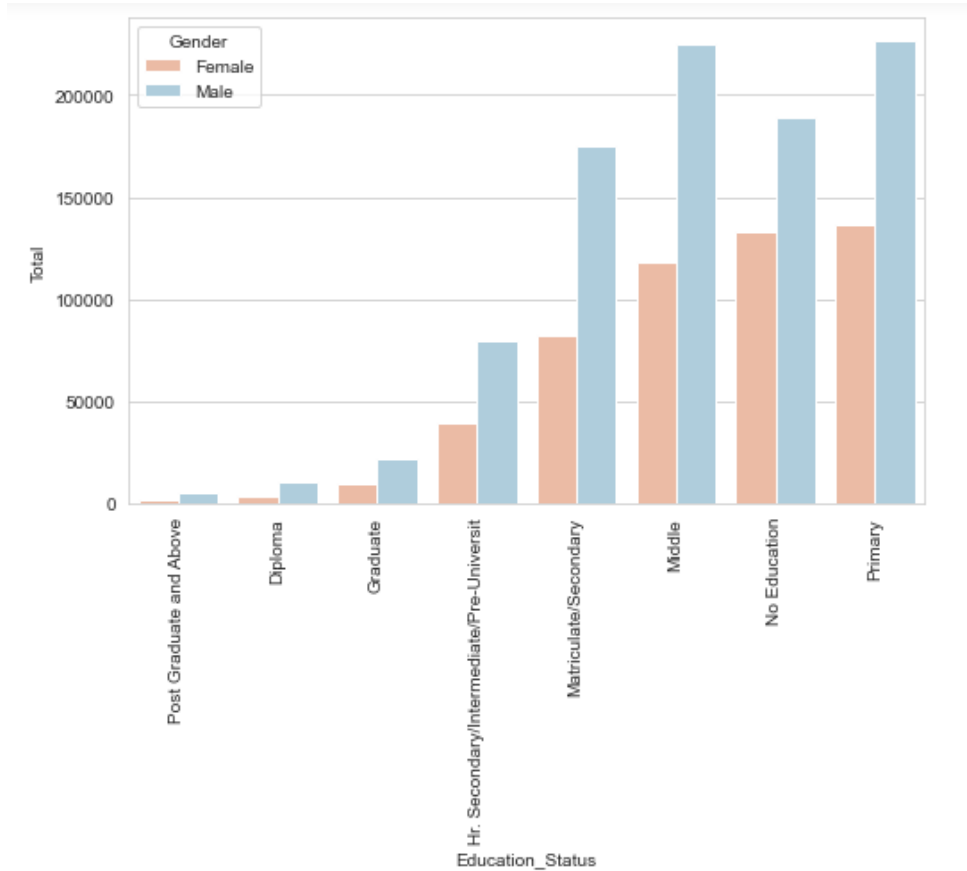
From the above bar graph, it is evident that most of the males who committed suicide are done with primary or middle education. Females who committed suicide are mostly with primary education or no education.
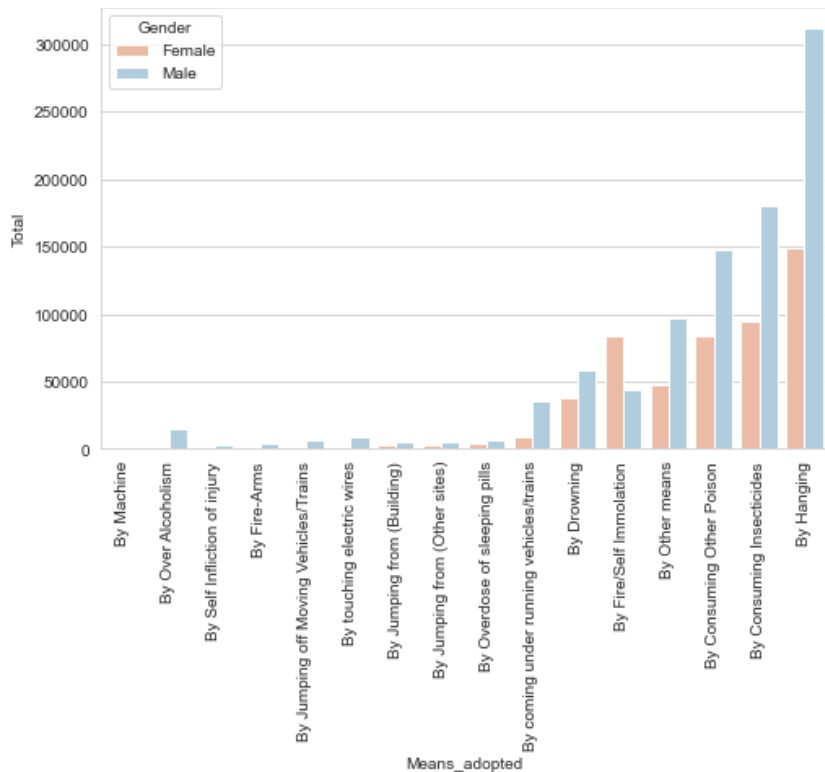
From the above bar graph, it is evident that both males and females are opting hanging for committing suicide.
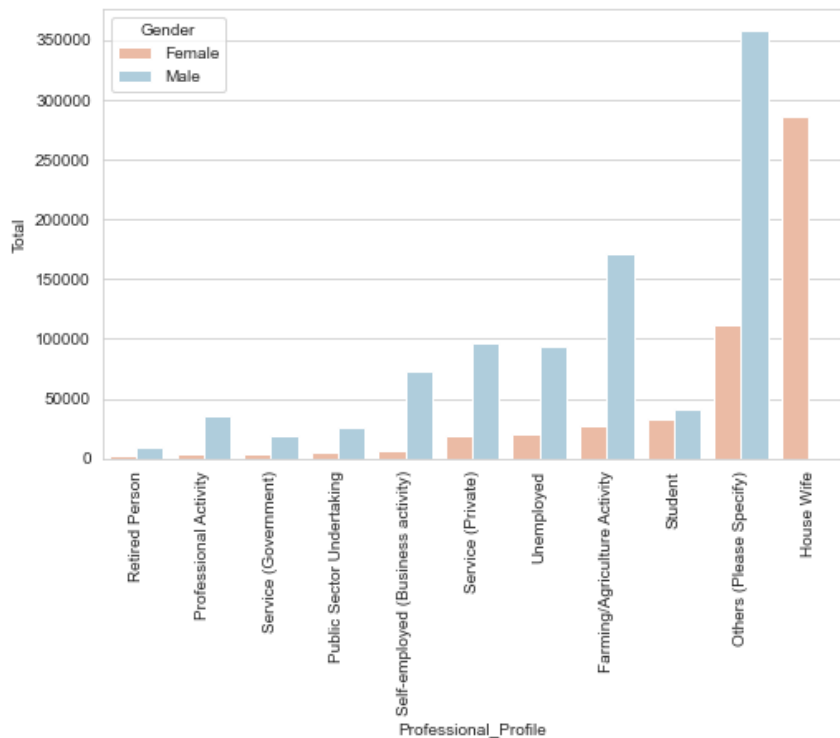
From the above bar graph, it is evident that the professional profile of most of the male who committed suicide is Farmers or agricultural workers and the highest female suicides are house wives.
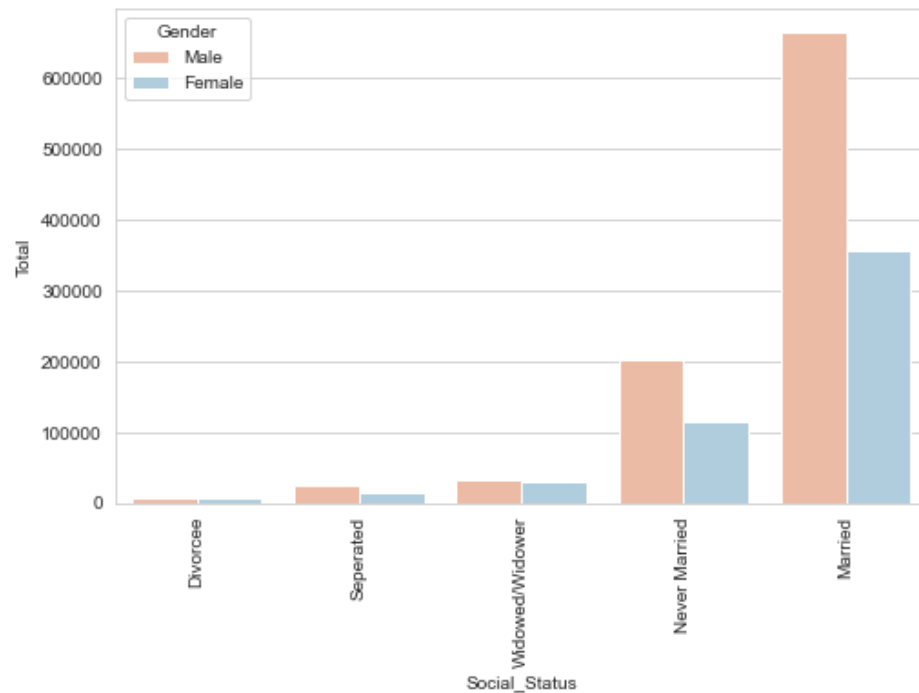
From the above bar graph, both males and females who committed suicide are married mostly.

14. Analysis of main causes of suicides in each age group.
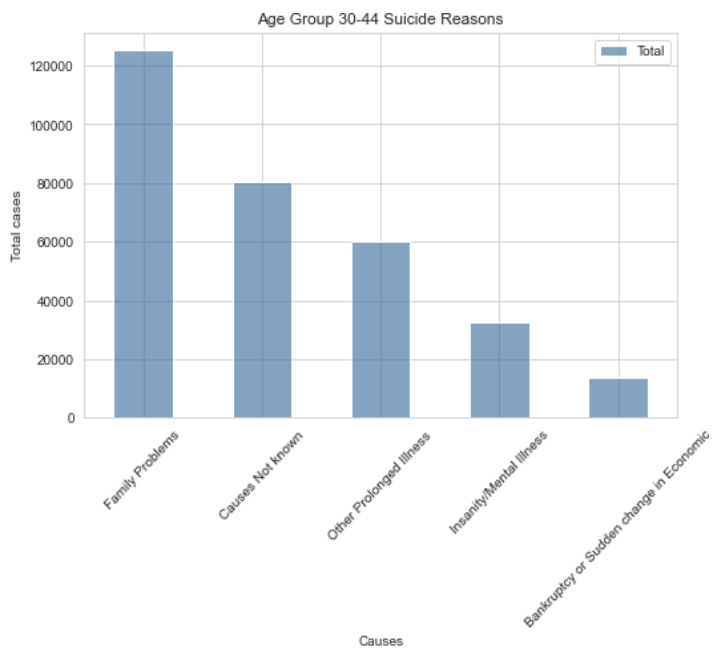
PURPOSE:

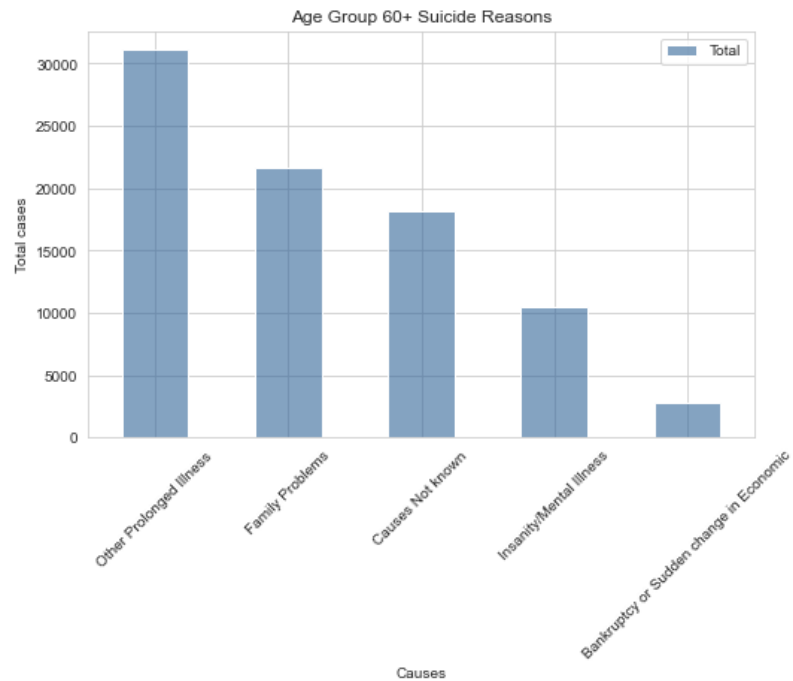➤ To find out the main causes of suicide per each age group in India from 2002 to 2012.
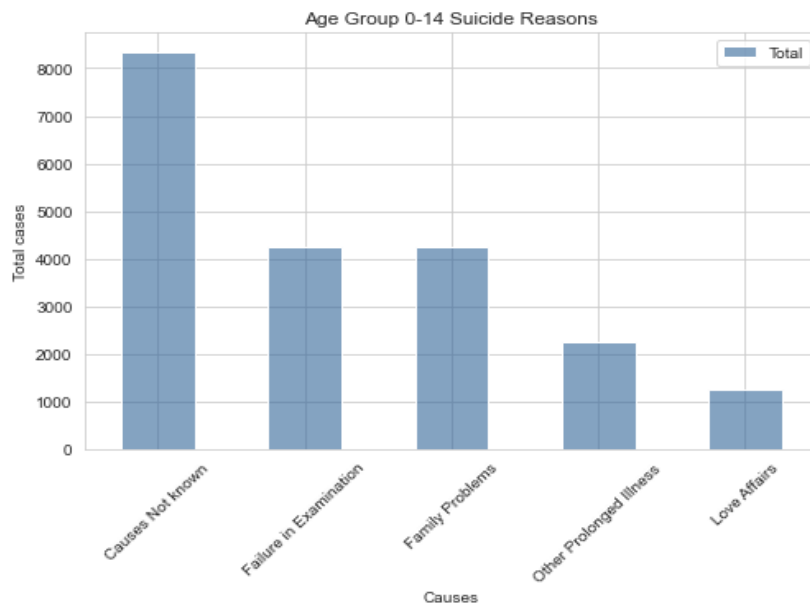
From the above graph it is evident that most of the reasons for committing suicide in 0-14 age group are unknown or due to failure in examination. Family problems, Prolonged illness and love affairs are also the main causes of suicides in this age
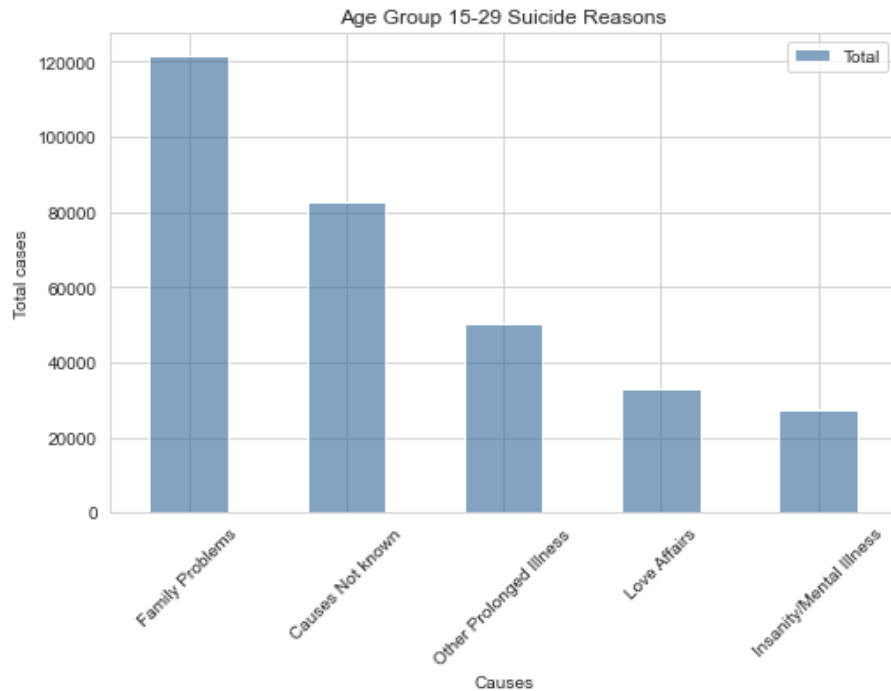
From the above graph it is evident that age group 15-29 are committing suicide mainly due to family problems, prolonged illness, love affairs, mental illness and many causes are not known.
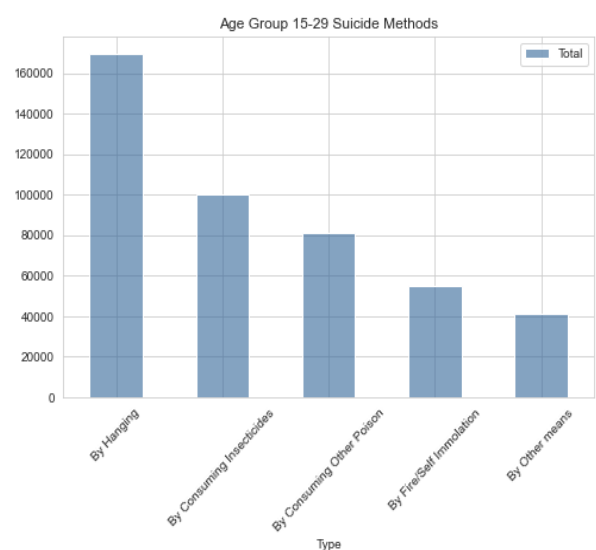
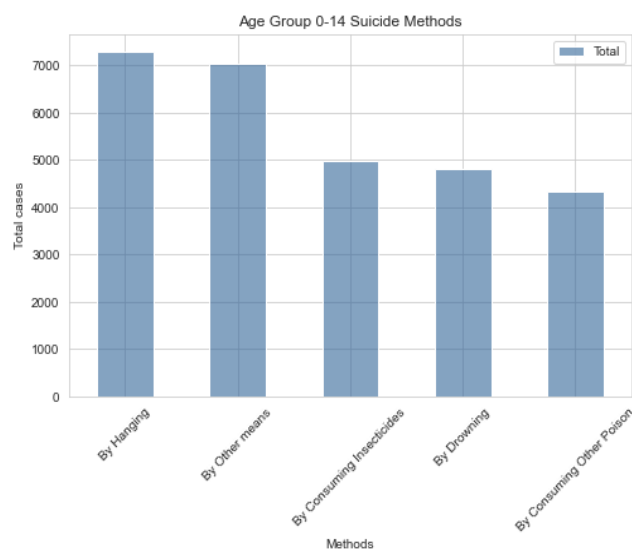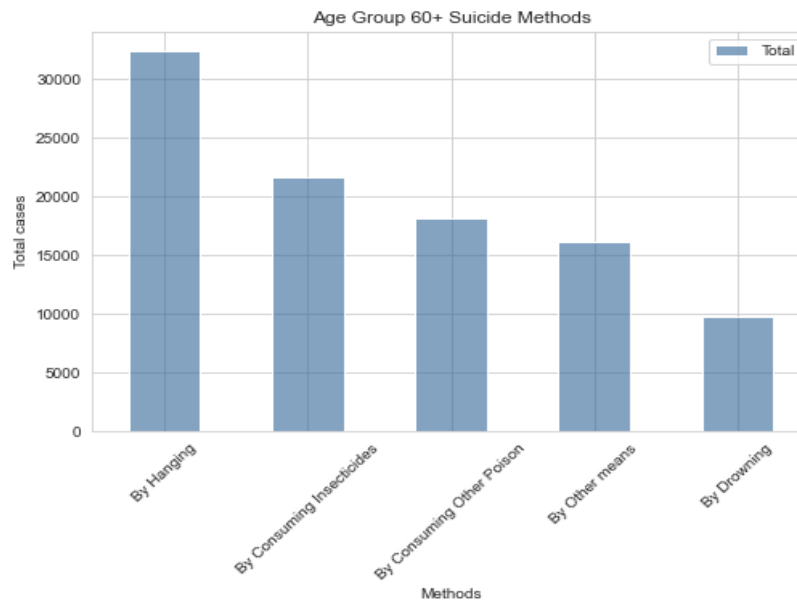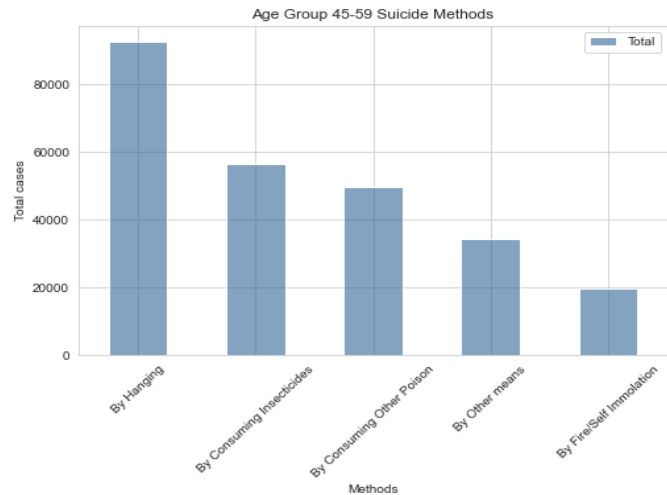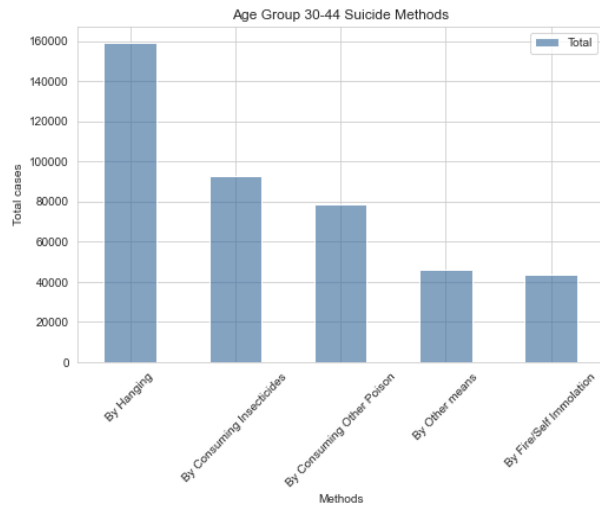Age Group 60+ Suicide Reasons
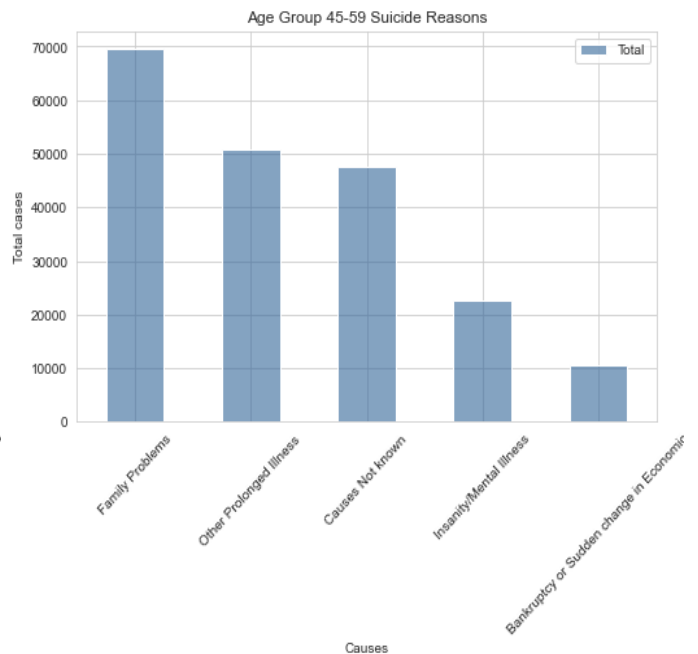
From the above graphs it is evident that 30-44, 45-59 and 60+ age groups committed suicides mainly due to family problems, prolonged illness, mental illness, bankruptcy and unknown reasons.

15. Analysis of main methods used for suicides in each age group.

PURPOSE

➢ To find out the main methods used for suicide per each age group in India from 2002 to 2012.

Age Group 0-14 Suicide Methods

Age Group 15-29 Suicide Methods

Age Group 30-44 Suicide Methods

Age Group 45-59 Suicide Methods

Age Group 60+ Suicide Methods

INFERENCE

From the above analysis,

➢ The most frequent method opted for committing suicide is by hanging in India from 2002 to 2012. This is the method used by every age group.

➢ The common methods for committing suicides in every age group are hanging, Consuming insecticides, consuming poison, by fire or self-immolation.

➢ 0-14 and 60+ age group also committed suicide by drowning.

➢ If government takes appropriate measures, then suicides can be controlled. It can decrease the availability of insecticides, poisons in the market which are leading to suicides.

➢ Government can also appoint people near water bodies who can stop people committing suicide by drowning.

➢ Hanging can be reduced by family care and medication of depression.

16.Analysis of role of unemployment in number of suicides.

PURPOSE

➢ To know the effect of unemployment among various age groups in India from 2002 to 2012.
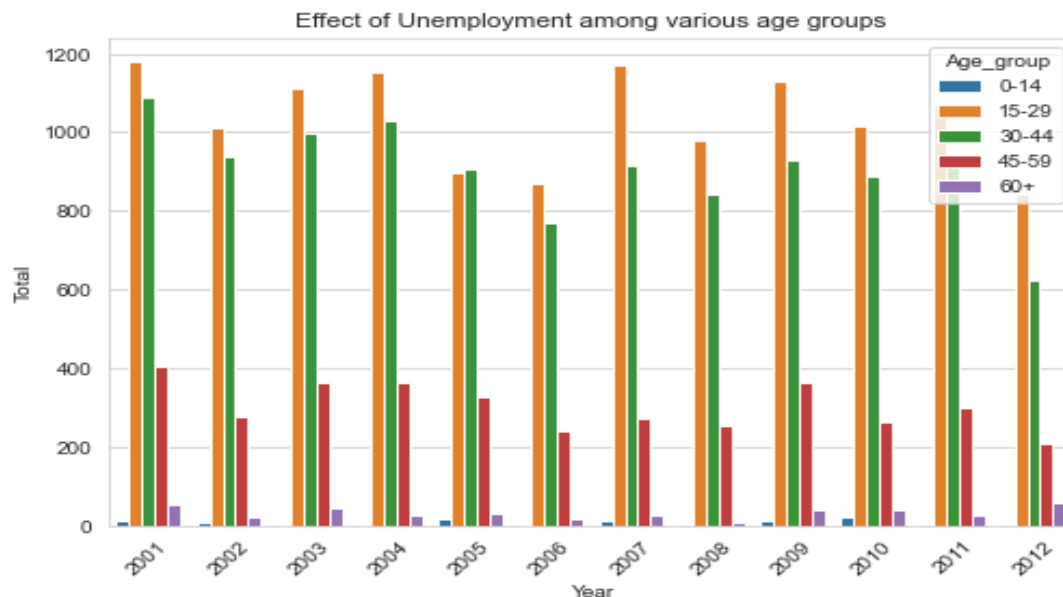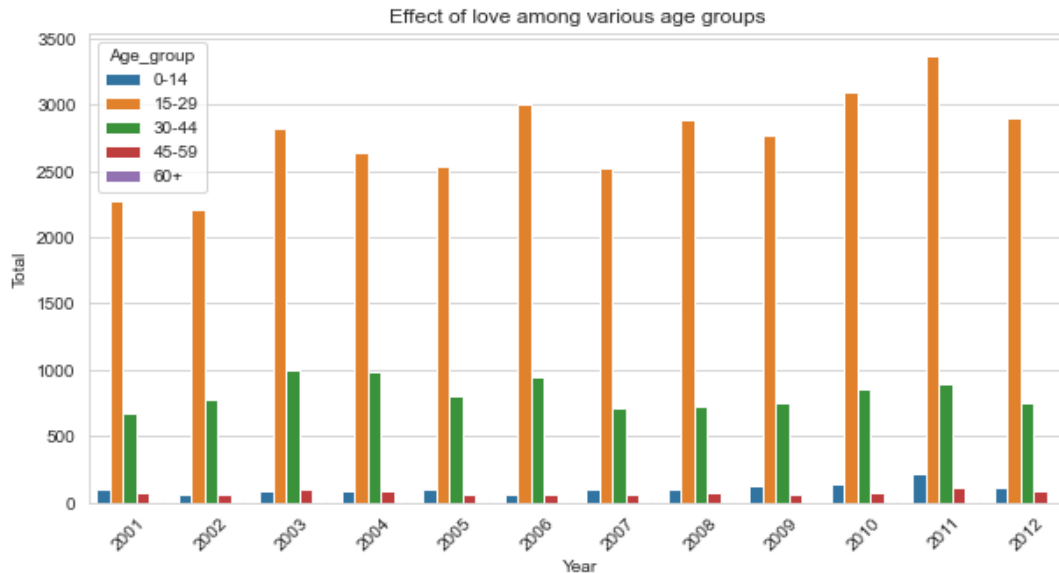

INFERENCE

From the above analysis it is evident that,

➢ The highest number of suicides due to unemployment is been observed in 15-29 age group. This is the age where all try to begin their career with high expectations and due to reasons like lack of openings, high competition, increase of population, etc. They may not achieve their goals and try to end their lives by committing suicides.

➢ More number of suicides due to unemployment is been observed in 30-44 and 45-59 age group also. These are the one who may have lost their jobs due to high availability of young employees or any crisis that occurred like covid 19.

➢ Least number of suicides due to unemployment is been observed in 0-14 years as it is the age of studying rather than working for livelihood.

17. Analysis of effect of love affairs in number of suicides.

PURPOSE

➢ To know the effect of love affairs among various age groups in India from 2002 to 2012.



Effect of love among various age groups

INFERENCE

➢ From the above analysis it is evident that,
➢ The highest number of suicide cases due to love affairs happened in 15-29 age group. Love failures leads to suicides and being close to those people during that time may help them into recovery and lead a happy life.
➢ Age group 30-44 also committed suicide due to love affairs.
➢ There is very little cases observed in 0-14 and 60+ age groups due to love affairs.

18. Total number of suicides by hanging vs total number of suicides year wise.

PURPOSE:

To know the relationship between number of suicides by hanging to total number of suicides.
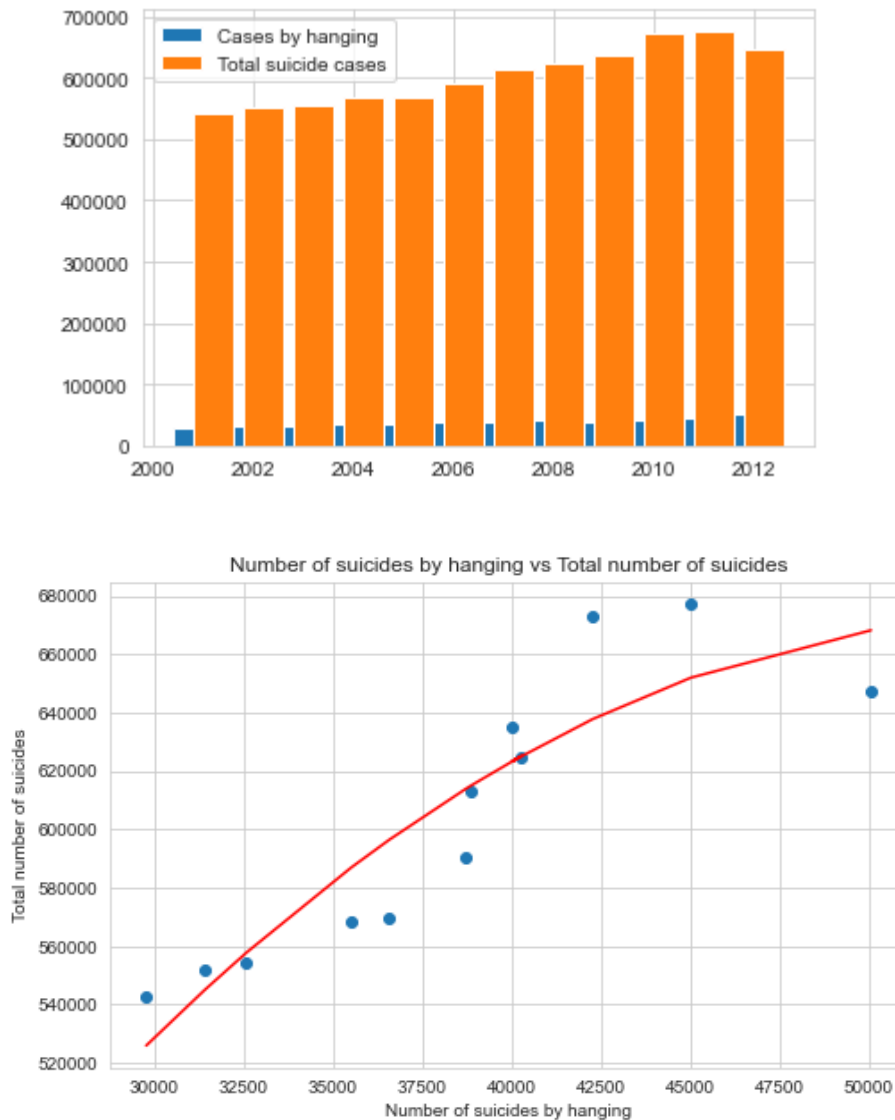
Points are scattered on the graph and polynomial regression line is been fitted to know the relationship between the number of suicides by hanging to total number of suicides in the country. The r square value obtained is 0.9649.

INFERENCE

- ➢ Dependent variable: Number of suicides by hanging
- ➢ Independent variable: Total number of suicides
- ➢ Polynomial regression technique is applied on number of suicides by hanging and total number of suicides in India.
- ➢ The r2 square obtained is 0.9649 which is close to 1 which implies that there is appreciable relation.

CONCLUSION

➢ Suicide is a serious public health problem; however, suicides are preventable with timely, evidence-based and often low-cost interventions.

➢ Number of suicide cases with respect to population have been decreasing in the world from the past two decades and there may be still hope of decrease in the cases in the future.

➢ Knowledge of the most commonly used suicide methods is important to devise prevention strategies which have shown to be effective, such as restriction of access to means of suicide.

➢ The number of suicide cases can be controlled by controlling the access to the means of suicide.

➢ Suicide prevention efforts require coordination and collaboration among multiple sectors of society, including the health sector and other sectors such as education, labor, agriculture, business, justice, law, defense, politics, and the media.

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[2] https://www.kaggle.com/rajanand/suicides-in-india

[3] https://www.kaggle.com/twinkle0705/mental-health-and-suicide-rates