Suicide Analysis of India Based on Different Category from 2015-2019

PROJECT REPORT SUBMITTED TO

Symbiosis Institute of Geoinformatics

FOR PARTIAL FULFILLMENT OF THE M. Sc. DEGREE

By

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BATCH 2022-24

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January 2023

Acknowledgment

I would like to convey my heartfelt gratitude to Dr. Moushumi Dasgupta for her tremendous support and assistance in completing my project. I would also like to thank her, for providing me with this beautiful opportunity to work on a project with the topic “Suicide Analysis of India Based on Different Category from 2015-2019”. The completion of the project would not have been possible without her help and insights. I am grateful to all those with whom I have had the pleasure to work during this and other related projects. Nobody has been more important to me in the pursuit of this project than the members of my family. I would like to thank my parents, whose love and guidance are with me in whatever I pursue. They are the ultimate role models.

Ayush Mitra

Abstract

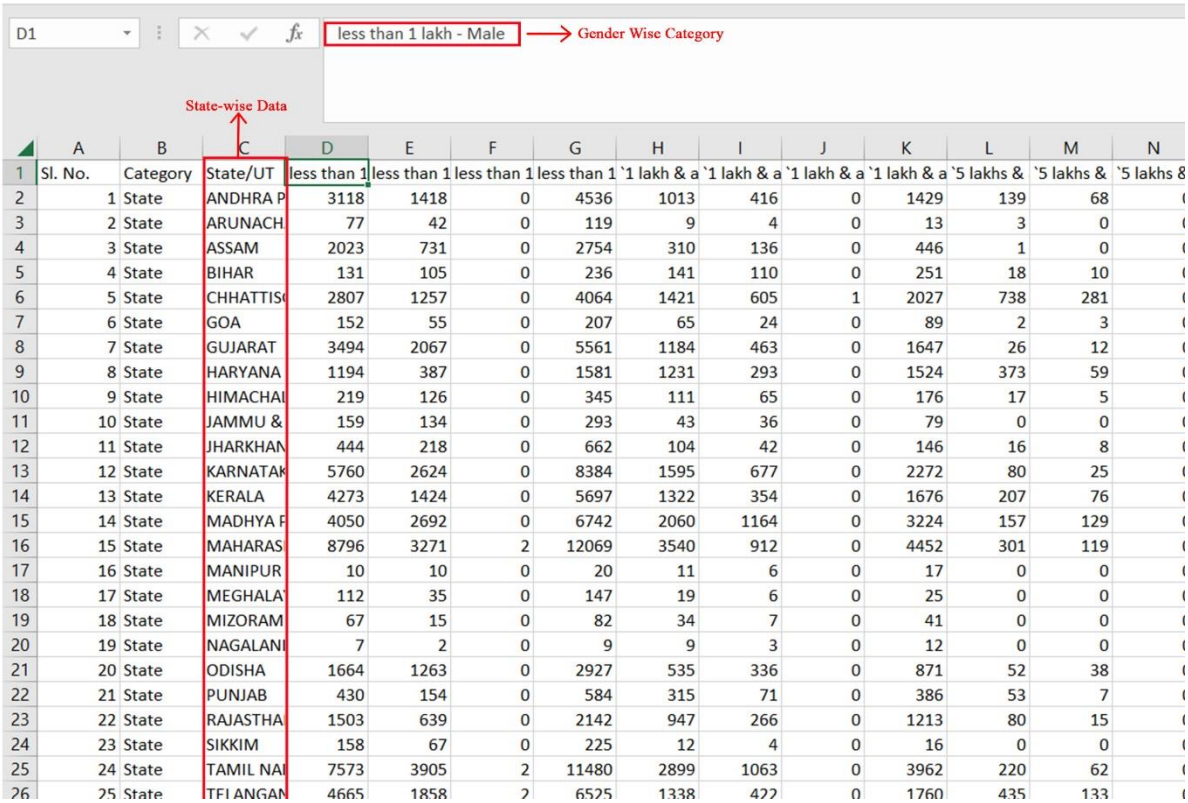
This report provides an in-depth analysis of suicide in India based on different categories from 2015 to 2019. It provides a comprehensive overview of suicide rates by Education level, gender, socio-economic status, suicide means and geographic location. The report identifies key trends and patterns in suicide rates, including the highest risk groups and areas. Additionally, the report explores the contributing factors to suicide, such as mental illness, relationship problems, and financial stress. The report highlights the need for effective intervention and prevention programs to reduce the burden of suicide in India, including increased access to mental health services, community-based support programs, and improved public education and awareness. The report also recommends further research to better understand the complex nature of suicide and to inform the development of more effective prevention strategies. Overall, this report offers valuable insights into the suicide situation in India and the need for a multi-faceted approach to address this significant public health issue.

Introduction

Suicide is a global public health issue that causes significant distress and loss of life. In India, the suicide rate has been steadily increasing over the years, and it is estimated that over 1.3 million people died by suicide between 2015 and 2019. This report aims to provide an in-depth analysis of suicide in India based on different categories from 2015 to 2019, with the objective of gaining a better understanding of the patterns and trends of suicide in the country. The report provides a comprehensive overview of suicide rates by education status, gender, socio-economic status, suicide means and geographic location, as well as exploring the contributing factors to suicide. The report also highlights the need for effective intervention and prevention programs to reduce the burden of suicide in India and offers valuable insights into the complex nature of suicide and the need for a multi-faceted approach to address this important public health issue. With a focus on the latest data and research, this report provides a comprehensive overview of the suicide situation in India and offers recommendations for future action to prevent suicide and save lives.

Data Source

The data for this report was collected from the official website of the Government of India, data.gov.in. This website provides access to a wealth of information on various social and economic indicators, including data on suicide. The data on suicide was obtained from the National Crime Records Bureau (NCRB) and covers the period from 2015 to 2019. The data includes information on the number of suicides by education, gender, socio-economic status, suicide means and geographic location. The data also provides information on the methods used for suicide, such as hanging, poisoning, and jumping from high places. The data was analysed using statistical techniques to identify trends and patterns in suicide rates, as well as to identify the highest risk groups and areas. The data was organised state and union territory wise with different attributes having gender specified category. Overall, the data collected from data.gov.in provided a comprehensive overview of the suicide situation in India and was a valuable resource for this report on Suicide Analysis of India Based on Different Categories from 2015-2019.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Sl. No.	Category	State/UT	less than 1	less than 1	less than 1	less than 1	`1 lakh & a	`1 lakh & a	`1 lakh & a	`1 lakh & a	`5 lakhs &	`5 lakhs &	`5 lakhs &
2	1	State	ANDHRA P	3118	1418	0	4536	1013	416	0	1429	139	68	
3	2	State	ARUNACH	77	42	0	119	9	4	0	13	3	0	
4	3	State	ASSAM	2023	731	0	2754	310	136	0	446	1	0	
5	4	State	BIHAR	131	105	0	236	141	110	0	251	18	10	
6	5	State	CHHATTIS	2807	1257	0	4064	1421	605	1	2027	738	281	
7	6	State	GOA	152	55	0	207	65	24	0	89	2	3	
8	7	State	GUJARAT	3494	2067	0	5561	1184	463	0	1647	26	12	
9	8	State	HARYANA	1194	387	0	1581	1231	293	0	1524	373	59	
10	9	State	HIMACHAI	219	126	0	345	111	65	0	176	17	5	
11	10	State	JAMMU &	159	134	0	293	43	36	0	79	0	0	
12	11	State	JHARKHAN	444	218	0	662	104	42	0	146	16	8	
13	12	State	KARNATAK	5760	2624	0	8384	1595	677	0	2272	80	25	
14	13	State	KERALA	4273	1424	0	5697	1322	354	0	1676	207	76	
15	14	State	MADHYA P	4050	2692	0	6742	2060	1164	0	3224	157	129	
16	15	State	MAHARAS	8796	3271	2	12069	3540	912	0	4452	301	119	
17	16	State	MANIPUR	10	10	0	20	11	6	0	17	0	0	
18	17	State	MEGHALA	112	35	0	147	19	6	0	25	0	0	
19	18	State	MIZORAM	67	15	0	82	34	7	0	41	0	0	
20	19	State	NAGALANI	7	2	0	9	9	3	0	12	0	0	
21	20	State	ODISHA	1664	1263	0	2927	535	336	0	871	52	38	
22	21	State	PUNJAB	430	154	0	584	315	71	0	386	53	7	
23	22	State	RAJASTHA	1503	639	0	2142	947	266	0	1213	80	15	
24	23	State	SIKKIM	158	67	0	225	12	4	0	16	0	0	
25	24	State	TAMIL NAI	7573	3905	2	11480	2899	1063	0	3962	220	62	
26	25	State	TELANGAN	4665	1858	2	6525	1338	422	0	1760	435	133	

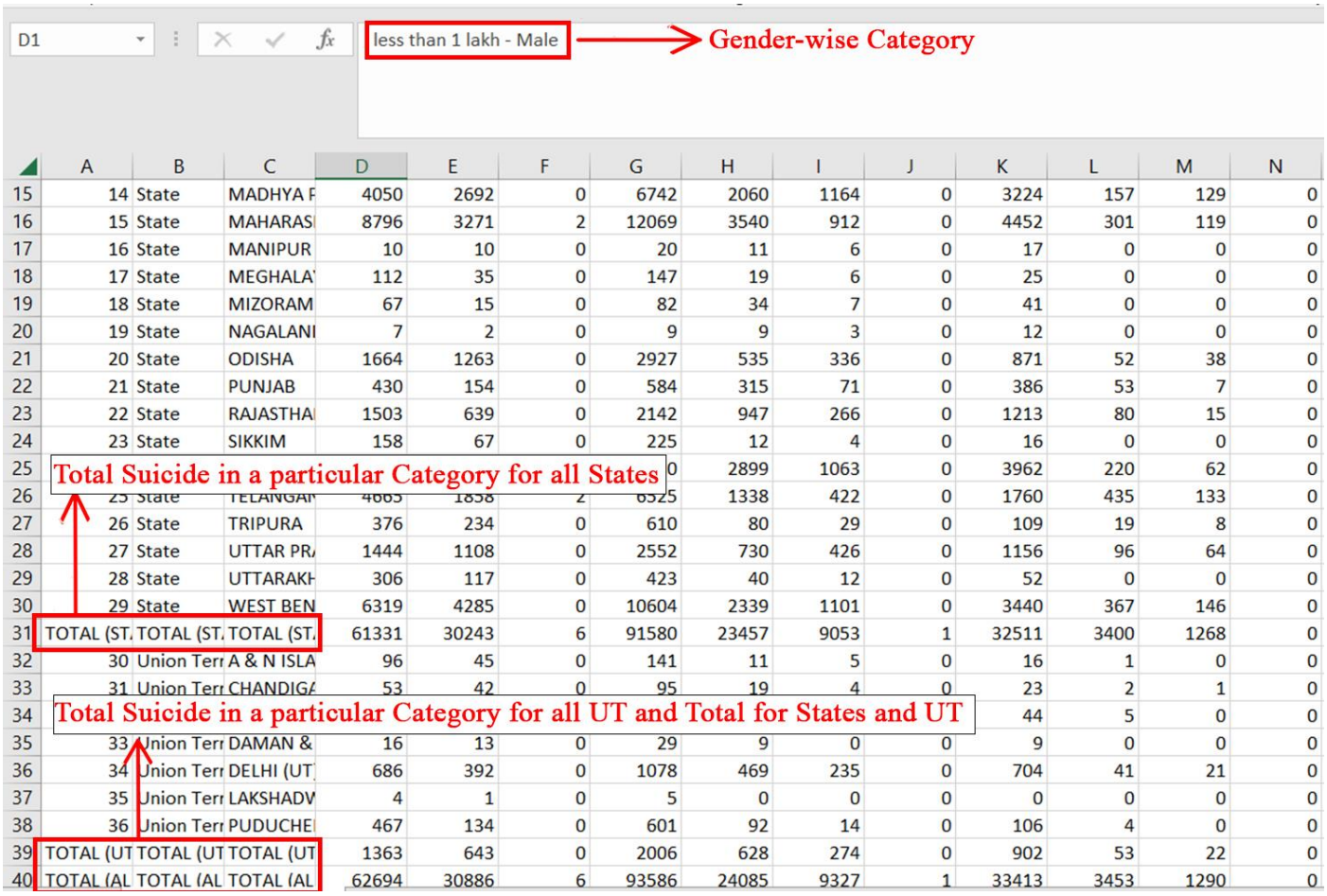
Fig1: An Example of Data Collected from data.gov.in

In the above figure, we can see the data collected from data.gov.in on suicide in the year 2015 based on economic categories. We can see that the data has been given based on states and union territory and each attribute represents an economic category which has been marked with gender. As the data is taken from an official government website the data can be trusted and we can assume no data is wrong. Even the data format is very structured that helps in analysis and information extraction.

The link of the data is: https://data.gov.in/resource/stateut-and-economic-status-wise-distribution-suicides-during-2015

Data Cleaning and Pre-processing

Data from the website came in a structured format where each column had a category and each row represented a state. But in few rows, we had the total values of States and Union separately and on row had the total of both States and Unions, which were the total sum of the Suicide in a particular Category. The figure below shows those particular rows in the dataset.

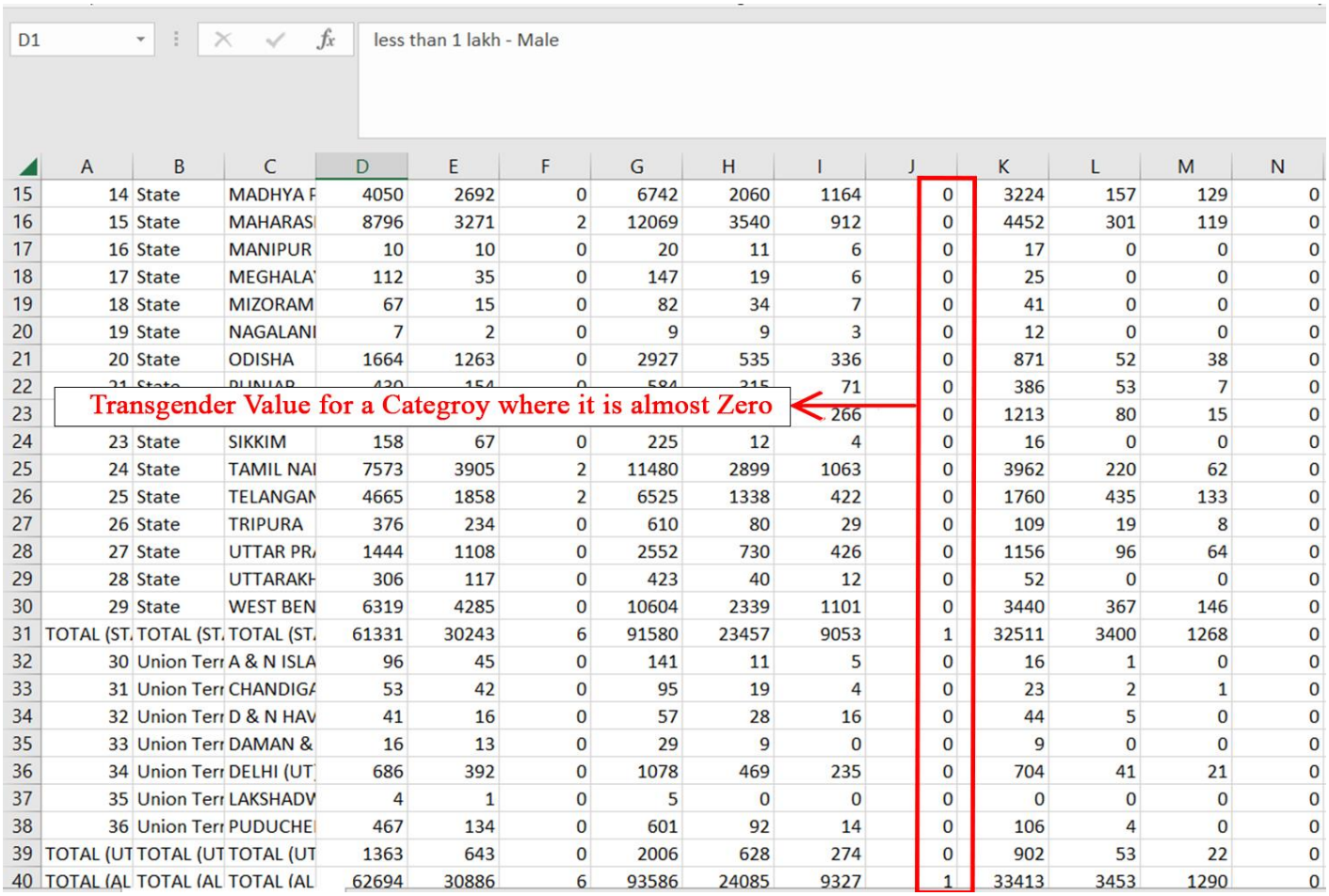


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
15	14	State	MADHYA F	4050	2692	0	6742	2060	1164	0	3224	157	129	0
16	15	State	MAHARAS	8796	3271	2	12069	3540	912	0	4452	301	119	0
17	16	State	MANIPUR	10	10	0	20	11	6	0	17	0	0	0
18	17	State	MEGHALA	112	35	0	147	19	6	0	25	0	0	0
19	18	State	MIZORAM	67	15	0	82	34	7	0	41	0	0	0
20	19	State	NAGALANI	7	2	0	9	9	3	0	12	0	0	0
21	20	State	ODISHA	1664	1263	0	2927	535	336	0	871	52	38	0
22	21	State	PUNJAB	430	154	0	584	315	71	0	386	53	7	0
23	22	State	RAJASTHA	1503	639	0	2142	947	266	0	1213	80	15	0
24	23	State	SIKKIM	158	67	0	225	12	4	0	16	0	0	0
25							0	2899	1063	0	3962	220	62	0
26								1338	422	0	1760	435	133	0
27	26	State	TRIPURA	376	234	0	610	80	29	0	109	19	8	0
28	27	State	UTTAR PR	1444	1108	0	2552	730	426	0	1156	96	64	0
29	28	State	UTTARAKH	306	117	0	423	40	12	0	52	0	0	0
30	29	State	WEST BEN	6319	4285	0	10604	2339	1101	0	3440	367	146	0
31	TOTAL (ST	TOTAL (ST	TOTAL (ST	61331	30243	6	91580	23457	9053	1	32511	3400	1268	0
32	30	Union Terr	A & N ISLA	96	45	0	141	11	5	0	16	1	0	0
33	31	Union Terr	CHANDIGA	53	42	0	95	19	4	0	23	2	1	0
34											44	5	0	0
35	33	Union Terr	DAMAN &	16	13	0	29	9	0	0	9	0	0	0
36	34	Union Terr	DELHI (UT	686	392	0	1078	469	235	0	704	41	21	0
37	35	Union Terr	LAKSHADV	4	1	0	5	0	0	0	0	0	0	0
38	36	Union Terr	PUDUCHE	467	134	0	601	92	14	0	106	4	0	0
39	TOTAL (UT	TOTAL (UT	TOTAL (UT	1363	643	0	2006	628	274	0	902	53	22	0
40	TOTAL (AL	TOTAL (AL	TOTAL (AL	62694	30886	6	93586	24085	9327	1	33413	3453	1290	0

Fig2: The Data of Suicides based on economic category

These rows can create a problem for proper analysis as they are already having total value. So, if we take the sum of a column, this total value will also get added and will give incorrect data for total number of suicides in a particular category. So, it is necessary to remove these rows from all the datasets.

There is no missing Data in the datasets, but there are some Zero values in some categories, which are mostly related to Transgender Suicides. This may be due to stigma and underreporting. Additionally, factors such as lack of legal recognition and support, as well as societal discrimination and prejudice, can also contribute to underreporting. Further research and advocacy are needed to improve data collection and support for the transgender community in India. This can help the underreporting of the suicides of the transgender community. The figure below shows the dataset where transgender values are almost Zero

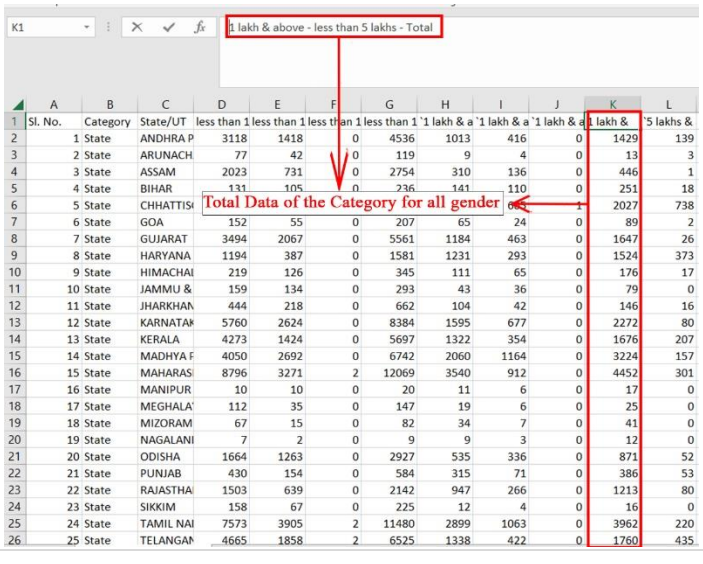


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
15	14	State	MADHYA F	4050	2692	0	6742	2060	1164	0	3224	157	129	0
16	15	State	MAHARAS	8796	3271	2	12069	3540	912	0	4452	301	119	0
17	16	State	MANIPUR	10	10	0	20	11	6	0	17	0	0	0
18	17	State	MEGHALA	112	35	0	147	19	6	0	25	0	0	0
19	18	State	MIZORAM	67	15	0	82	34	7	0	41	0	0	0
20	19	State	NAGALANI	7	2	0	9	9	3	0	12	0	0	0
21	20	State	ODISHA	1664	1263	0	2927	535	336	0	871	52	38	0
22									71	0	386	53	7	0
23									266	0	1213	80	15	0
24	23	State	SIKKIM	158	67	0	225	12	4	0	16	0	0	0
25	24	State	TAMIL NAI	7573	3905	2	11480	2899	1063	0	3962	220	62	0
26	25	State	TELANGAN	4665	1858	2	6525	1338	422	0	1760	435	133	0
27	26	State	TRIPURA	376	234	0	610	80	29	0	109	19	8	0
28	27	State	UTTAR PR/	1444	1108	0	2552	730	426	0	1156	96	64	0
29	28	State	UTTARAKH	306	117	0	423	40	12	0	52	0	0	0
30	29	State	WEST BEN	6319	4285	0	10604	2339	1101	0	3440	367	146	0
31	TOTAL (ST.	TOTAL (ST.	TOTAL (ST.	61331	30243	6	91580	23457	9053	1	32511	3400	1268	0
32	30	Union Terr	A & N ISLA	96	45	0	141	11	5	0	16	1	0	0
33	31	Union Terr	CHANDIGA	53	42	0	95	19	4	0	23	2	1	0
34	32	Union Terr	D & N HAV	41	16	0	57	28	16	0	44	5	0	0
35	33	Union Terr	DAMAN &	16	13	0	29	9	0	0	9	0	0	0
36	34	Union Terr	DELHI (UT	686	392	0	1078	469	235	0	704	41	21	0
37	35	Union Terr	LAKSHADV	4	1	0	5	0	0	0	0	0	0	0
38	36	Union Terr	PUDUCHE	467	134	0	601	92	14	0	106	4	0	0
39	TOTAL (UT	TOTAL (UT	TOTAL (UT	1363	643	0	2006	628	274	0	902	53	22	0
40	TOTAL (AL	TOTAL (AL	TOTAL (AL	62694	30886	6	93586	24085	9327	1	33413	3453	1290	0

Fig3: Dataset where the transgender data is almost Zero

Keeping such a sparse data where maximum data is Zero doesn't make sense when data regarding other gender is Very largely registered in their numbers being in thousands. So, for analysis and visualization these datapoints will be negligible. So, it will be better to remove these attributes from the datasets.

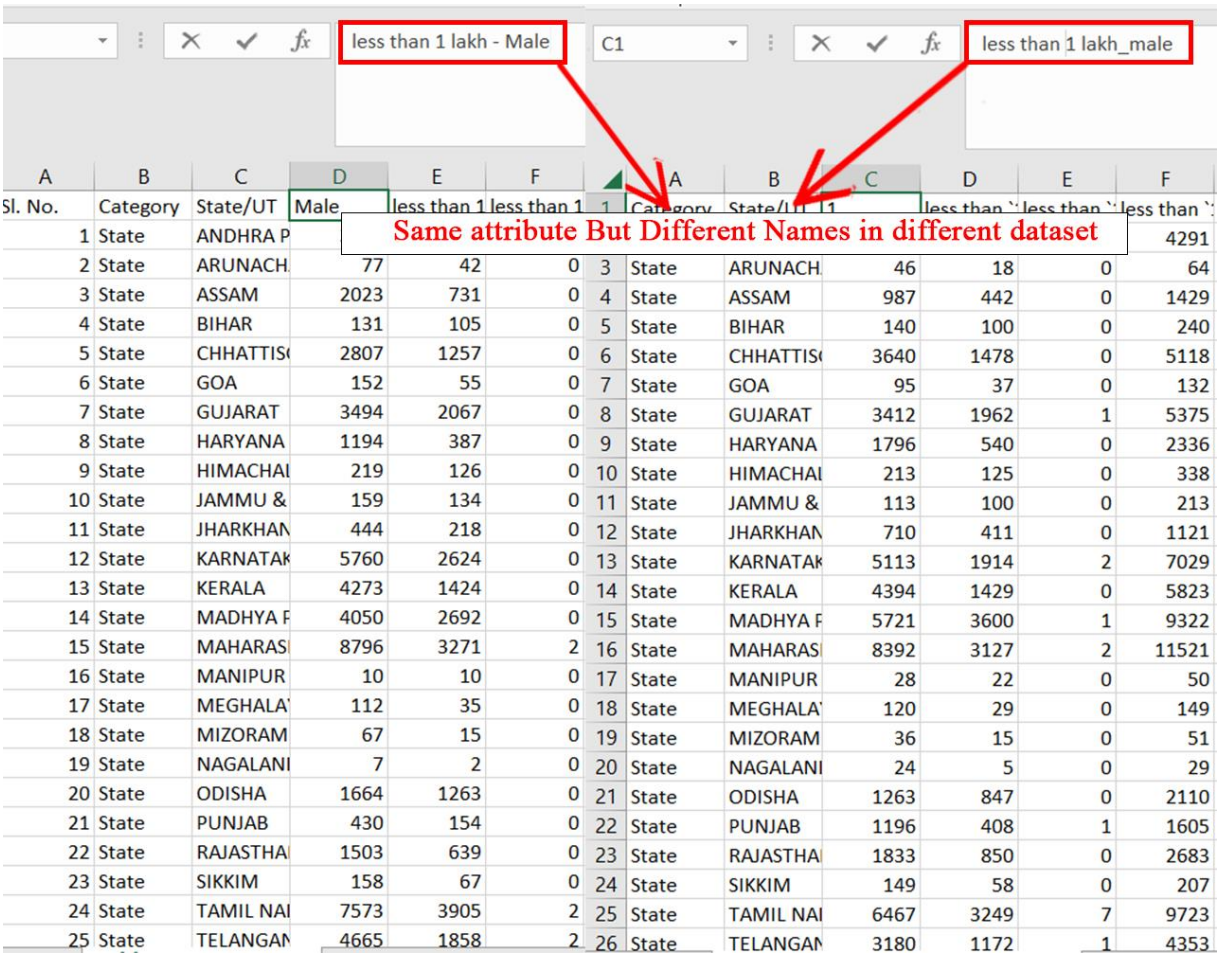
The Data has been also ready for further analysis, but there are also few columns where the total of a particular category is stored, this again can create problem for further analysis, especially when total suicide of a State or Union Territory is calculated the values from these columns can get added up and can give wrong data. So, these columns need to be deleted.



	A	B	C	D	E	F	G	H	I	J	K	L
1	Sl. No.	Category	State/UT	less than 1	less than 1	less than 1	less than 1	`1 lakh & a	`1 lakh & a	`1 lakh & a	1 lakh &	`5 lakhs &
2	1	State	ANDHRA P	3118	1418	0	4536	1013	416	0	1429	139
3	2	State	ARUNACH	77	42	0	119	9	4	0	13	3
4	3	State	ASSAM	2023	731	0	2754	310	136	0	446	1
5	4	State	BIHAR	131	105	0	236	141	110	0	251	18
6	5	State	CHHATTISG							1	2027	738
7	6	State	GOA	152	55	0	207	65	24	0	89	2
8	7	State	GUJARAT	3494	2067	0	5561	1184	463	0	1647	26
9	8	State	HARYANA	1194	387	0	1581	1231	293	0	1524	373
10	9	State	HIMACHAL	219	126	0	345	111	65	0	176	17
11	10	State	JAMMU &	159	134	0	293	43	36	0	79	0
12	11	State	JHARKHAN	444	218	0	662	104	42	0	146	16
13	12	State	KARNATAK	5760	2624	0	8384	1595	677	0	2272	80
14	13	State	KERALA	4273	1424	0	5697	1322	354	0	1676	207
15	14	State	MADHYA F	4050	2692	0	6742	2060	1164	0	3224	157
16	15	State	MAHARAS	8796	3271	2	12069	3540	912	0	4452	301
17	16	State	MANIPUR	10	10	0	20	11	6	0	17	0
18	17	State	MEGHALA	112	35	0	147	19	6	0	25	0
19	18	State	MIZORAM	67	15	0	82	34	7	0	41	0
20	19	State	NAGALANI	7	2	0	9	9	3	0	12	0
21	20	State	ODISHA	1664	1263	0	2927	535	336	0	871	52
22	21	State	PUNJAB	430	154	0	584	315	71	0	386	53
23	22	State	RAJASTHA	1503	639	0	2142	947	266	0	1213	80
24	23	State	SIKKIM	158	67	0	225	12	4	0	16	0
25	24	State	TAMIL NAI	7573	3905	2	11480	2899	1063	0	3962	220
26	25	State	TELANGAN	4665	1858	2	6525	1338	422	0	1760	435

The above figure, shows the total value for the category “1 lakh & above - less than 5 lakhs”. This type of columns can give some error. So, it is best to remove them as be can use other columns to calculate the total so the column itself is very redundant.

All this data cleaning and pre-processing is for one year we have to repeat it for all the years, for that we can create a function and pass all the dataset to automate the pre-processing. But there is a problem. The other years may have the column names in different format, so before passing them in the function we have to check if the column names are similar for all the years. This will help later in analysis step where having similar column names for same dataset will help develop a reusable code and make the process much easier and faster.



Sl. No.	Category	State/UT	Male	less than 1	less than 1	1	Category	State/UT	1	less than 1	less than 1	less than 1
1	State	ANDHRA P										4291
2	State	ARUNACH	77	42	0	3	State	ARUNACH	46	18	0	64
3	State	ASSAM	2023	731	0	4	State	ASSAM	987	442	0	1429
4	State	BIHAR	131	105	0	5	State	BIHAR	140	100	0	240
5	State	CHHATTIS	2807	1257	0	6	State	CHHATTIS	3640	1478	0	5118
6	State	GOA	152	55	0	7	State	GOA	95	37	0	132
7	State	GUJARAT	3494	2067	0	8	State	GUJARAT	3412	1962	1	5375
8	State	HARYANA	1194	387	0	9	State	HARYANA	1796	540	0	2336
9	State	HIMACHAL	219	126	0	10	State	HIMACHAL	213	125	0	338
10	State	JAMMU &	159	134	0	11	State	JAMMU &	113	100	0	213
11	State	JHARKHAN	444	218	0	12	State	JHARKHAN	710	411	0	1121
12	State	KARNATAK	5760	2624	0	13	State	KARNATAK	5113	1914	2	7029
13	State	KERALA	4273	1424	0	14	State	KERALA	4394	1429	0	5823
14	State	MADHYA F	4050	2692	0	15	State	MADHYA F	5721	3600	1	9322
15	State	MAHARAS	8796	3271	2	16	State	MAHARAS	8392	3127	2	11521
16	State	MANIPUR	10	10	0	17	State	MANIPUR	28	22	0	50
17	State	MEGHALA	112	35	0	18	State	MEGHALA	120	29	0	149
18	State	MIZORAM	67	15	0	19	State	MIZORAM	36	15	0	51
19	State	NAGALANI	7	2	0	20	State	NAGALANI	24	5	0	29
20	State	ODISHA	1664	1263	0	21	State	ODISHA	1263	847	0	2110
21	State	PUNJAB	430	154	0	22	State	PUNJAB	1196	408	1	1605
22	State	RAJASTHA	1503	639	0	23	State	RAJASTHA	1833	850	0	2683
23	State	SIKKIM	158	67	0	24	State	SIKKIM	149	58	0	207
24	State	TAMIL NAI	7573	3905	2	25	State	TAMIL NAI	6467	3249	7	9723
25	State	TELANGAN	4665	1858	2	26	State	TELANGAN	3180	1172	1	4353

Fig5: Datasets having same attribute but having different name

The above figure, shows two datasets from two different year where they have same attribute but the names are different this can cause problem when we want a analysis for a span of multiple year. So, we need to make the columns have same name for easier analysis.

The Data doesn’t have any missing value and most of the data is numeric where they just represent the number of suicides, this makes the data free of any outliers assuming that the data present on the government website itself is accurate. And most of the data is associated with the State and Union territory making the data best suitable for Visualization and extracting information through Visualization.

Data Analysis and Visualization

The Suicide Analysis has been done year wise, where five categories are compared in every year. These categories are economic status, social status, education status, suicide means and professional status.

The basic data understanding is needed to be done before starting any analysis or visualization. These basic data understanding is done through python pandas data frame. For example we will consider 2015 economic suicide data.

```
1 eco_data_2015.describe().T
```

	count	mean	std	min	25%	50%	75%	max
less than 1 lakh(m)	36.0	1741.500000	2384.417671	4.0	108.00	437.0	2884.75	8796.0
less than 1 lakh(f)	36.0	857.944444	1190.115887	1.0	44.25	186.0	1301.75	4285.0
1 lakh & above - less than 5 lakhs (m)	36.0	669.027778	906.822316	0.0	25.75	126.0	1195.75	3540.0
1 lakh & above - less than 5 lakhs (f)	36.0	259.083333	345.537211	0.0	6.75	68.0	417.50	1164.0
5 lakhs & above - less than 10 lakhs(m)	36.0	95.916667	163.312387	0.0	0.75	17.5	106.75	738.0
5 lakhs & above - less than 10 lakhs(f)	36.0	35.833333	60.369103	0.0	0.00	7.5	59.75	281.0
10 lakhs and above (m)	36.0	36.000000	145.001872	0.0	0.00	0.5	19.00	871.0
10 lakhs and above (f)	36.0	16.250000	69.758102	0.0	0.00	0.0	5.25	416.0

Here we can see the basic statistical properties of all the attributes like mean, max, min, count, quartile values.

After seeing all the basic statistical properties, we can focus on analysis through visualization. But the visualization and graphs should be interactive and dynamic so end user can have better user experience when seeing the visualization for that plotly is the best python module to do visualization on as it is dynamic, interactive and as a added bonus is web deployable using Dash module.

So, for all the further visualization and analysis plotly will be used to create graphs and as the end product, a web based dashboard will be created using dash and plotly.

The suicide data is very nominal in the sense it is only for analysis and visualization. There is no depended variable like was committing suicide was a success or not, which could be used for creating a model they data in each attribute is of different category will doesn't have a correlation with on another. This makes a machine learning model on this dataset not feasible.

A.Analysis of 2015:

- **Total Suicide in each State and Union Territory:**

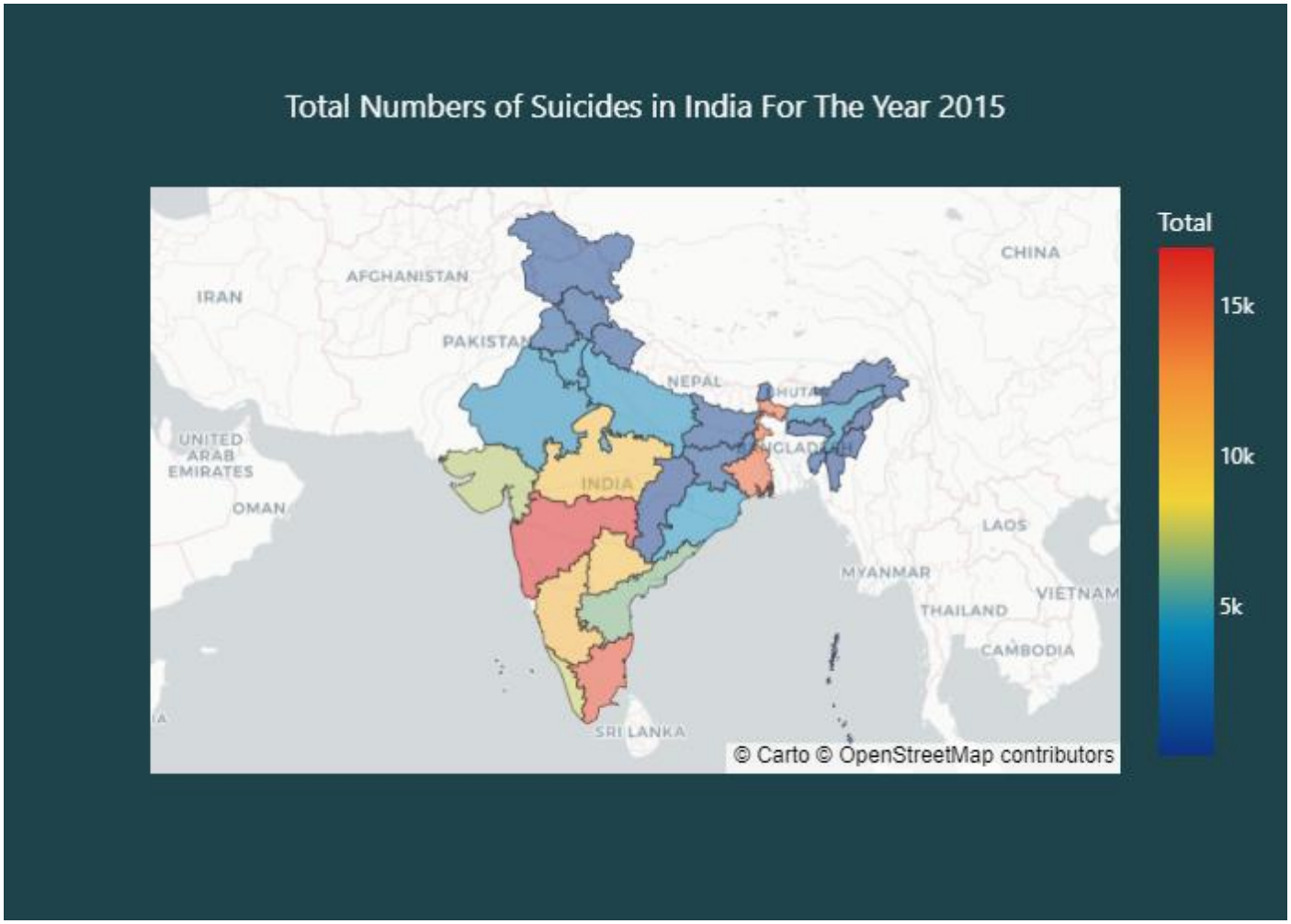


Fig6: Total Number of suicides in 2015

In the above figure, we can see 3 distinct states having the highest Suicides, these states are:

1. Maharashtra (16.968k)
2. Chennai (15.77k)
3. West Bengal (14.602k)

As Maharashtra is the economic centre of India, high stress levels due to job insecurity, financial difficulties, and poverty can lead to suicide. India also have a social stigma surrounding mental health and seeking help, this can cause suicides as most of the people suffering from mental health doesn't seek help and can ultimately commit suicide.

Chennai being a industrial hub, where lots of people work in various industry, makes high academic and professional pressure on students and working individuals, Chennai also have some great universities, so students can also commit suicide due to high pressure and lack of proper mental health resources and facilities.

West Bengal has a high rate of suicides due to a combination of factors including poverty, unemployment, lack of educational and economic opportunities, and social and cultural pressures. Mental health issues and substance abuse are also contributing factors.

- **Male and Female Suicide Death Ratio in 2015**

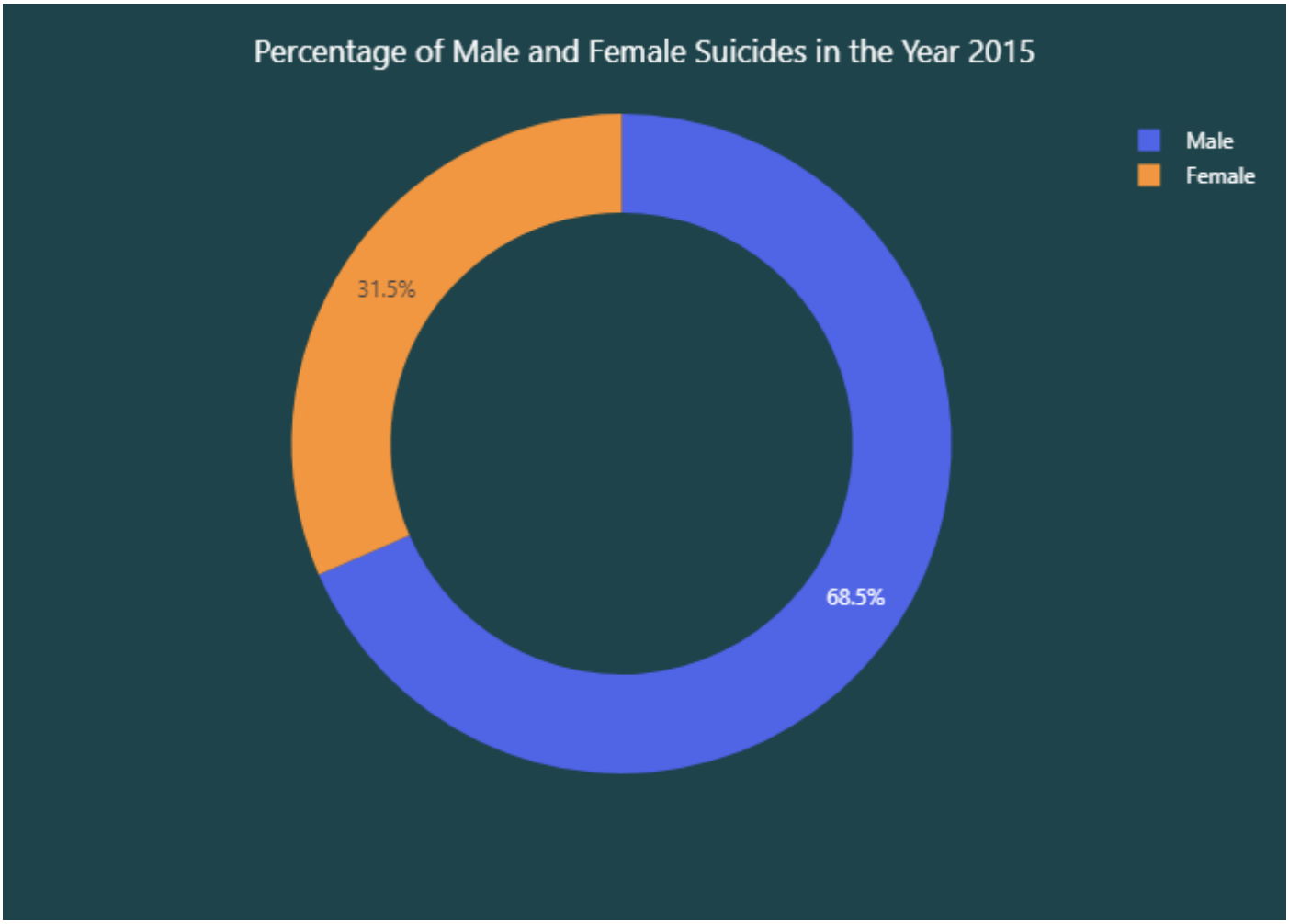


Fig7: Male and Female Suicide Ratio in 2015

In the above figure, we can see that males have the highest suicide ratio of 68.5%, this could be due to various factors such as social stigma surrounding mental health and seeking help, lack of support systems, and stress related to financial and occupational pressures. Cultural norms that emphasize masculinity and discourage expressing emotions also play a role. Substance abuse and untreated mental health issues are also contributing factors to the high rate of male suicides in India.

Women also have a high suicide rate of 31.5%, this could be due to various factors such as domestic violence, marital problems, harassment, and abuse. Lack of social and financial independence, poverty, and limited educational and career opportunities are also contributing factors. Mental health issues, such as depression and anxiety, are often not addressed due to social stigma surrounding mental illness. In addition, access to lethal means, such as pesticides, is also a factor in the high rate of female suicides in India.

- **Economic Status wise Analysis:**

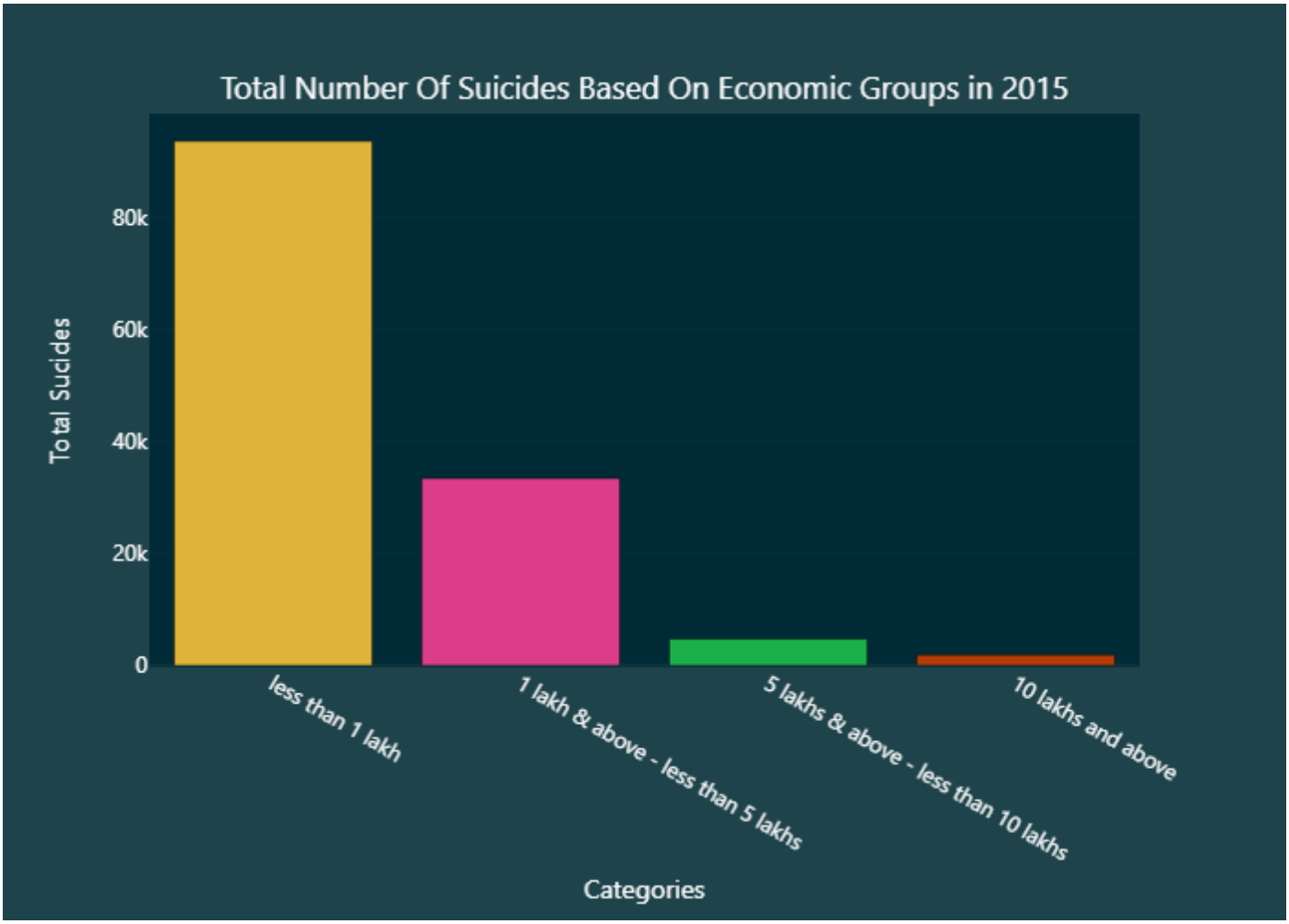


Fig8: Total Number of suicides based on Economic Groups

In the above figure, we can see an overwhelming number of suicides have happened in the category of income less than 1lakh. This shows most of the people committing suicides belong to the poor class and may have committed suicide due to financial in stability.

In the next category the number of suicides is more than half. So, we can say with some certainty that focusing on giving a job stability with a basic salary can help reduce some suicides.

The least number of suicides are in 10lakh above category this shows, higher income reduces the rate of suicide and people are generally have a more stable life with a proper income.

- **Male and Female suicides based on Economic status:**

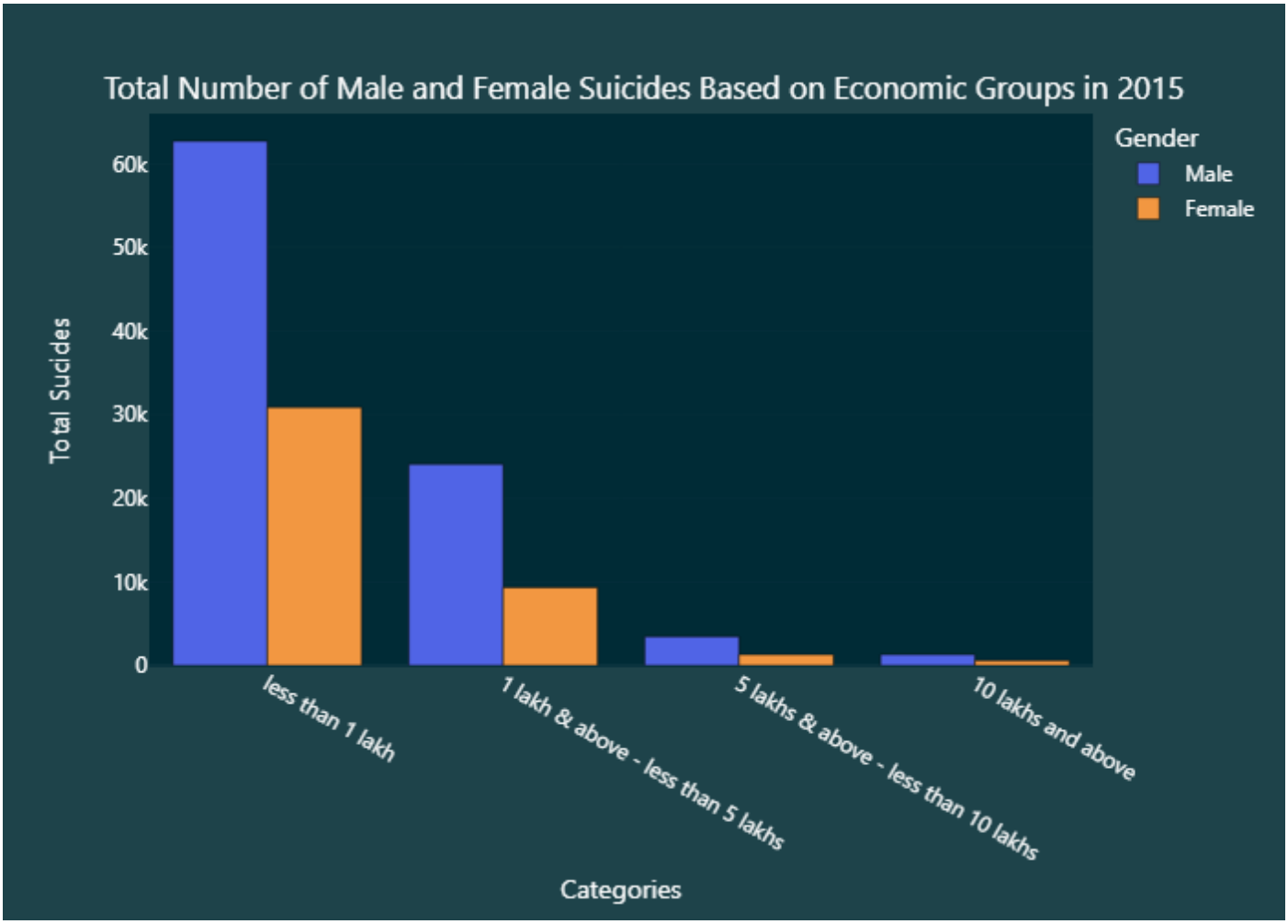


Fig9: Total Number of Male and Female suicides based on Economic Groups

The above figure clearly shows that most male have committed suicide in each and every category. This could be that more percentage of males are associated with the working force in India and still now males are the main source of income in the families. So, having a less financial stability makes the male commit suicide more often than the females. Some times in the lower income section both male and female have a higher rate of suicide this could again be associated with having low income and less stability financially, especially in a growing economy like India where prices are always on the rise.

- **Education Status wise Analysis:**

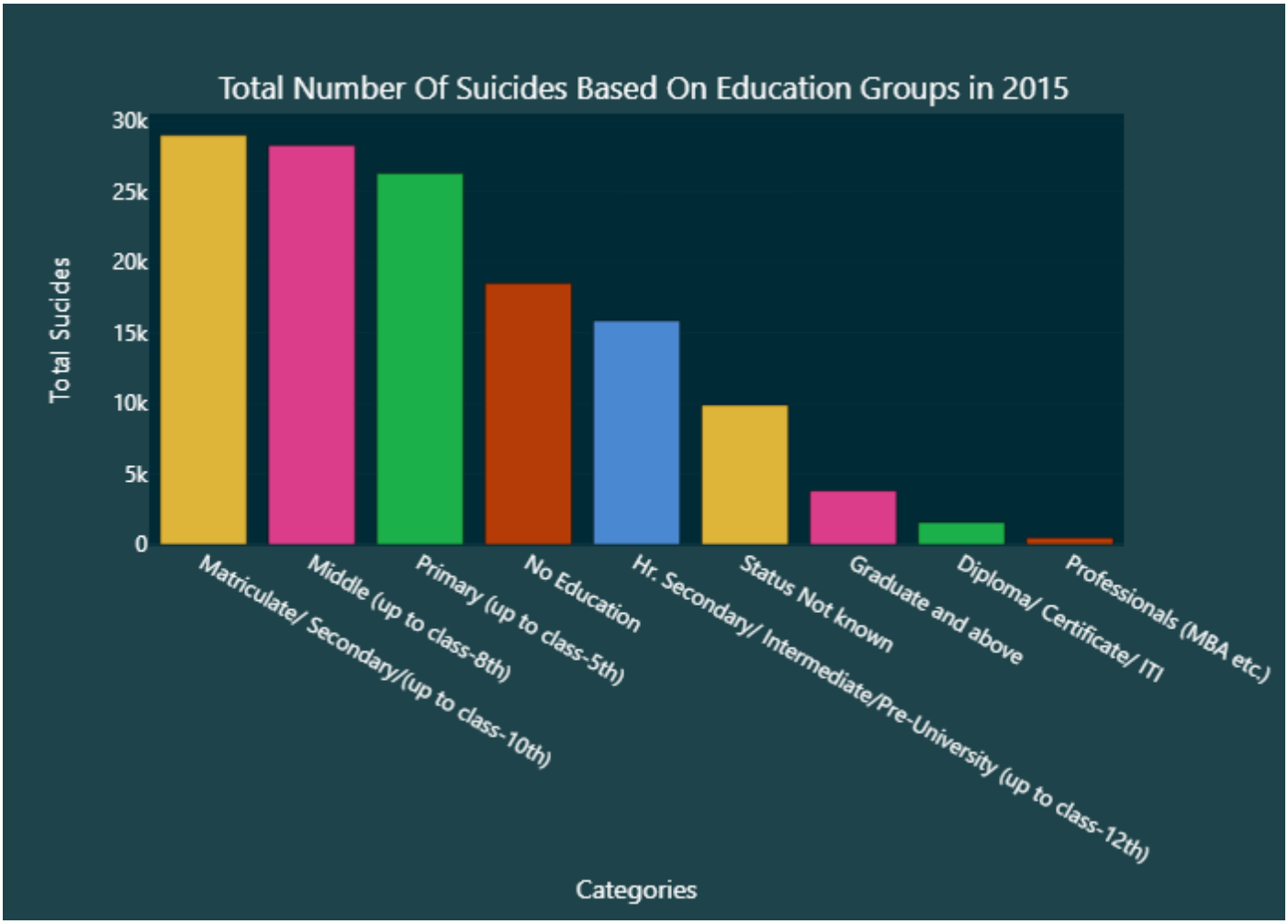


Fig10: Total Number of suicides based on Education Groups

In the figure above, we can see that Matriculate have the highest number of suicides followed by middle school and primary. At first glance this gives some idea that most of the suicides happen to students during school life, but the data doesn't come with age so it cant be surely said that education status data is only for students, it can also be an adult how have studied till class 10 or class 8. But we can see that there is a connection with education level and suicide and this shows people who have studied still some class but didn't complete their school, commit more suicides. We can use this data to help people who left education for financial, family or other reasons join back to schools to complete there education. This can give them some certification or credibility for them to join some work giving them a financial stability, which we already know is very much tied to suicide.

Even People with no education category also have a high suicide rate, this could be due to lack of awareness and social stigma for mental health. Educating this people and giving them proper schemes, may help reduce suicides.

- **Male and Female suicides based on Education status:**

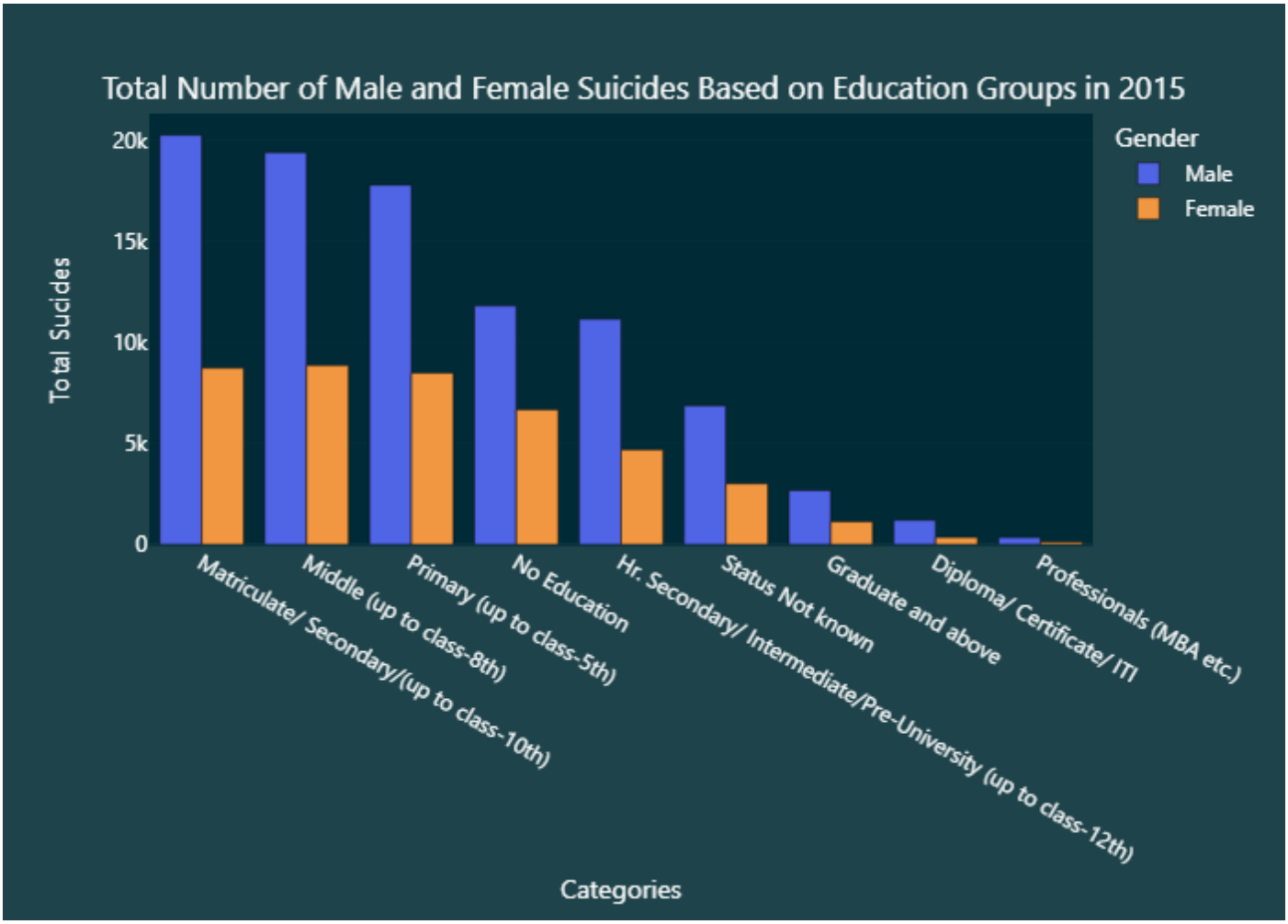


Fig11: Total Number of Male and Female suicides based on Education Groups

We can observe from the above figure, that mostly males have died in each and every category. These could be due to social stigma surrounding mental health and seeking help, which may be more prevalent among men. Stress related to academic pressure and performance expectations. Difficulty in coping with failure or disappointment. Lack of support systems and resources. Substance abuse or addiction. In India males are given more education then female this could also be a reason that more males are committing suicide.

- **Profession Status wise Analysis**

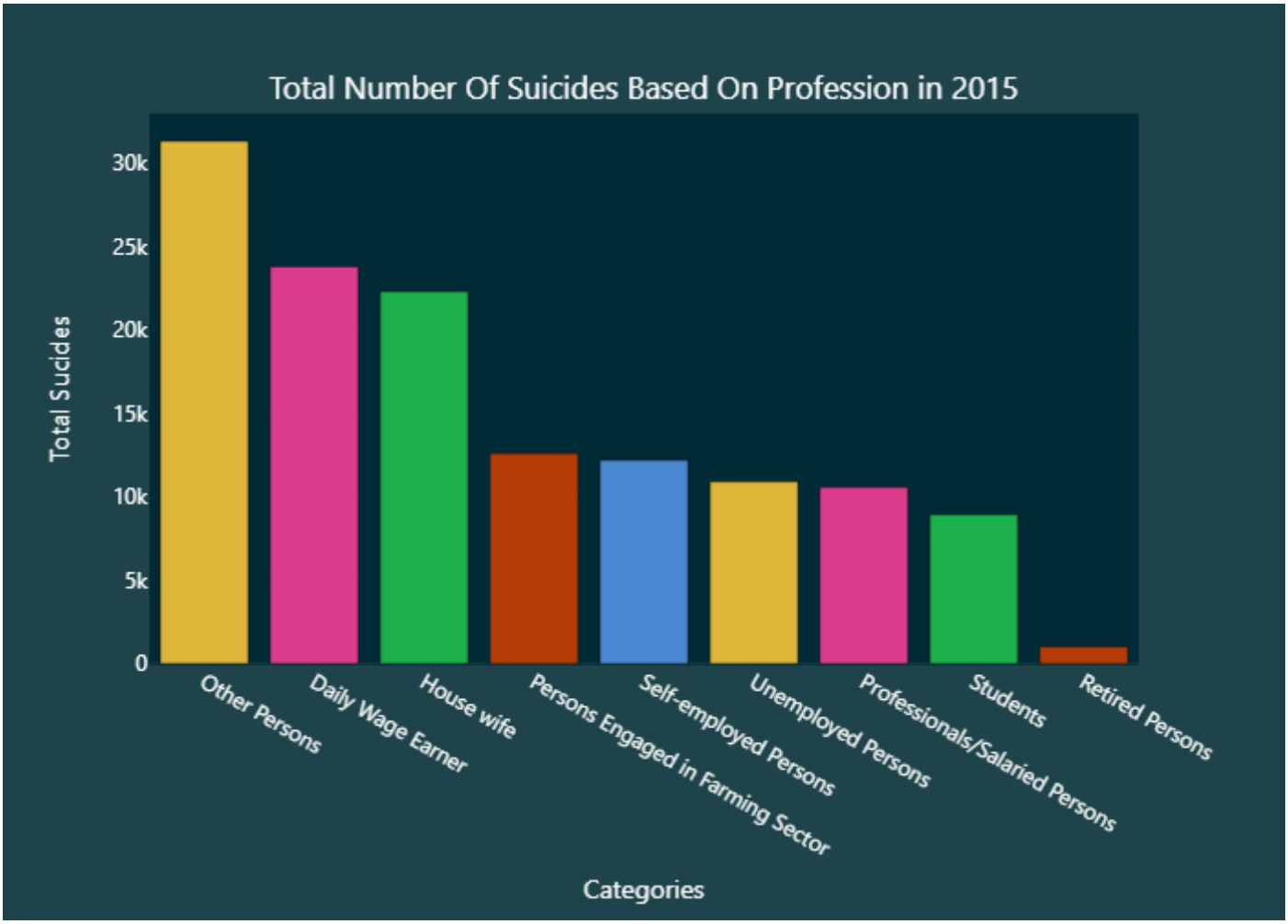


Fig12: Total Number of suicides based on Profession Groups

In the above figure we can see that the other persons category has the highest number of suicides, this raises a question what other person means in the dataset, either they can be those who are of different categories which cannot be classified in the other predefined categories or can be those people who do odd jobs or jobs based on requirements on a temporary basis. But, one this can be easily be understand that they didn't have a constant profession or they might change professions very often, and this could be a reason for there high number of suicides.

On the other hand, we can see that retired person has the least number of suicides, this may be because in India still many families are joint family where the elders are taken a very good care and given very high respect, this may contribute there a smaller number of suicides in India.

- **Male and Female suicides based on Profession status:**

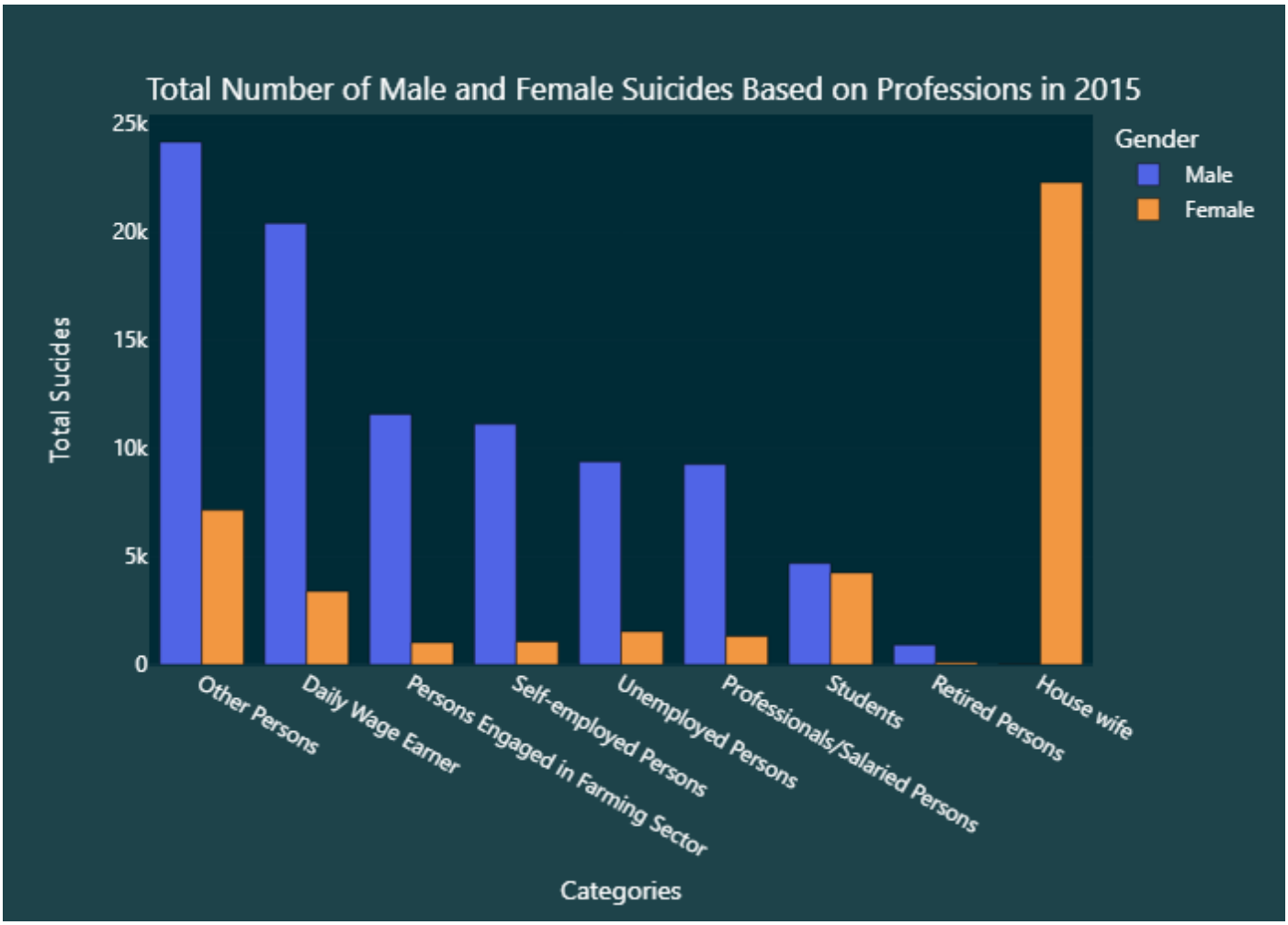


Fig13: Total Number Male and Female suicides based on Profession Groups

Here, in the above figure, the first thing we notice is that all the house wife are females and this shows that, still in Indian society females play the role of the housewife and the male do all the bread earning jobs. That's why all the suicides of housewife are of a particular gender. But this doesn't mean that there is no male housewife, but the suicide of a male housewife is not existent or are not reported.

Another thing to notice is the that all categories have a huge difference in male and female number of suicides but in the student category we can see that the number of male and female suicides in very close to each other, this shows that the factors for a student to suicide is not gender specific. This could be pressure due to education, family problems, social problem which effect both male and female equally.

The third thing to point out, is the vast difference in the number of male and female suicides. Specially in daily wage and farmer category this shows that most of the hard jobs are still done by men where only a few women take part in labour jobs.

- **Social Status wise Analysis**

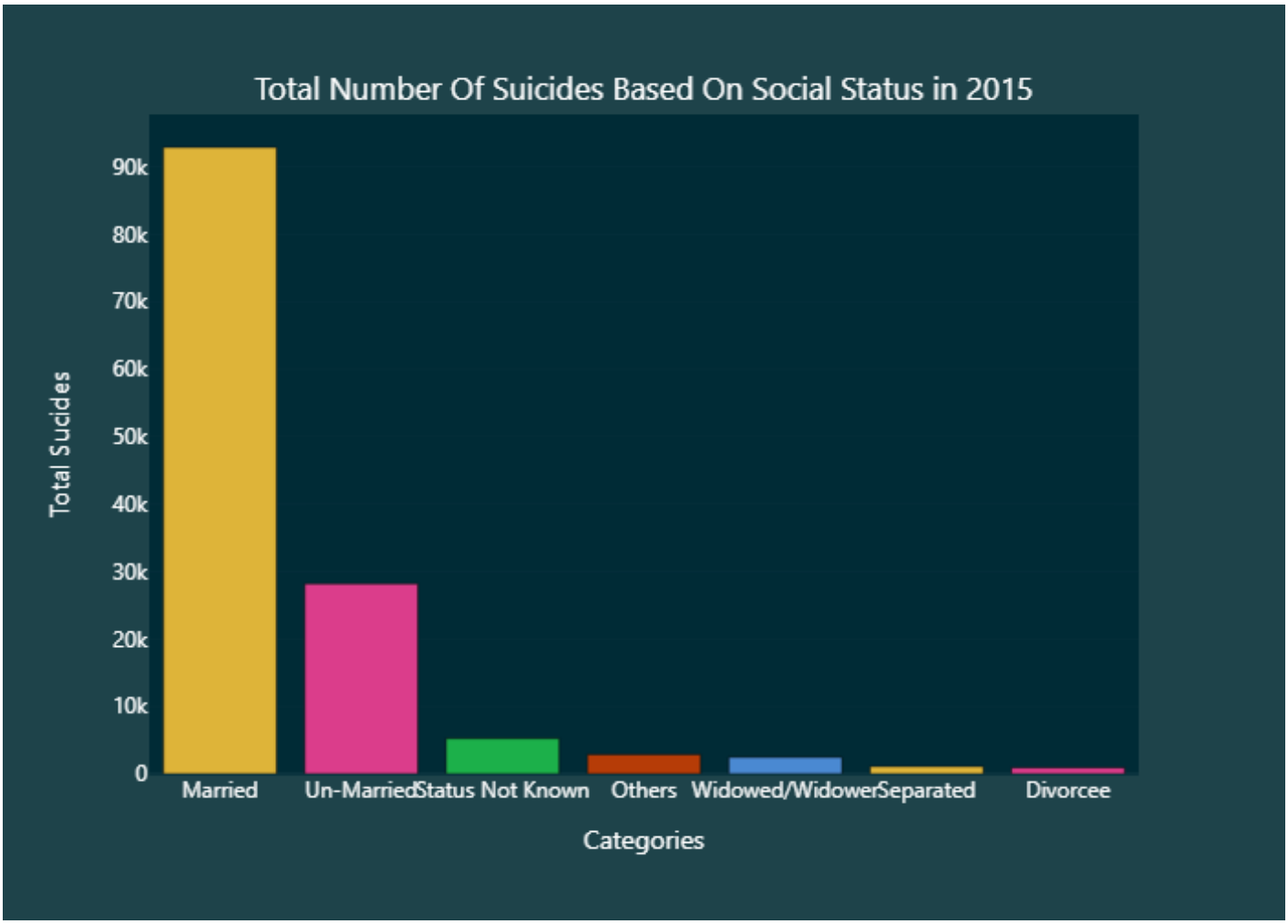


Fig14: Total Number of suicides based on Social Status Groups

In the figure above, the first thing that catches the eye is that the married people commit the highest number of suicides. This could be because most of the Indians are married and so the suicide cases of most people are of married people. On the other hand India have a very low divorce rate, so people are rarely having a divorce and even in that small population of divorced people a very small fractions are committing suicide, so the number of divorce people may be a very less for suicide.

There could also be other reasons for suicides like:

Financial stress

Domestic violence or abuse

Mental health issues

Infidelity or extramarital affairs

Lack of social support

Substance abuse

Chronic illness or physical health problems

- **Male and Female suicides based on Social Status:**

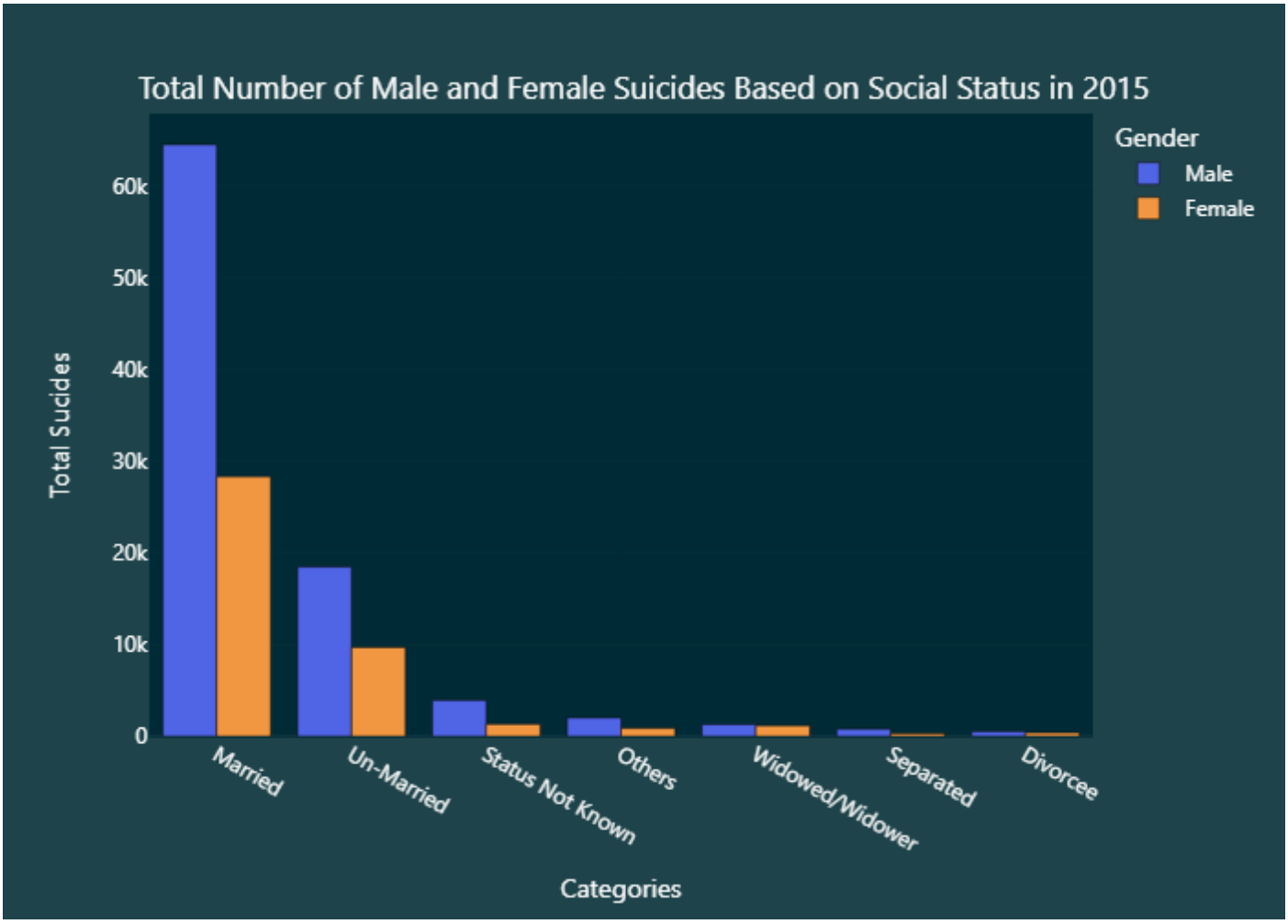


Fig15: Total Number of Male and Female suicides based on Social Status Groups

In the above figure two things can be observed that in the married category, males are committing more suicides than female, but in widow and divorced category the number of suicides by male and female is almost same.

The reason for married male to have a higher number of suicides could be related to financial problems and problems in the family because of financial instability. As most of the workforce in India is male dominated lack of financial security could cause married male to commit suicide.

On the other hand, widower have same number of suicides regardless of gender, this could be based on factor related to social stigma over the concept of being widow. Similarly, for divorced people they also face social pressure, which can lead them to commit suicide.

- **Suicide Means Analysis:**

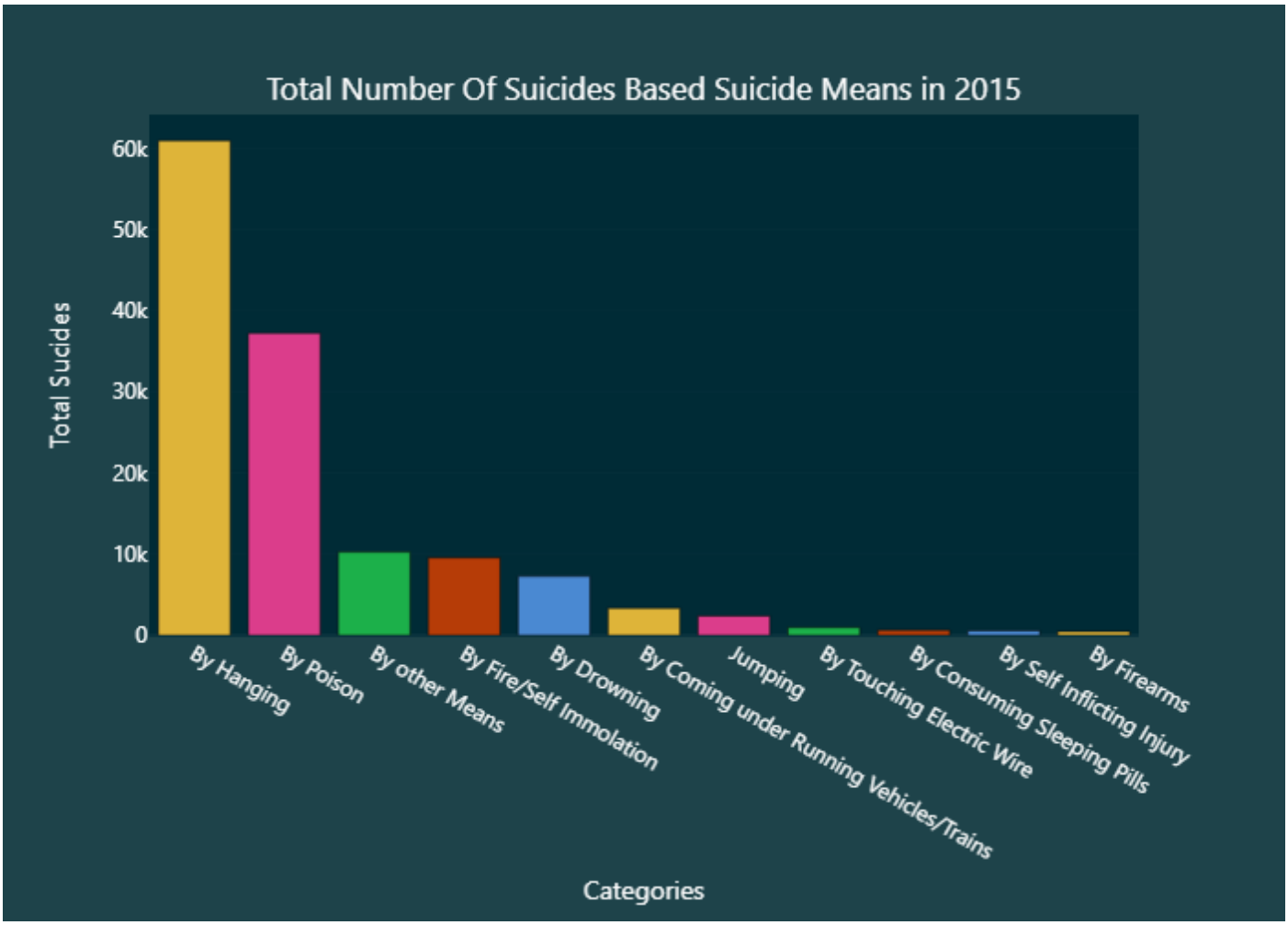


Fig16: Total Number of suicides based on Suicide Means Groups

In the above figure, we can see the most common way of suicide is by hanging, because it is the most common method of suicide because it is relatively easy to access and requires no special tools or weapons. Additionally, it is often seen as a quick and efficient way to end one's life.

The next most used way to commit suicide is by poison, this could be because, it is often easy to access household or commonly used substances that can be toxic in high doses, such as prescription or over-the-counter drugs, cleaning supplies, or pesticides. This method may also be perceived as a more painless way to end one's life.

On the other hand, Suicide by firearm is the least used way to commit suicide in India, this could be because firearm suicide is less common because firearms are usually used in a smaller proportion of suicides compared to other methods, such as poisoning. Additionally, access to firearms can be restricted through laws and regulations, reducing the likelihood that individuals will use them to take their own life. Furthermore, the impulsive nature of suicide may mean that individuals opt for quicker, less painful methods such as overdosing, rather than firearms.

- **Male and Female suicides based on Suicide Means:**

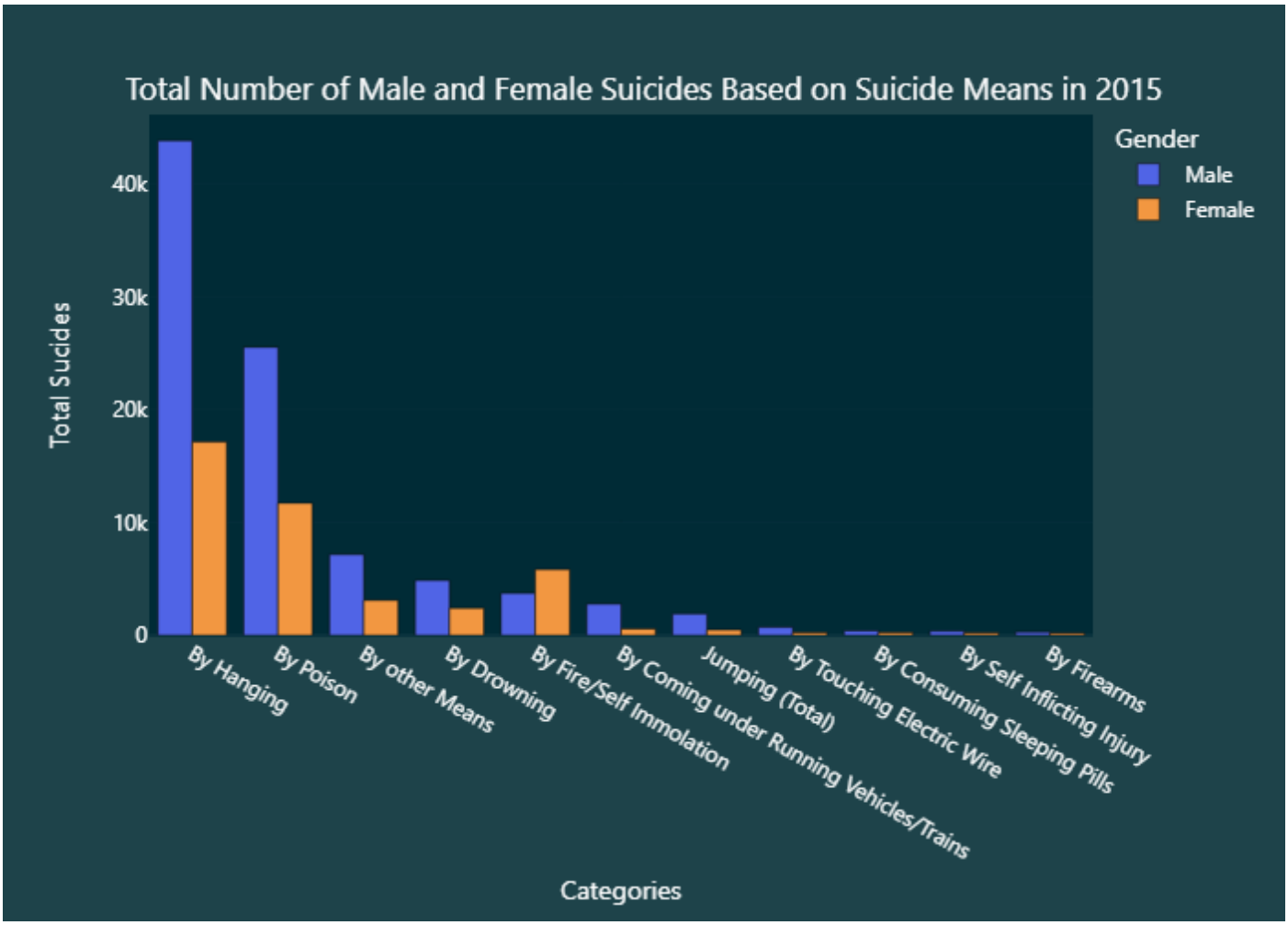


Fig17: Total Number of Male and Female suicides based on Suicide Means Groups

One thing we can see in the above figure is that, the suicide by fire has a higher female number. This means, female choose suicide using fire more than male. There is no definitive answer to why more women may choose to die by fire, but some studies suggest that women may be more likely to experience depression, anxiety, and other mental health issues that can contribute to suicidal ideation. Additionally, cultural and societal factors, such as stigma surrounding mental health and limited access to resources, may also play a role. However, it is important to note that suicide is a complex issue and there is no single cause.

Another thing to notice is that the vast difference in the number of male suicides using hanging. This could be because hanging is a very easy way to die and very effective.

B. Analysis of 2016:

- **Total Suicide in each State and Union Territory:**

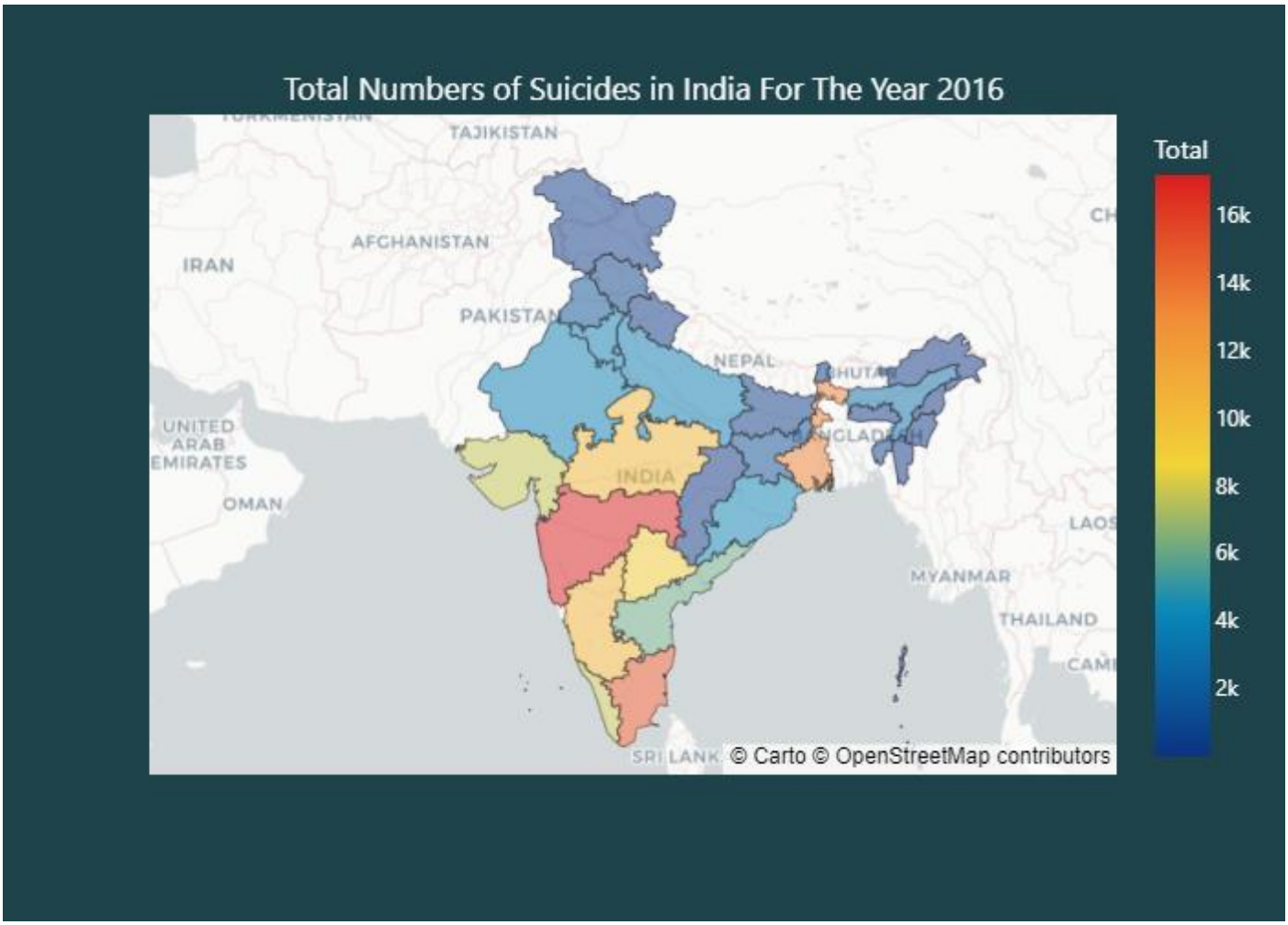


Fig18: Total Number of suicides in 2016

Like the previous year's analysis, we can see that Maharashtra, Chennai and West Bengal has the highest suicides. But another thing to notice is that the northern India have a very low suicide rate.

There are several reasons why Northern India has a lower suicide rate compared to other regions:

Strong family values: Indian society in general, but particularly in Northern India, places a strong emphasis on family support and togetherness, which can help individuals to cope with difficulties and feel less isolated.

Cultural stigma: The stigma surrounding suicide and mental health issues is strong in many parts of India, which may discourage people from taking their own lives.

Religious beliefs: Some religious communities in India view suicide as a sin, which may discourage people from taking their own lives.

Availability of mental health resources: Access to mental health resources and support systems is limited in many parts of India, which may make it difficult for individuals to get help when they need it.

Lack of data: Inaccurate reporting and lack of data collection on suicide in India makes it difficult to fully understand why certain regions have lower rates of suicide.

- **Male and Female Suicide Death Ratio in 2016:**

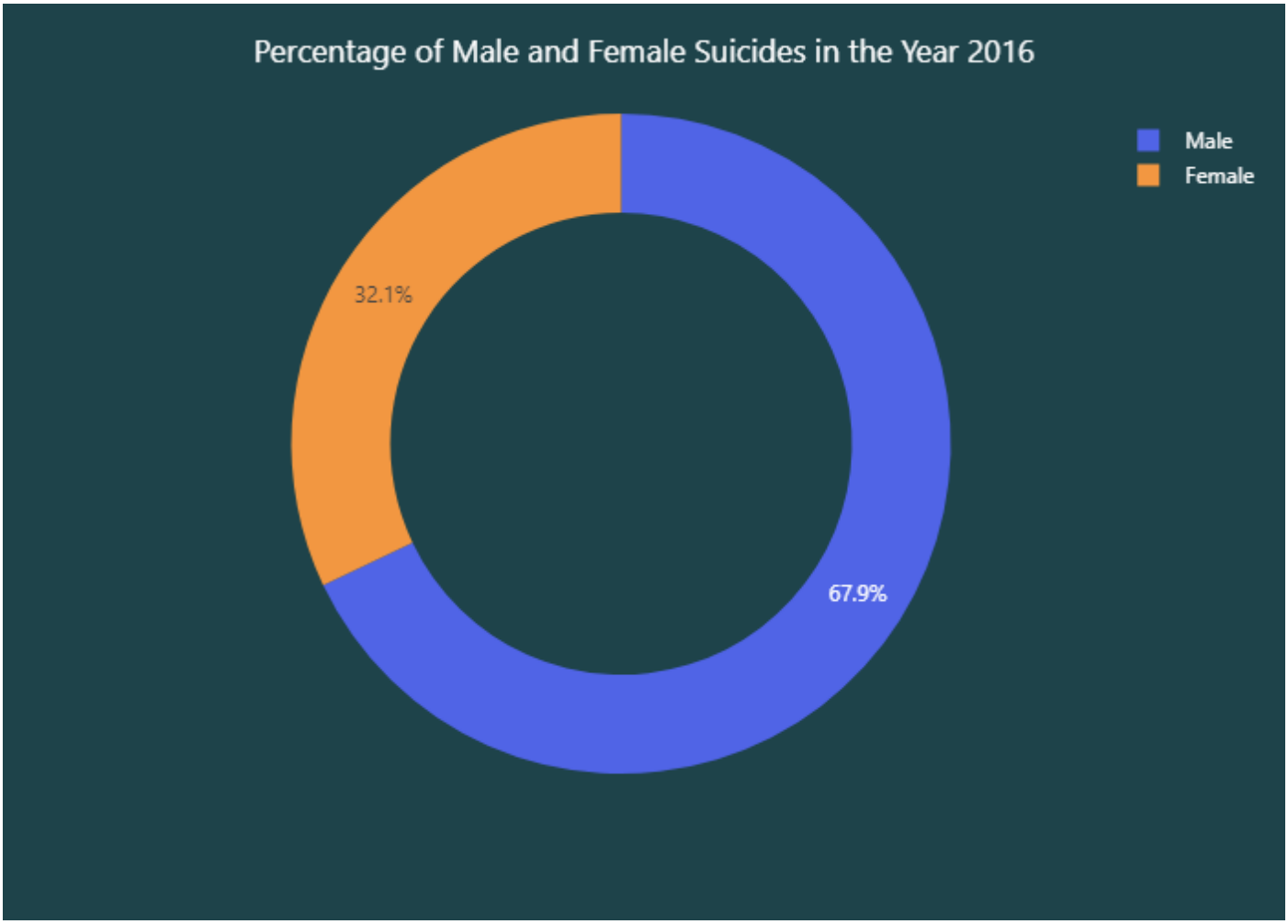


Fig19: Male and Female Suicide ratio in 2016

In the above figure, we can see that males have the highest suicide ratio of 67.9%,which is slightly less than the last year, this could be due to various factors such as social stigma surrounding mental health and seeking help, lack of support systems, and stress related to financial and occupational pressures. Cultural norms that emphasize masculinity and discourage expressing emotions also play a role. Substance abuse and untreated mental health issues are also contributing factors to the high rate of male suicides in India.

Women also have a high suicide rate of 32.1%, this could be due to various factors such as domestic violence, marital problems, harassment, and abuse. Lack of social and financial independence, poverty, and limited educational and career opportunities are also contributing

factors. Mental health issues, such as depression and anxiety, are often not addressed due to social stigma surrounding mental illness. In addition, access to lethal means, such as pesticides, is also a factor in the high rate of female suicides in India.

- **Economic Status wise Analysis:**

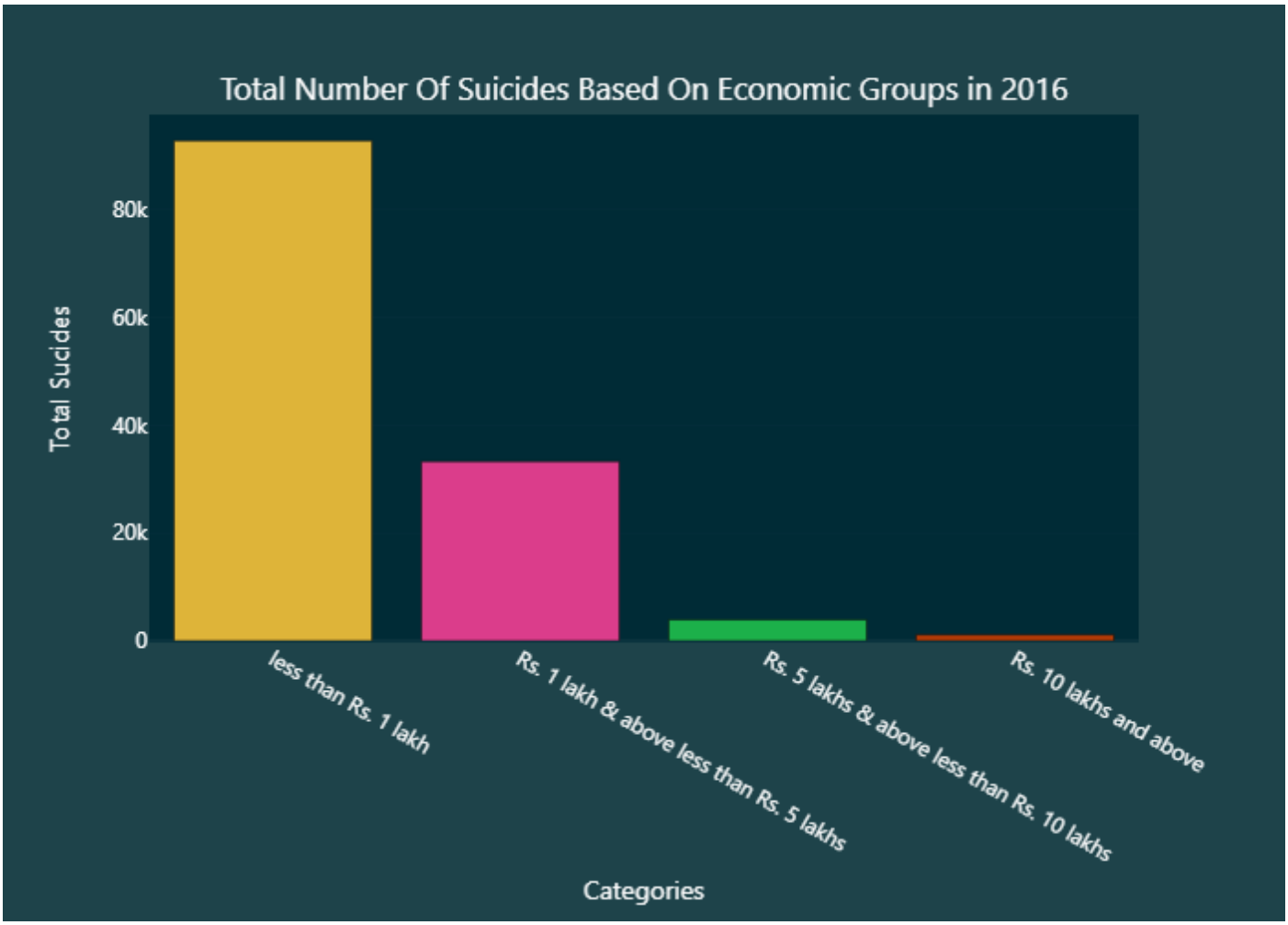


Fig20: Total Number of suicides based on economic categories

In the first category, individuals with an income less than 1 lakh, the total number of suicides is 92,719. This is the largest number of suicides among all the categories, which suggests that financial stress and struggles may be a significant factor in these cases.

In the second category, individuals with an income of 1 lakh or more but less than 5 lakhs, the total number of suicides is 33,253. While this number is still substantial, it is lower than the first category, indicating that higher income can help alleviate some financial stress and struggles.

In the third category, individuals with an income of 5 lakhs or more but less than 10 lakhs, the total number of suicides is 3914. This number is even lower than the second category, indicating that a higher income level is associated with a lower risk of suicide.

In the fourth category, individuals with an income of 10 lakhs or above, the total number of suicides is 1108. This is the lowest number of suicides among all the categories, suggesting that higher income may provide greater financial stability and reduce the risk of suicide.

In conclusion, this data suggests a correlation between income and the risk of suicide, with higher income levels being associated with a lower risk. However, it is important to note that this is just one factor that can influence suicide risk and that a comprehensive approach is needed to address the issue of suicide.

- **Male and Female suicides based on Economic Status:**

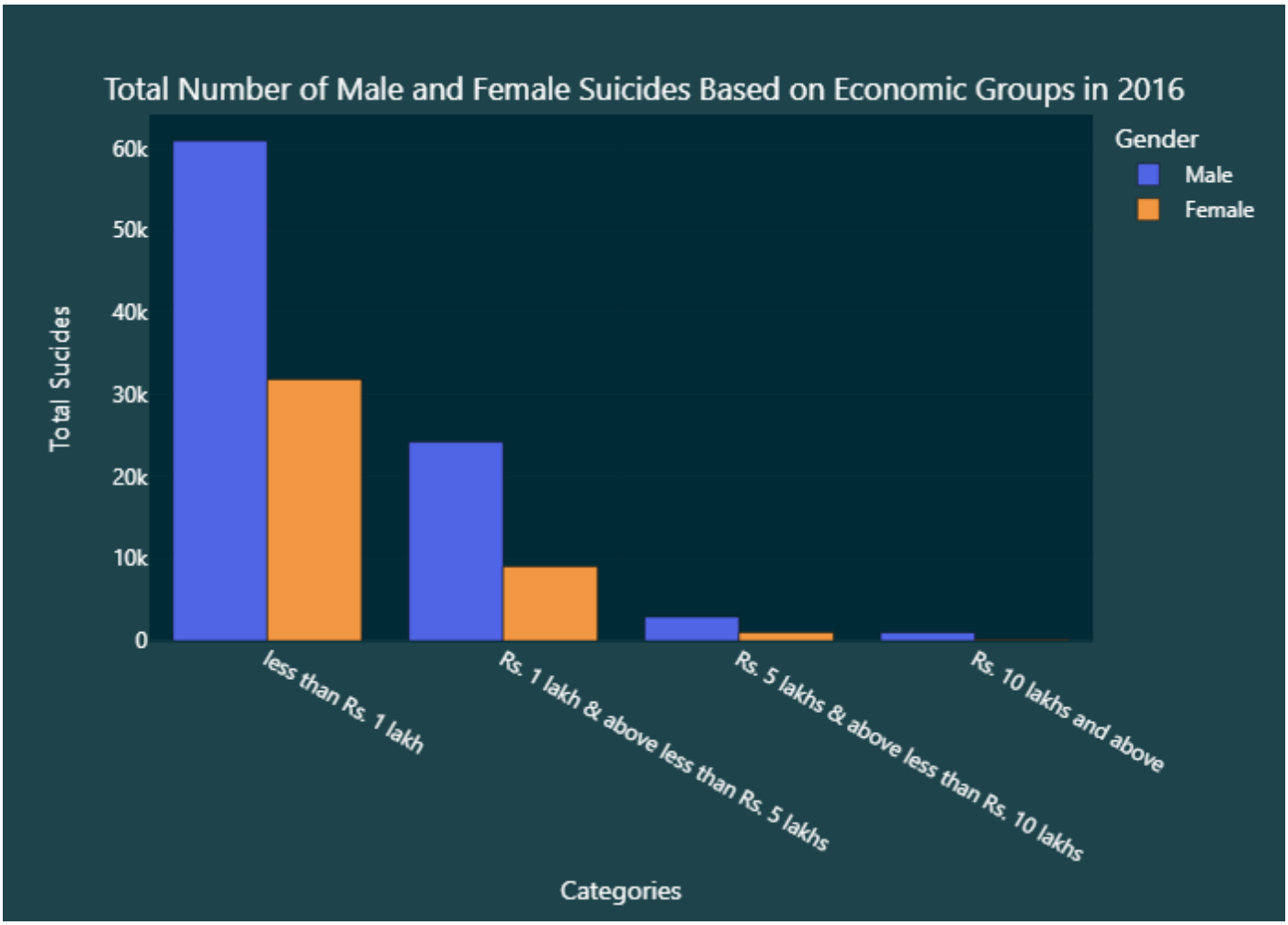


Fig21: Total Number of Male and Female suicides based on economic categories

The above figure clearly shows that most male have committed suicide in each and every category. This could be that more percentage of males are associated with the working force in India and still now males are the main source of income in the families. So, having a less financial stability makes the male commit suicide more often than the females. Some times in the lower income section both male and female have a higher rate of suicide this could again be associated with having low income and less stability financially, especially in a growing economy like India where prices are always on the rise.

The data shows that more males have committed suicide as compared to females in all economic categories. This disparity in suicide rates between genders is a common trend observed in many countries and requires further investigation to understand the underlying causes.

The highest number of suicides among males is in the first category, individuals with an income less than 1 lakh. The number of suicides in this category is 60,883, which is nearly half of the total suicides among males. This suggests that financial stress and struggles may be a significant factor contributing to suicide risk among individuals with lower income levels.

Similarly, the highest number of suicides among females is also in the first category, individuals with an income less than 1 lakh. The number of suicides in this category is 31,836. This suggests that financial struggles may be a significant factor in suicide risk among women as well.

As the income level increases, the number of suicides decreases for both males and females. This trend highlights the importance of financial stability and security as a factor in reducing suicide risk.

The data also shows that while the number of suicides decreases as the income level increases, there is still a significant number of suicides among individuals in higher income categories. This suggests that while financial stability can help reduce suicide risk, it may not be the only factor and that a comprehensive approach is needed to address the issue of suicide.

In conclusion, this data highlights the importance of addressing financial stress and struggles as a part of suicide prevention efforts, especially among individuals with lower income levels.

- **Education Status Wise Analysis**

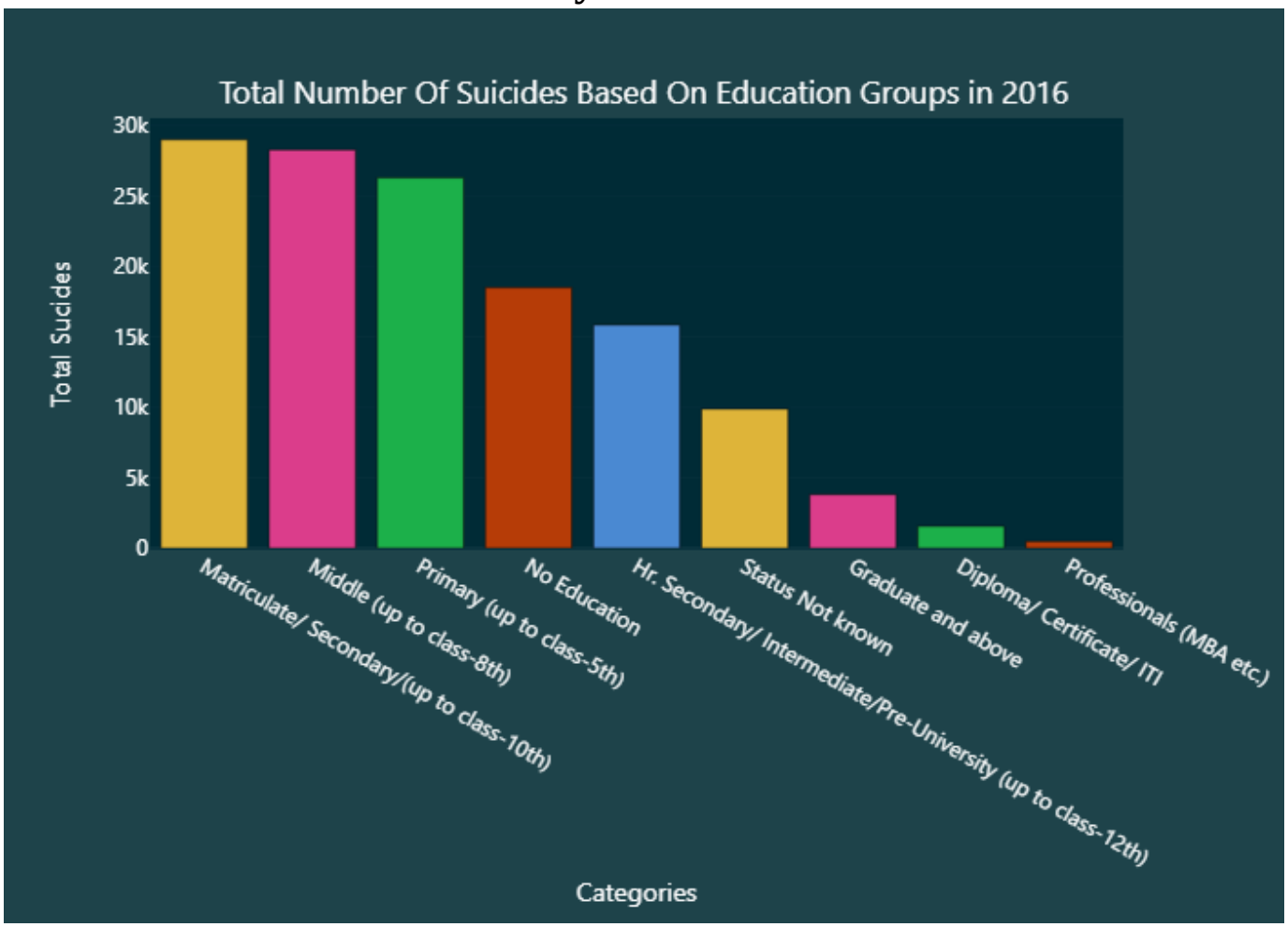


Fig22: Total Number of suicides based on education categories

This data provides information on the number of suicides recorded in a certain population, grouped by the highest level of education achieved by the individual.

From the data, it can be seen that individuals with lower levels of education tend to have higher numbers of suicides compared to those with higher levels of education. For example, the category "No Education" has the highest number of suicides (18,493) among all categories, while the categories "Graduate and above" and "Professionals (MBA etc.)" have the lowest number of suicides (3807 and 475 respectively).

This trend suggests a possible correlation between education level and suicide rates, where higher levels of education may be protective against suicide. However, it's important to note that there could be other factors contributing to the number of suicides in each category, such as socio-economic status, access to mental health resources, and cultural attitudes towards mental health and suicide.

The category "Status Not known" has a relatively high number of suicides (9882), which may indicate that the education level of these individuals was not recorded or unknown. This highlights the importance of having accurate and complete information in order to understand and address suicide in a population.

- **Male and Female suicides based on Education Status:**

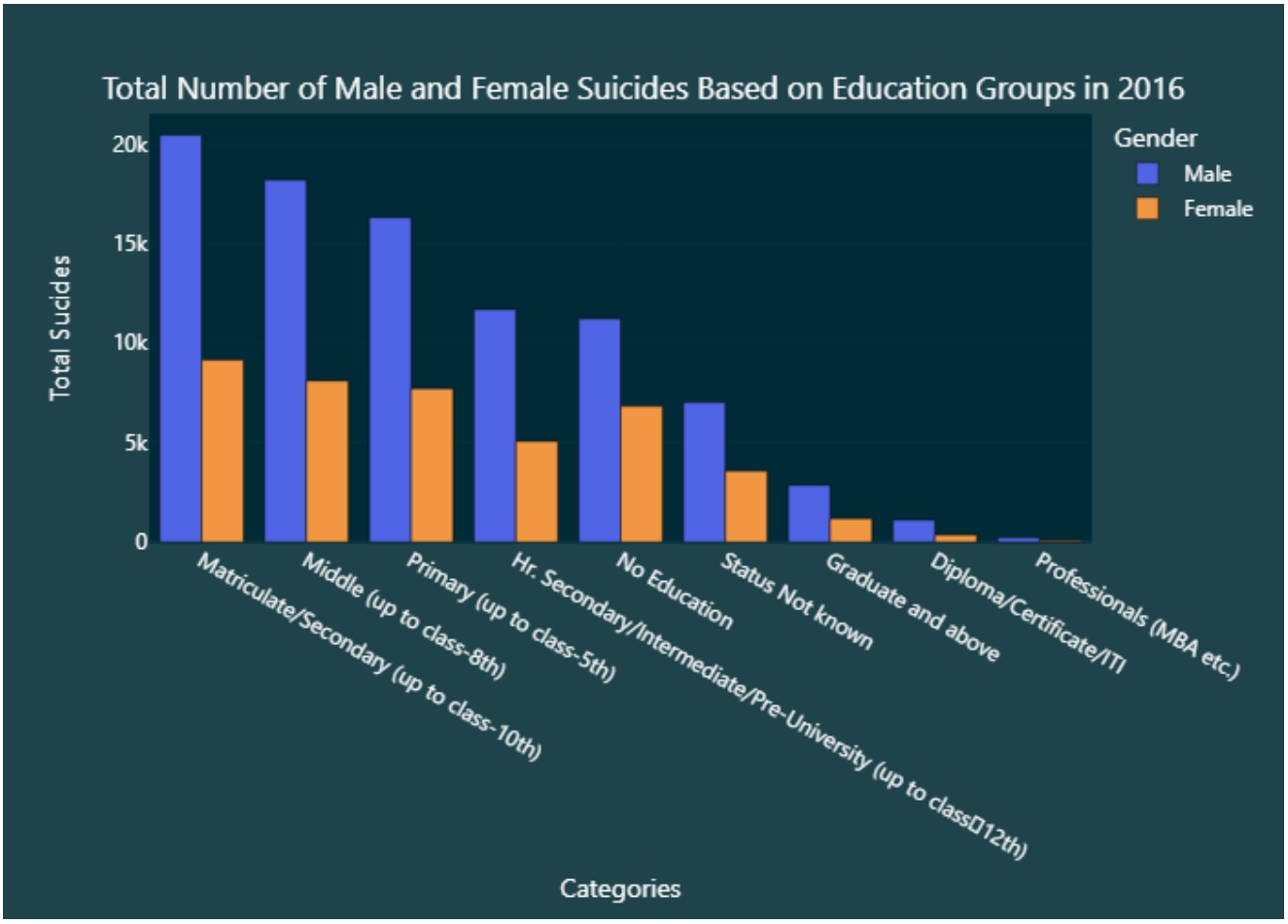


Fig23: Total Number of Male and Female suicides based on education categories

The data shows the number of suicides in India, broken down by the level of education attained and by gender. The data suggests the following insights:

Higher incidence of suicides among males: The number of suicides among males is consistently higher in every education category compared to females. This is a concerning trend, as it highlights the need to understand and address the factors that may contribute to suicide among men in India.

Education and suicide risk: The data shows that the highest number of suicides among males occurred among those with Matriculate/Secondary education (20436). This suggests that individuals who have completed secondary education may be at a higher risk of suicide, and that efforts to prevent suicide should focus on this population.

Similar trends among females: The data also shows that the highest number of suicides among females occurred among those with Matriculate/Secondary education (9142). This suggests that the risk of suicide is similar for women, regardless of their level of education.

Lower risk among professionals: The lowest number of suicides among both males and females were among those with professional degrees (225 and 68 respectively). This suggests that having a professional degree may be associated with a lower risk of suicide.

Unknown education status: The "status not known" category has the third highest number of suicides among both males (7011) and females (3569). This highlights the importance of collecting accurate data on education status, as it may help to identify populations at higher risk of suicide and to design targeted prevention efforts.

In conclusion, the data provides valuable information about the relationship between education and suicide in India. By understanding the trends and patterns in the data, policymakers, mental health professionals, and community leaders can work together to develop and implement effective suicide prevention strategies.

- **Profession Wise Analysis:**

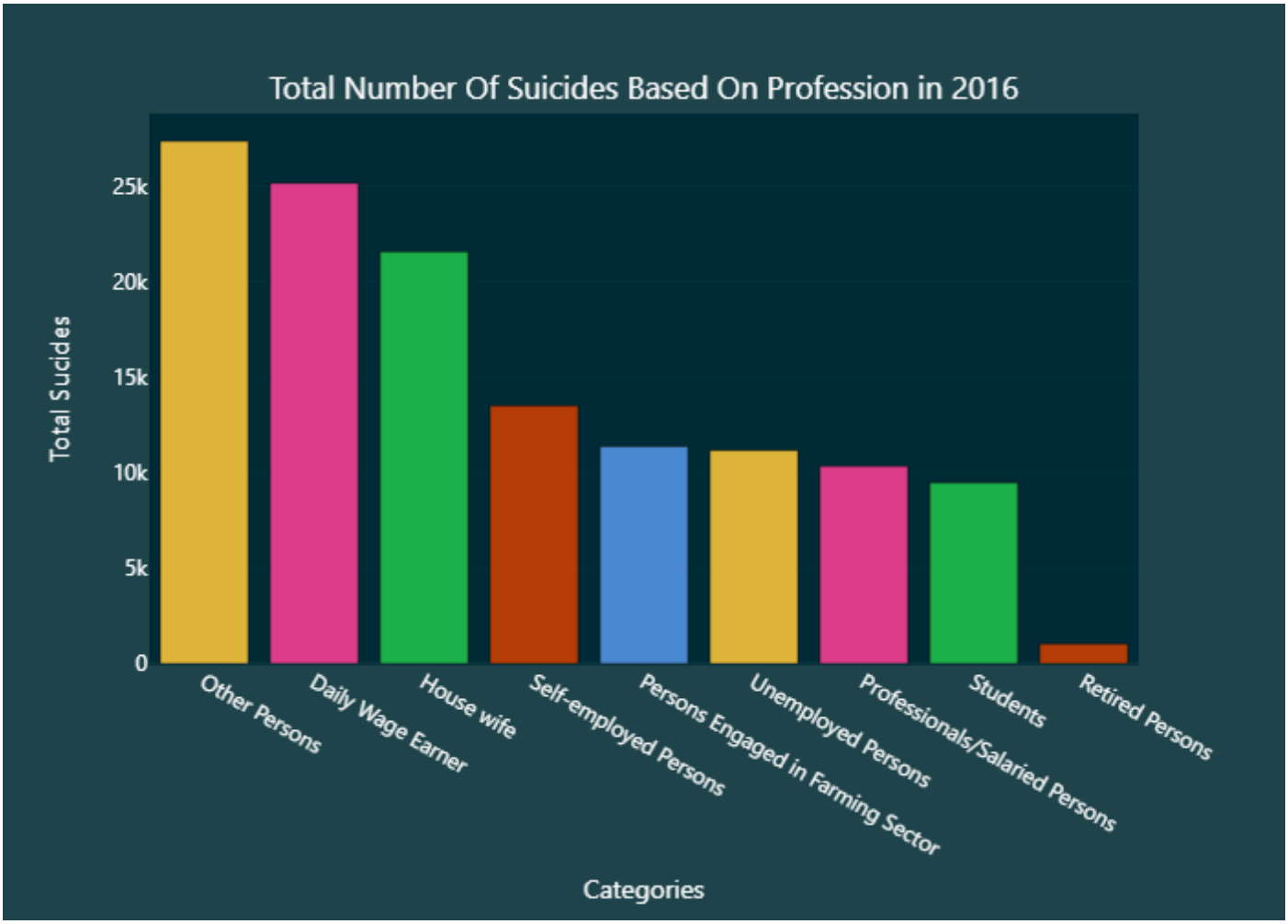


Fig24: Total Number of suicides based on Professional categories

This data presents the number of suicides in India, grouped by the individual's profession.

High incidence of suicides among housewives: The highest number of suicides was among housewives (21563), which is a concerning trend. This highlights the need to address the factors that may contribute to suicide among women who are housewives and to provide them with appropriate support and resources.

High number of suicides among daily wage earners: The second highest number of suicides was among daily wage earners (25159), which suggests that individuals who work in low-wage, insecure jobs may be at a higher risk of suicide.

Professionals and salaried persons: The number of suicides among professionals/salaried persons (10343) was lower than among housewives and daily wage earners. This suggests that having a salaried job with stability and security may be associated with a lower risk of suicide.

High number of suicides among students: The number of suicides among students (9477) was also relatively high, which highlights the need to address the stress and pressures that students may face, and to provide them with appropriate support and resources.

Unemployed and self-employed: The number of suicides among unemployed persons (11170) and self-employed persons (13506) was similar. This suggests that both unemployment and self-employment may be associated with an increased risk of suicide.

Low incidence of suicides among retired persons: The lowest number of suicides was among retired persons (1039), which suggests that retirement may be associated with a lower risk of suicide.

Other categories: The "other persons" category (27358) had the second highest number of suicides, which suggests that it is important to collect more detailed information on the characteristics of this population to understand their risk of suicide.

In conclusion, the data provides important insights into the relationship between profession and suicide in India. By understanding these trends, policymakers, mental health professionals, and community leaders can work together to design and implement targeted suicide prevention efforts that address the unique needs and challenges of different professional groups.

- **Male and Female suicides based on Professional Status:**

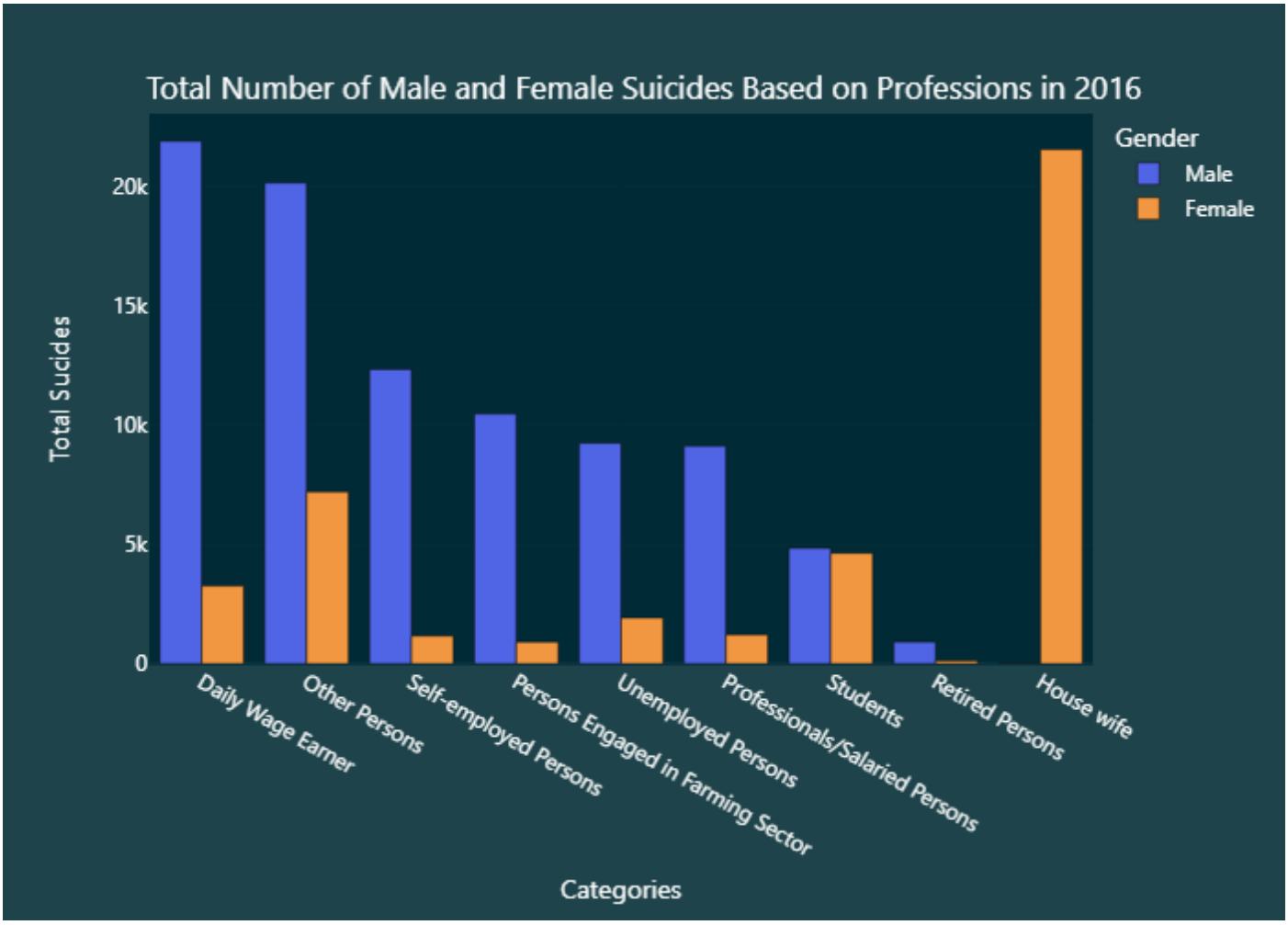


Fig25: Total Number of Male and Female suicides based on Professional categories

This data presents the number of suicides in India, grouped by the individual's profession and gender.

Gender differences: The highest number of suicides among females was among housewives (21563), while the highest number of suicides among males was among daily wage earners (21902).

High incidence of suicides among housewives: The number of suicides among housewives was much higher among females (21563) compared to males (0), which is a concerning trend. This highlights the need to address the factors that may contribute to suicide among women who are housewives and to provide them with appropriate support and resources.

High number of suicides among daily wage earners: The number of suicides among daily wage earners was higher among males (21902) compared to females (3257), which suggests that males who work in low-wage, insecure jobs may be at a higher risk of suicide.

Professionals and salaried persons: The number of suicides among professionals/salaried persons was higher among males (9127) compared to females (1216), which suggests that the stress and pressures that individuals in these professions may face, may be higher for males.

High number of suicides among students: The number of suicides among students was higher among males (4842) compared to females (4635), which highlights the need to address the stress and pressures that students may face, and to provide them with appropriate support and resources.

Unemployed and self-employed: The number of suicides among unemployed persons was higher among males (9250) compared to females (1920), while the number of suicides among self-employed persons was higher among males (12341) compared to females (1165). This suggests that both unemployment and self-employment may be associated with an increased risk of suicide for males.

Low incidence of suicides among retired persons: The number of suicides among retired persons was lower among females (126) compared to males (913), which suggests that retirement may be associated with a lower risk of suicide for females.

Other categories: The "other persons" category had a higher number of suicides among males (20151) compared to females (7207), which suggests that it is important to collect more detailed information on the characteristics of this population to understand their risk of suicide.

In conclusion, the data provides important insights into the relationship between profession, gender and suicide in India. By understanding these trends, policymakers, mental health professionals, and community leaders can work together to design and implement targeted suicide prevention efforts that address the unique needs and challenges of different professional groups and genders.

- **Social Status Wise Analysis:**

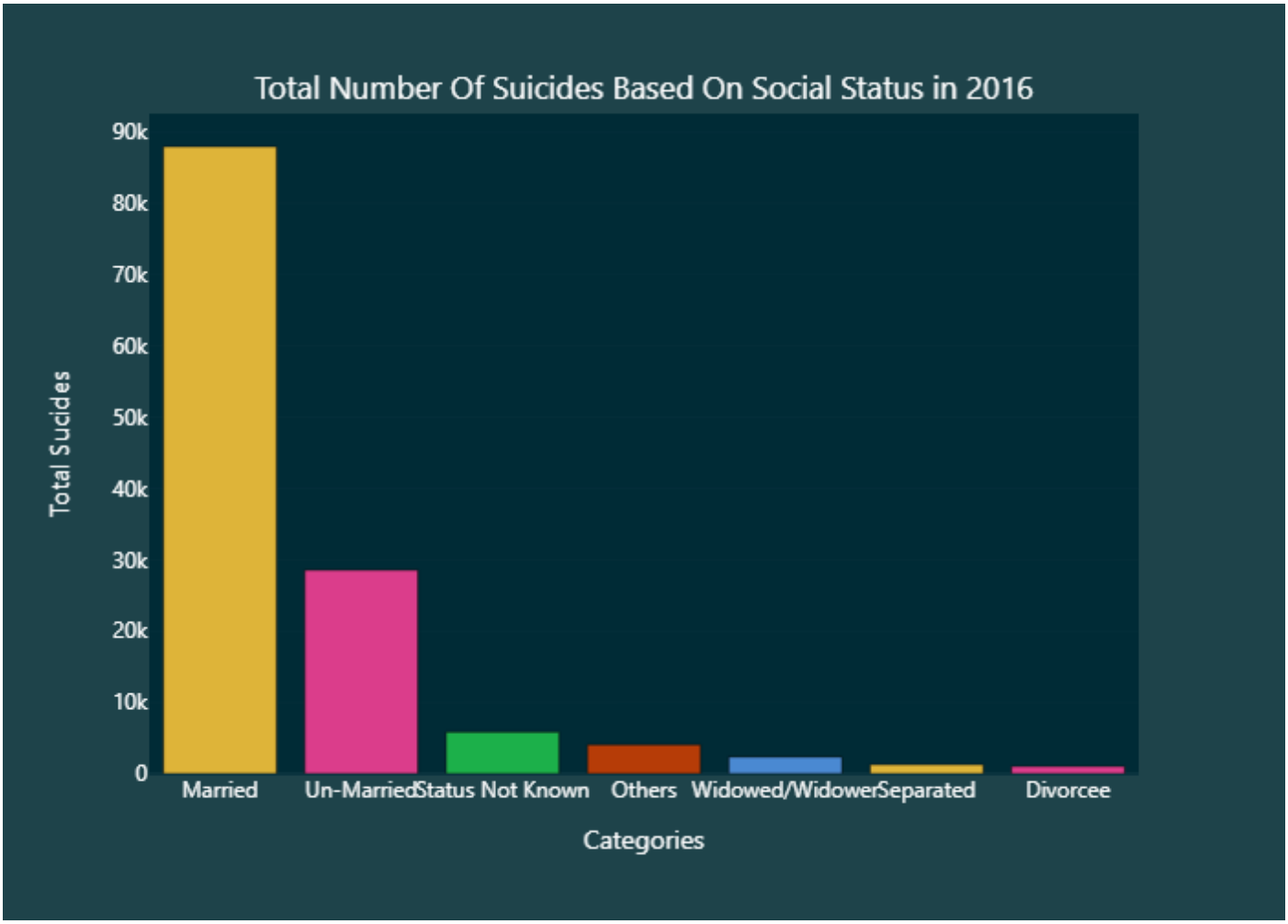


Fig26: Total Number of suicides based on social categories

This data provides information on the number of suicides in India, broken down by social categories such as marital status.

The highest number of suicides occurred among married individuals (87,944), followed by individuals whose marital status is unknown (5818). The number of suicides among un-married individuals (28,546) is also significant. Meanwhile, fewer suicides were recorded among separated (1261), divorced (1014), widowed/widower (2342), and "others" categories (4069).

It is important to keep in mind that this data only provides a partial picture of the situation and does not reveal the underlying reasons for the suicides. Further investigation and analysis, such as exploring factors like mental health, socio-economic status, and access to support, would be necessary to gain a deeper understanding of the issue.

It is also important to note that suicide is a complex issue with multiple contributing factors, and reducing suicides requires a multi-faceted approach, including mental health support, reducing stigma, and addressing socio-economic challenges.

- **Male and Female suicides based on Social Status:**

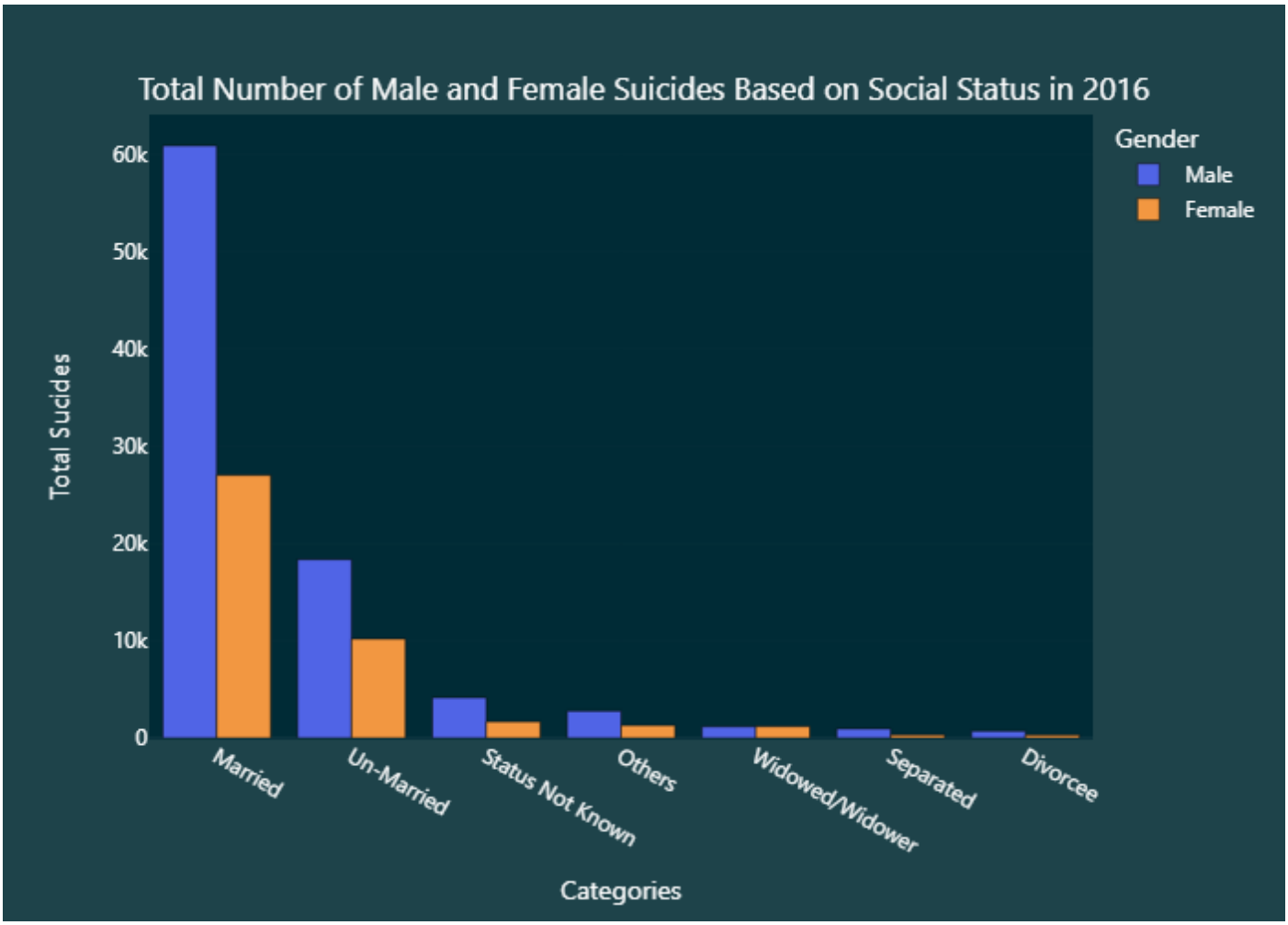


Fig27: Total Number of Male and Female suicides based on social categories

This data provides information on the number of suicides in India, broken down by social categories and gender.

The highest number of suicides among males occurred among the married population (60914), followed by individuals with a status not known (4143). The number of suicides among un-married males (18361) is also significant. Meanwhile, fewer suicides were recorded among separated (939), divorced (705), widowed/widower (1163), and "others" categories (2772).

In comparison, the highest number of suicides among females occurred among the married population (27030), followed by those with a status not known (1675). The number of suicides among un-married females (10185) is also significant. Fewer suicides were recorded among separated (322), divorced (309), widowed/widower (1179), and "others" categories (1297).

It is important to keep in mind that this data only provides a partial picture of the situation and does not reveal the underlying reasons for the suicides. Further investigation and

analysis, such as exploring factors like mental health, socio-economic status, and access to support, would be necessary to gain a deeper understanding of the issue.

It is also important to note that suicide is a complex issue with multiple contributing factors, and reducing suicides requires a multi-faceted approach, including mental health support, reducing stigma, and addressing socio-economic challenges. Additionally, there may be gender-specific challenges contributing to the differences in suicide rates, and these should also be explored.

- **Suicide Means Analysis:**

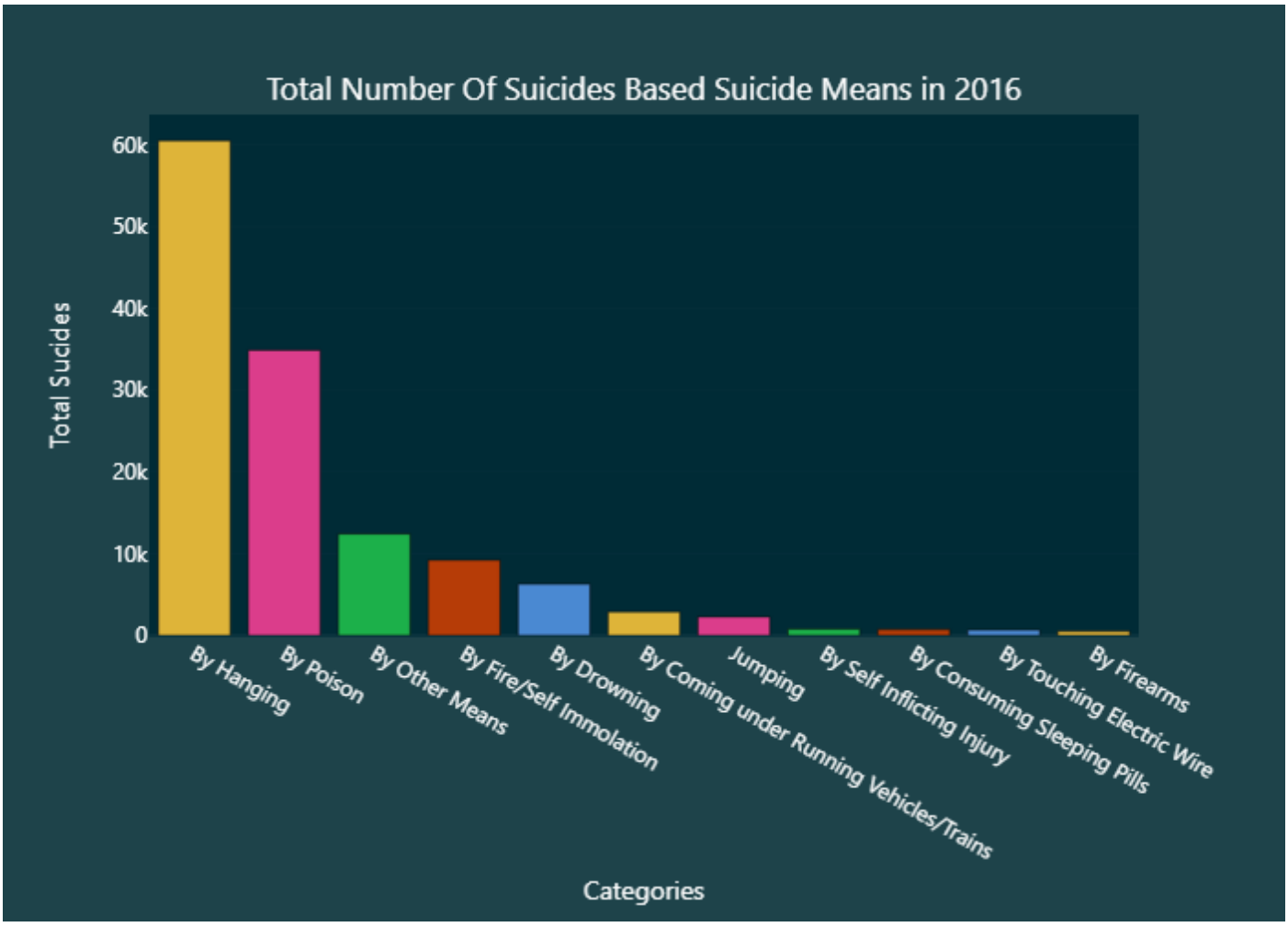


Fig28: Total Number of suicides based on Suicide Means Groups

This data represents the number of suicides committed using different methods in a given period of time. The most common method of suicide is by hanging (60,486 cases), followed by poisoning (34,868 cases). The least common methods of suicide are by consuming sleeping pills (704 cases) and by self-inflicting injury (769 cases).

On the other hand, Suicide by firearm is the least used way to commit suicide in India, this could be because firearm suicide is less common because firearms are usually used in a smaller proportion of suicides compared to other methods, such as poisoning. Additionally, access to firearms can be restricted through laws and regulations, reducing the likelihood that individuals will use them to take their own life. Furthermore, the impulsive nature of suicide

may mean that individuals opt for quicker, less painful methods such as overdosing, rather than firearms.

It is important to note that this data only represents the number of completed suicides and does not take into account attempted suicides or individuals who may have survived after attempting suicide. The data suggests that it is necessary to address and prevent suicide through various means such as mental health support, access to resources, and education.

- **Male and Female suicides based on Suicide Means:**

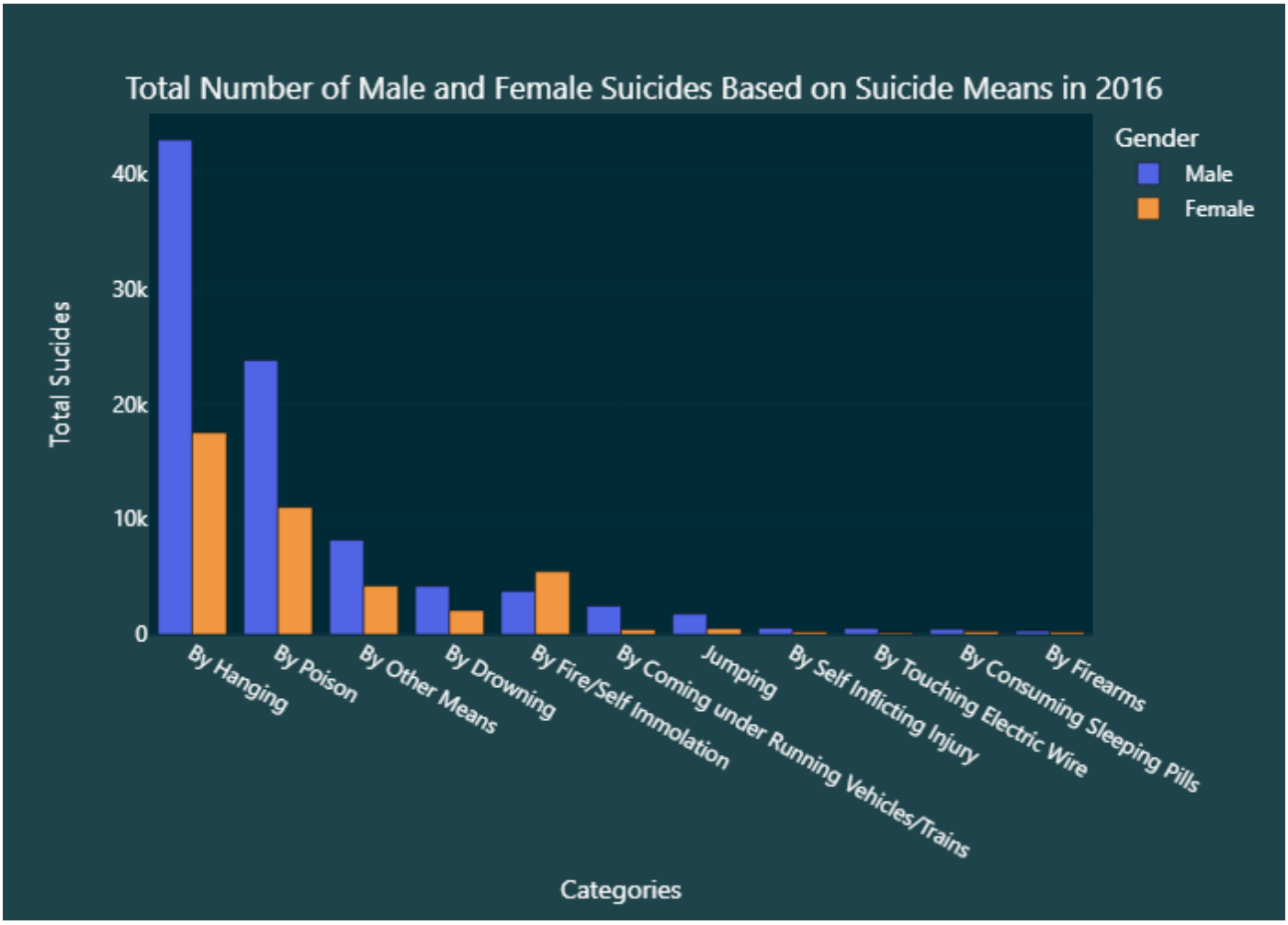


Fig29: Total Number of Male and Female suicides based on Suicide Means Groups

One thing we can see in the above figure is that, the suicide by fire has a higher female number. This means, female choose suicide using fire more than male. There is no definitive answer to why more women may choose to die by fire, but some studies suggest that women may be more likely to experience depression, anxiety, and other mental health issues that can contribute to suicidal ideation. Additionally, cultural and societal factors, such as stigma surrounding mental health and limited access to resources, may also play a role. However, it is important to note that suicide is a complex issue and there is no single cause.

Another thing to notice is that the vast difference in the number of male suicides using hanging. This could be because hanging is a very easy way to die and very effective.

C.Analysis of 2017:

- **Total Suicide in each State and Union Territory:**

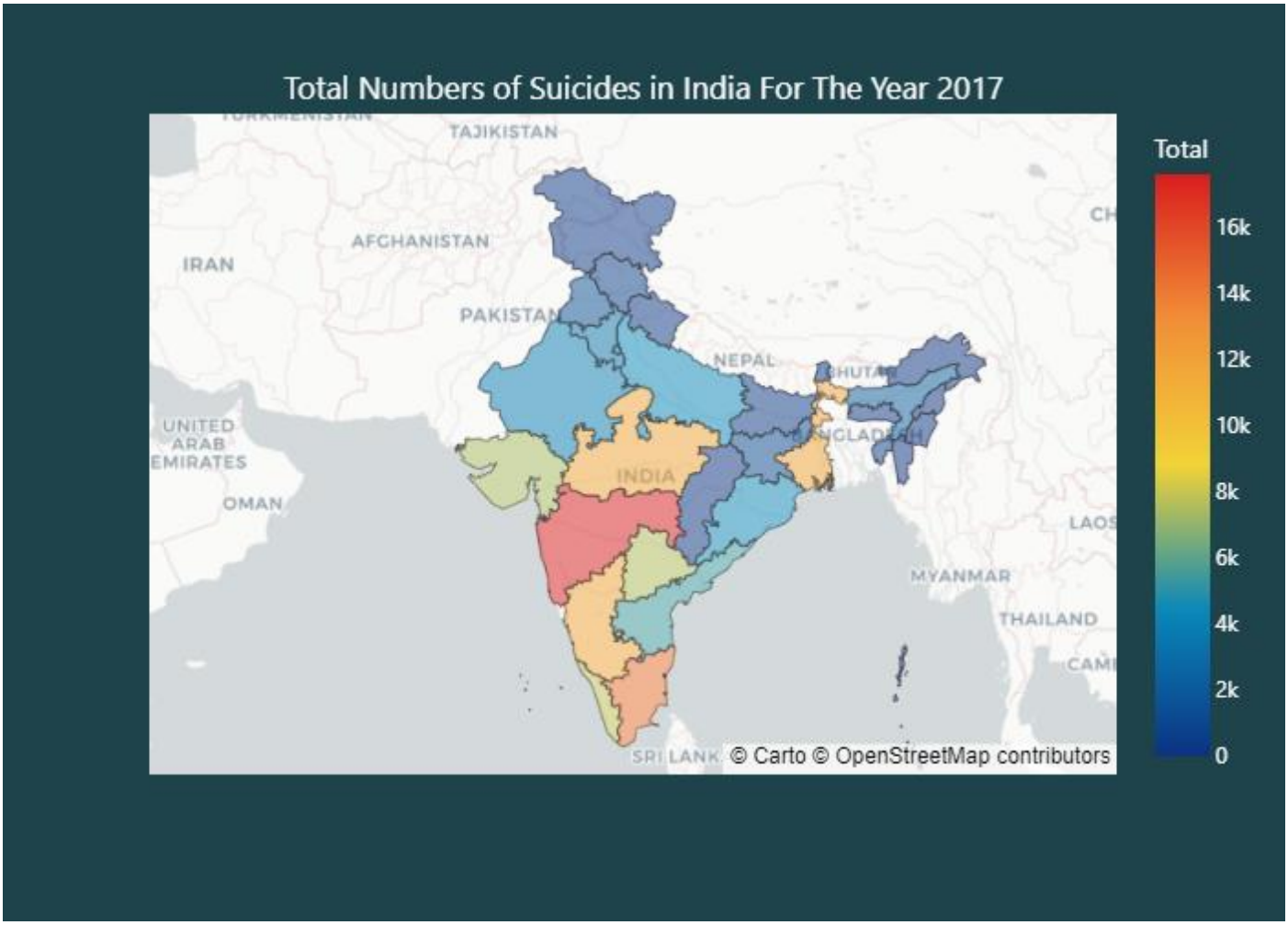


Fig30: Total Number of suicides in 2017

Like the previous year's analysis, we can see that Maharashtra, Chennai and West Bengal has the highest suicides. But another thing to notice is that the northern India have a very low suicide rate.

There are several reasons why Northern India has a lower suicide rate compared to other regions:

Strong family values: Indian society in general, but particularly in Northern India, places a strong emphasis on family support and togetherness, which can help individuals to cope with difficulties and feel less isolated.

Cultural stigma: The stigma surrounding suicide and mental health issues is strong in many parts of India, which may discourage people from taking their own lives.

Religious beliefs: Some religious communities in India view suicide as a sin, which may discourage people from taking their own lives.

Availability of mental health resources: Access to mental health resources and support systems is limited in many parts of India, which may make it difficult for individuals to get help when they need it.

Lack of data: Inaccurate reporting and lack of data collection on suicide in India makes it difficult to fully understand why certain regions have lower rates of suicide.

- **Male and Female Suicide Death Ratio in 2017:**

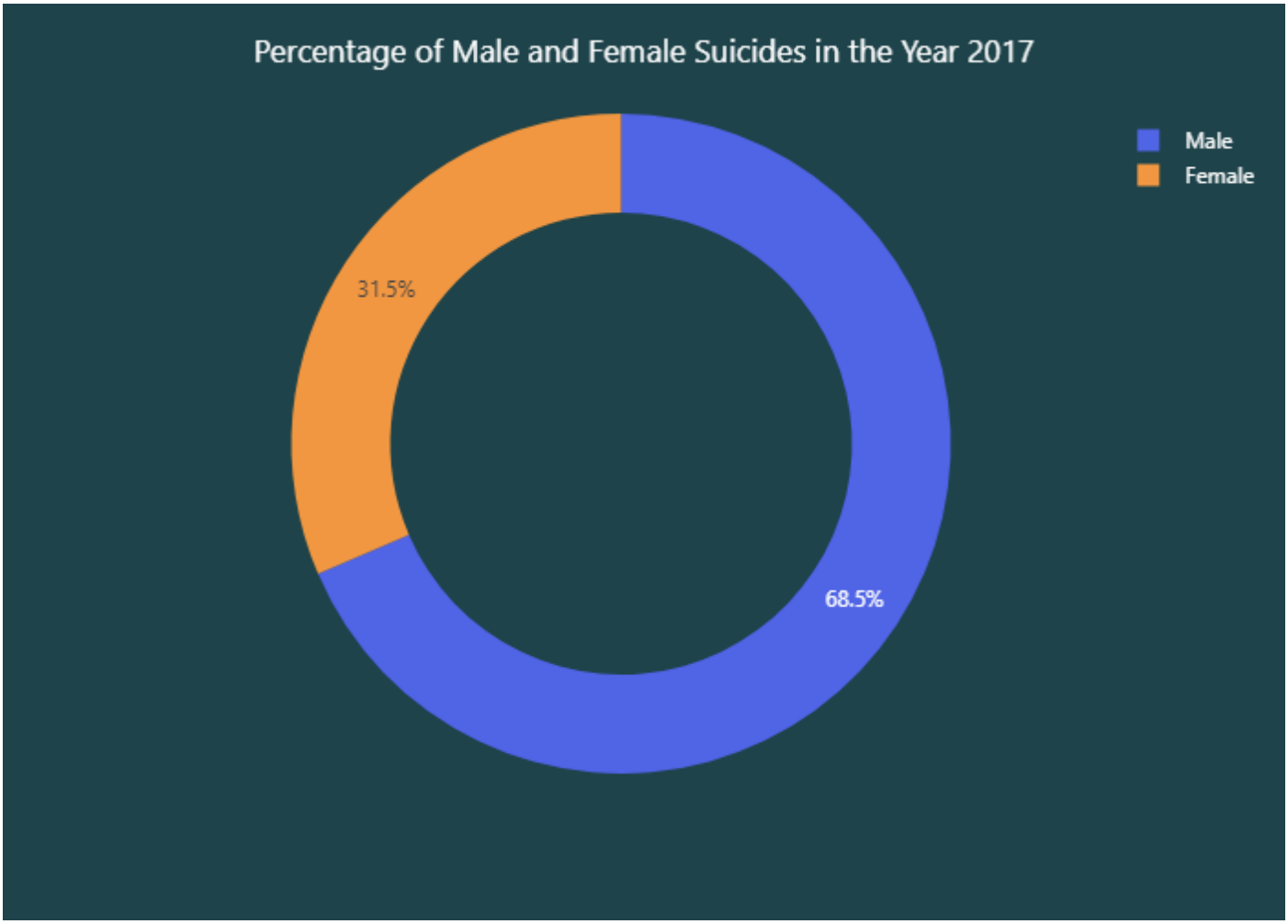


Fig31: Male and Female Suicide ratio in 2016

In the above figure, we can see that males have the highest suicide ratio of 68.5%, which is slightly less than the last year, this could be due to various factors such as social stigma surrounding mental health and seeking help, lack of support systems, and stress related to financial and occupational pressures. Cultural norms that emphasize masculinity and discourage expressing emotions also play a role. Substance abuse and untreated mental health issues are also contributing factors to the high rate of male suicides in India.

Women also have a high suicide rate of 31.5%, this could be due to various factors such as domestic violence, marital problems, harassment, and abuse. Lack of social and financial independence, poverty, and limited educational and career opportunities are also contributing factors. Mental health issues, such as depression and anxiety, are often not addressed due to

social stigma surrounding mental illness. In addition, access to lethal means, such as pesticides, is also a factor in the high rate of female suicides in India.

- **Economic Status wise Analysis:**

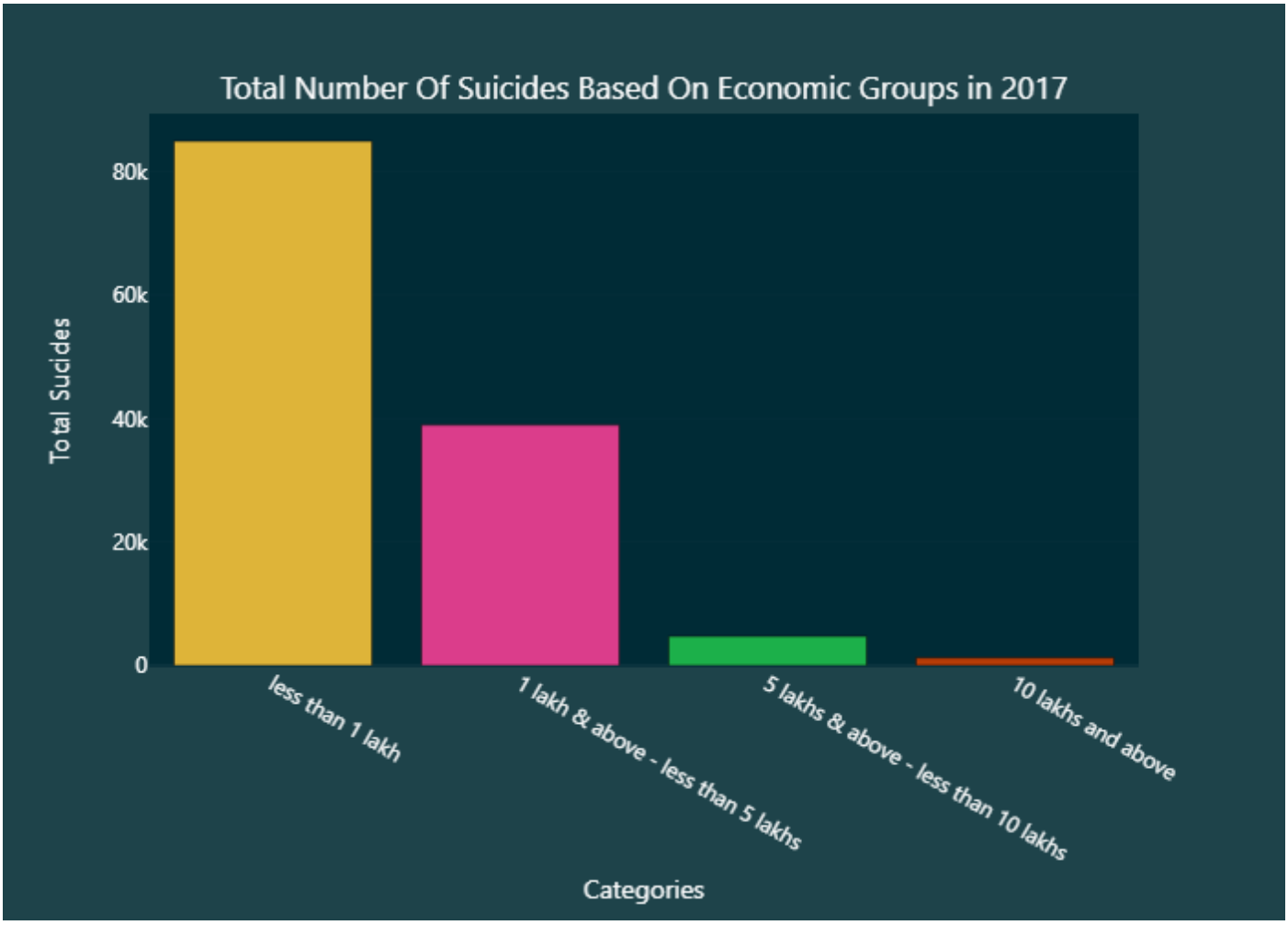


Fig32: Total Number of suicides based on economic categories

This data shows the total number of suicides in India, categorized by the individual's economic status. The data suggests that the highest number of suicides are among individuals with an income less than 1 lakh, with 92,719 suicides. As the income level increases, the number of suicides decreases. The data also shows that the number of suicides is highest in the lowest income category and decreases as the income level increases.

- **Male and Female suicides based on Economic Status:**

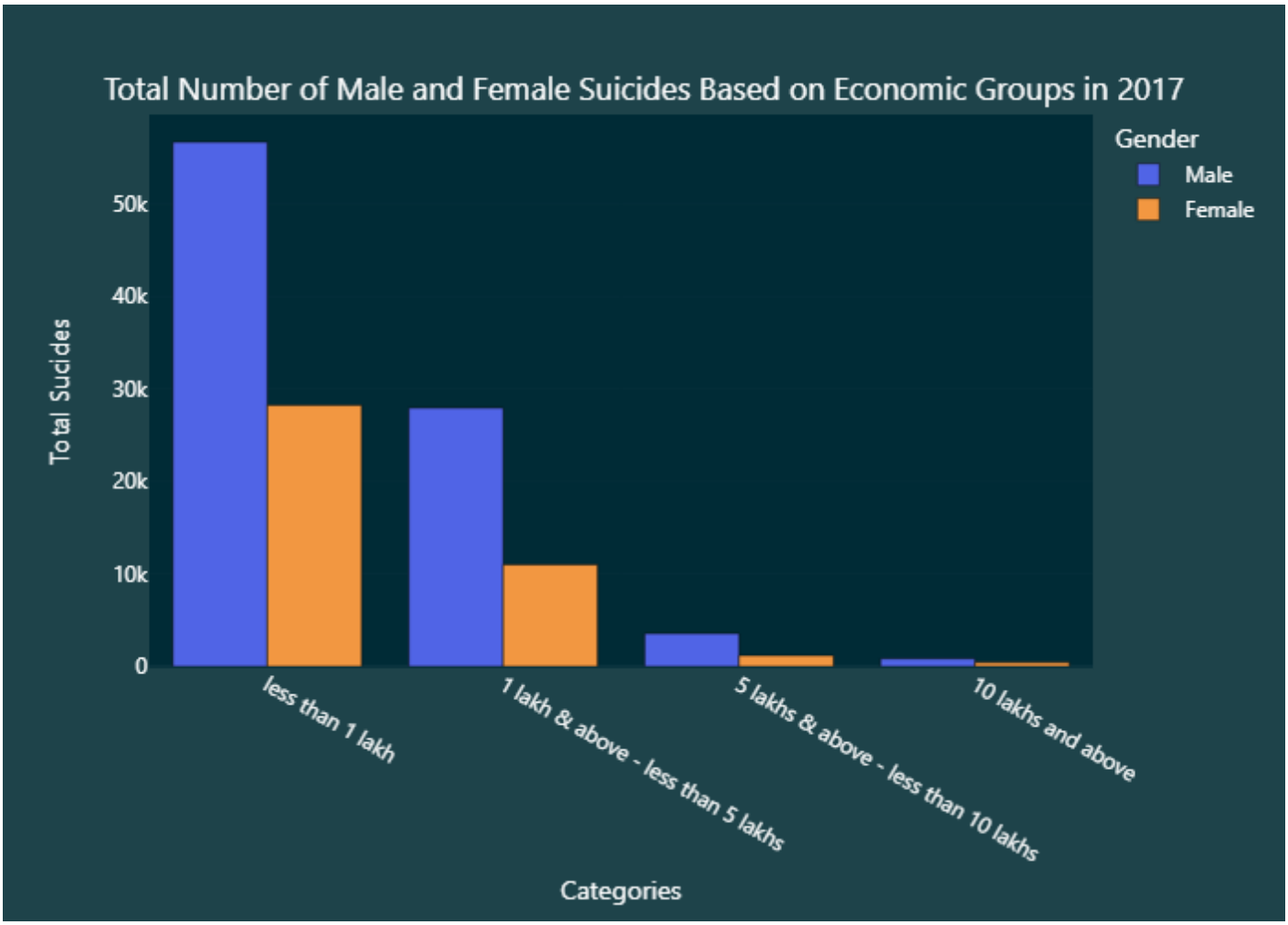


Fig33: Total Number of Male and Female suicides based on economic categories

The above figure clearly shows that most male have committed suicide in each and every category. This could be that more percentage of males are associated with the working force in India and still now males are the main source of income in the families. So, having a less financial stability makes the male commit suicide more often than the females. Some times in the lower income section both male and female have a higher rate of suicide this could again be associated with having low income and less stability financially, especially in a growing economy like India where prices are always on the rise.

Now, we can see a trend that the most of suicides in every year is committed by financially weaker section of the society and that situation is not getting any better. This could be the lack of government schemes, facilities that can help this financially weaker section to get better jobs and to help them improve there living conditions. There could be other reasons like the lack of awareness for the available schemes by the government for the poorer section of the society. This lack of awareness means they don't go for help and end up commiting suicide.

- **Education Status Wise Analysis:**

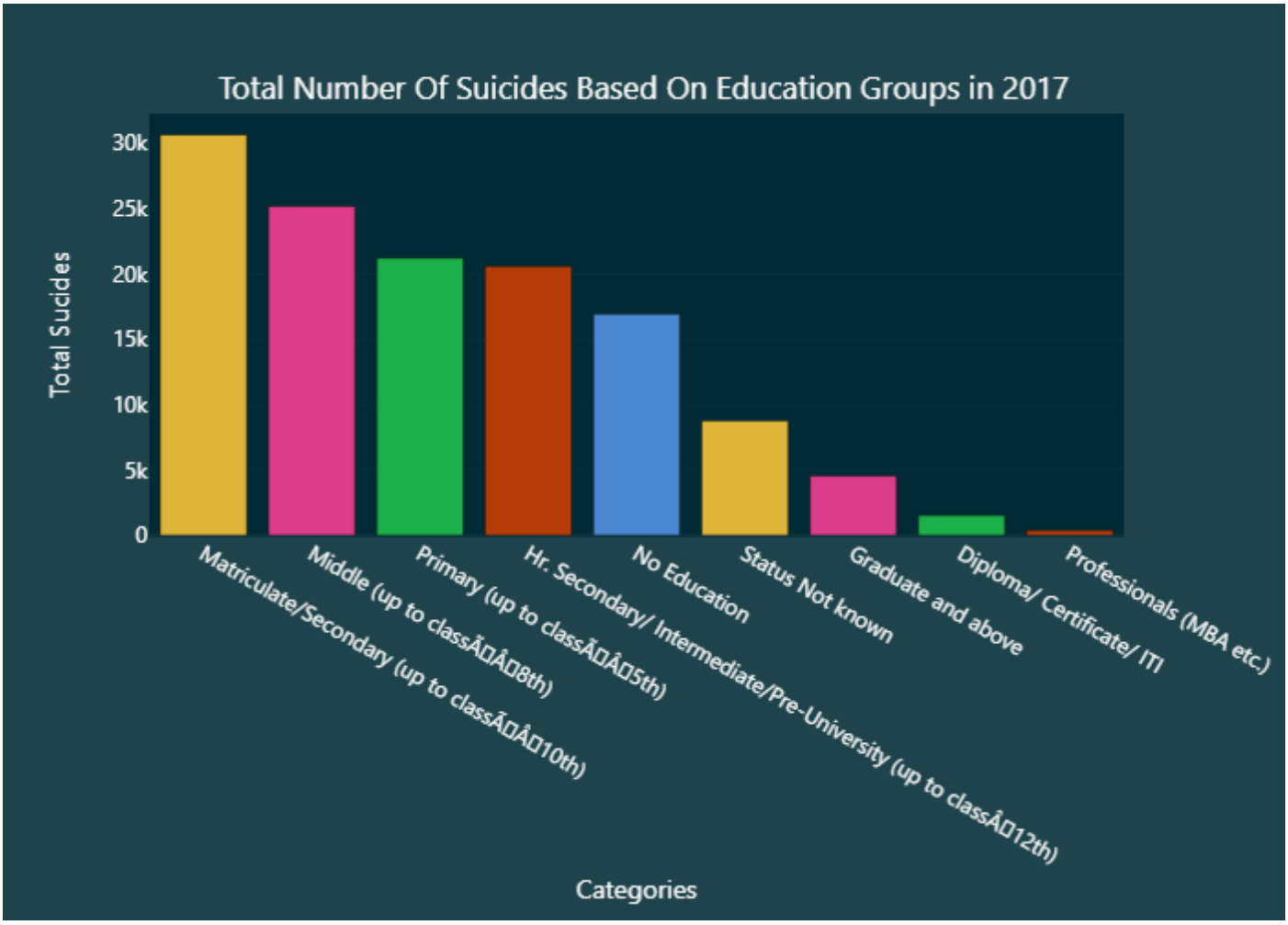


Fig34: Total Number of suicides based on education categories

In the figure above, we can see that Matriculate have the highest number of suicides followed by middle school and primary. At first glance this gives some idea that most of the suicides happen to students during school life, but the data doesn't come with age so it can't be surely said that education status data is only for students, it can also be an adult how have studied till class 10 or class 8. But we can see that there is a connection with education level and suicide and this shows people who have studied still some class but didn't complete their school, commit more suicides. We can use this data to help people who left education for financial, family or other reasons join back to schools to complete their education. This can give them some certification or credibility for them to join some work giving them a financial stability, which we already know is very much tied to suicide.

Even People with no education category also have a high suicide rate, this could be due to lack of awareness and social stigma for mental health. Educating this people and giving them proper schemes, may help reduce suicides.

- **Male and Female suicides based on Education Status:**

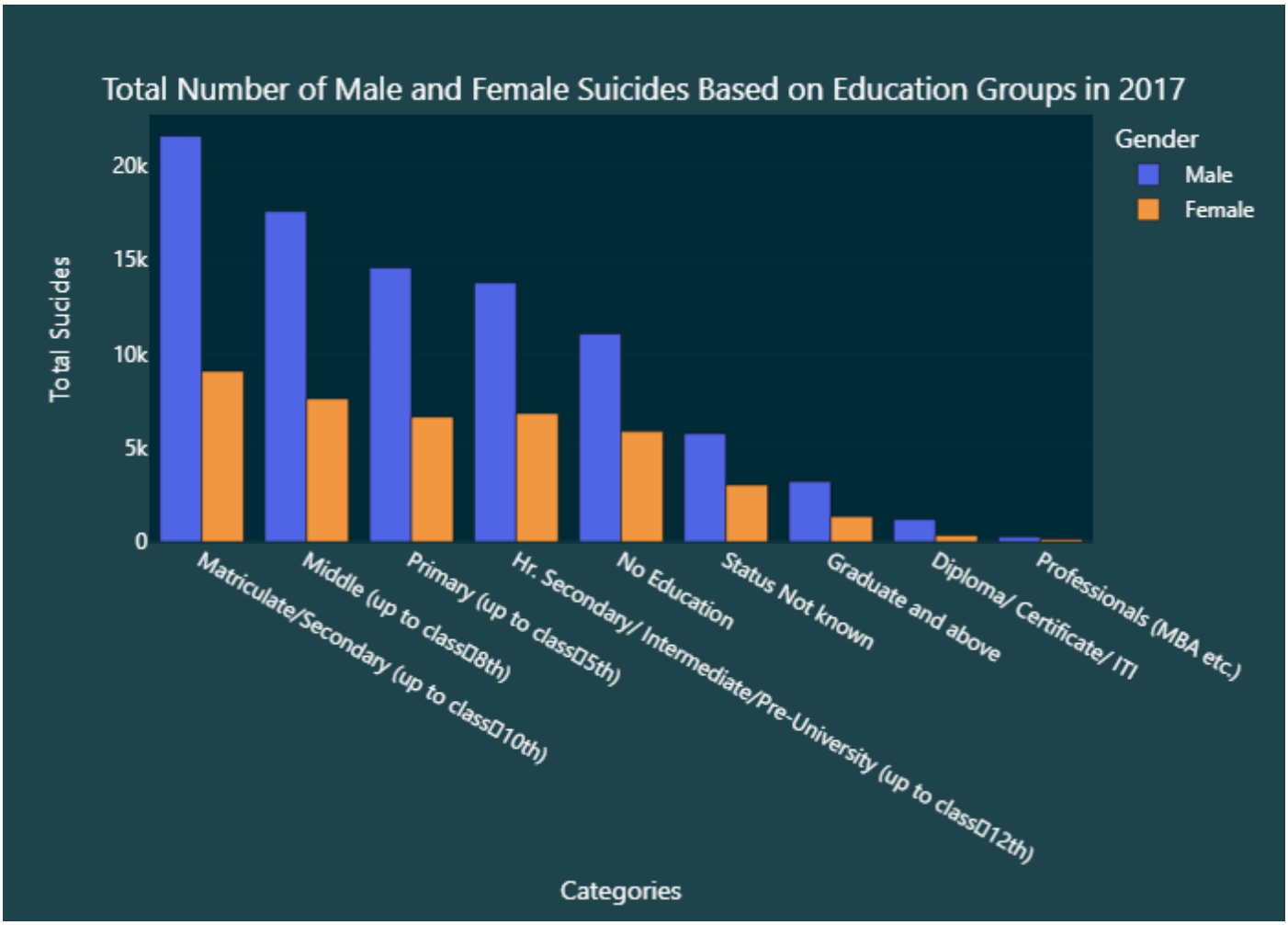


Fig35: Total Number of Male and Female suicides based on education categories

We can observe from the above figure, that mostly males have died in each and every category. These could be due to social stigma surrounding mental health and seeking help, which may be more prevalent among men. Stress related to academic pressure and performance expectations. Difficulty in coping with failure or disappointment. Lack of support systems and resources. Substance abuse or addiction. In India males are given more education than female this could also be a reason that more males are committing suicide.

Another reason for males to be committing suicide could be the larger data available for males rather than females. Specially data related to education as males are given more education than females and this could cause a higher education gap between male and female, and this could affect the data collected for suicide.

- **Profession Wise Analysis:**

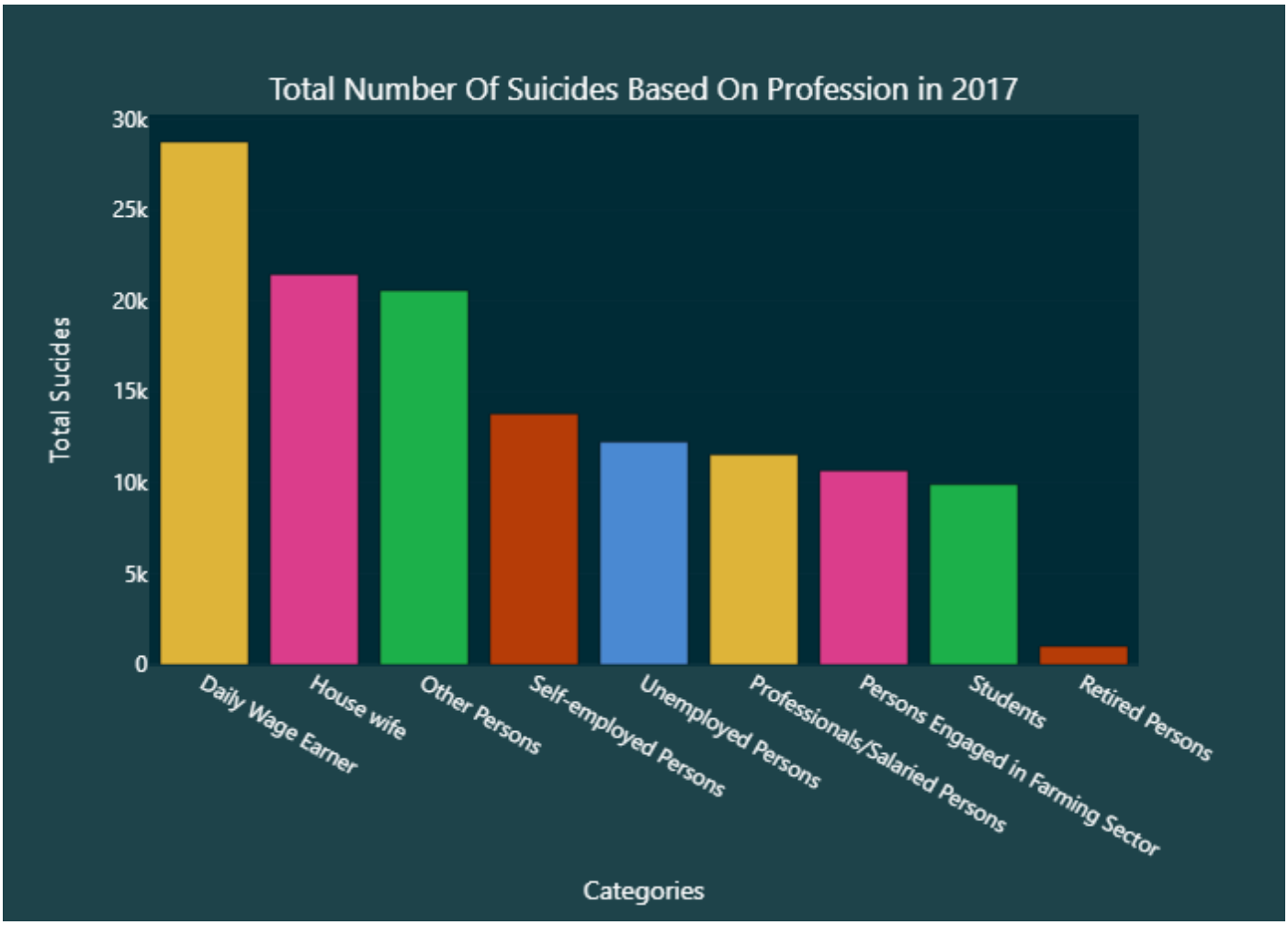


Fig36: Total Number of suicides based on Professional categories

In the above figure we can see that the other persons category has the highest number of suicides, this raises a question what other person means in the dataset, either they can be those who are of different categories which cannot be classified in the other predefined categories or can be those people who do odd jobs or jobs based on requirements on a temporary basis. But, one this can be easily be understand that they didn't have a constant profession or they might change professions very often, and this could be a reason for their high number of suicides.

On the other hand, we can see that retired person has the least number of suicides, this may be because in India still many families are joint family where the elders are taken a very good care and given very high respect, this may contribute there a smaller number of suicides in India.

One this to observe here is that, in the previous year analysis people engaged in farming sector was ahead of self-employed people, but in this year self-employed people are ahead of farming sector, this could be because the farming sector is getting developed rapidly and this might help the farmers in having a better life, making them less incline to commit suicide.

- **Male and Female suicides based on Professional Status:**

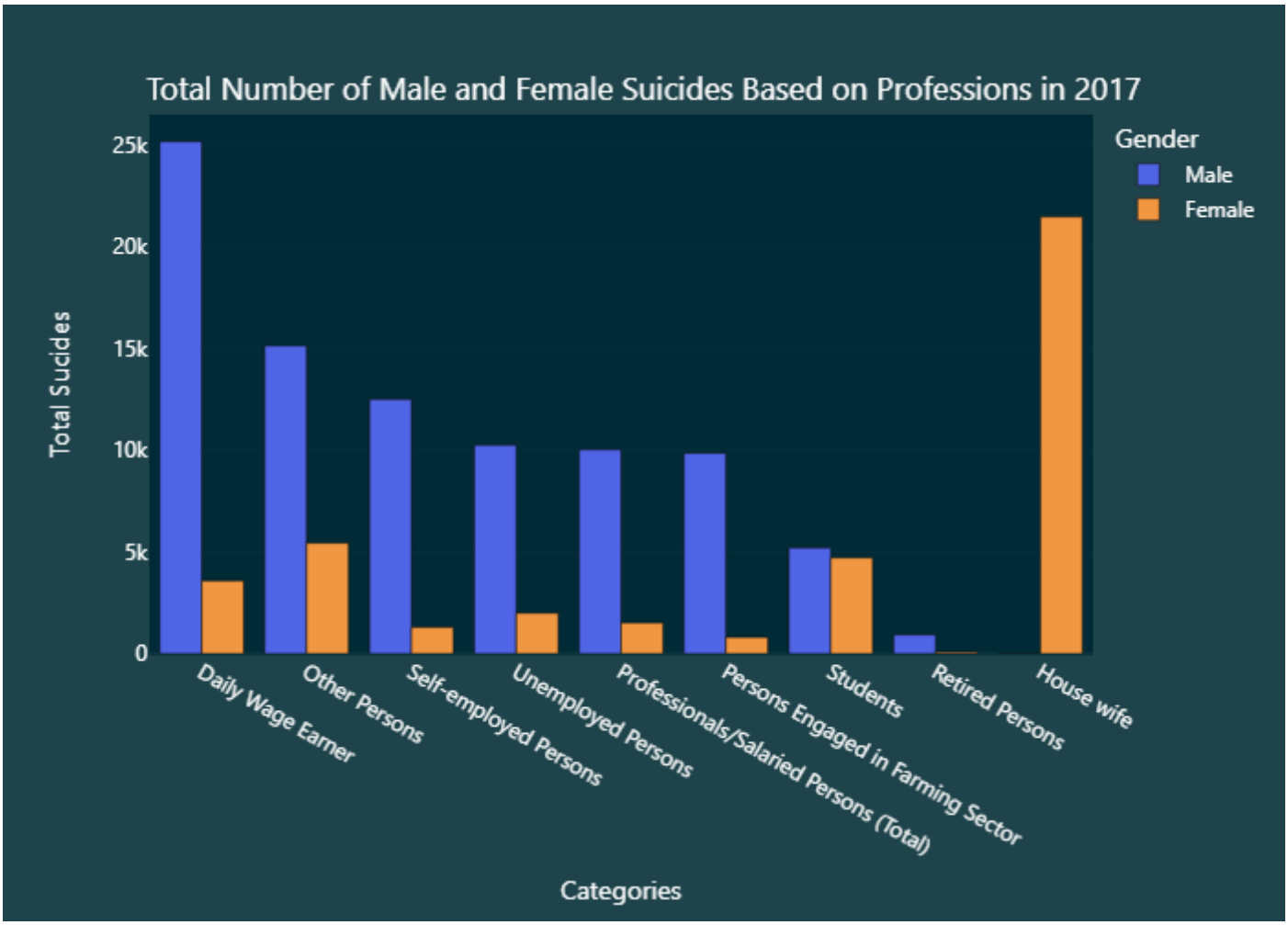


Fig37: Total Number of Male and Female suicides based on Professional categories

Here, in the above figure, the first thing we notice is that all the house wife are females and this shows that, still in Indian society females play the role of the housewife and the male do all the bread earning jobs. That's why all the suicides of housewife are of a particular gender. But this doesn't mean that there is no male housewife, but the suicide of a male housewife is not existent or are not reported.

Another thing to notice is the that all categories have a huge difference in male and female number of suicides but in the student category we can see that the number of male and female suicides in very close to each other, this shows that the factors for a student to suicide is not gender specific. This could be pressure due to education, family problems, social problem which effect both male and female equally.

The third thing to point out, is the vast difference in the number of male and female suicides. Specially in daily wage and farmer category this shows that most of the hard jobs are still done by men where only a few women take part in labour jobs.

- **Social Status Wise Analysis:**

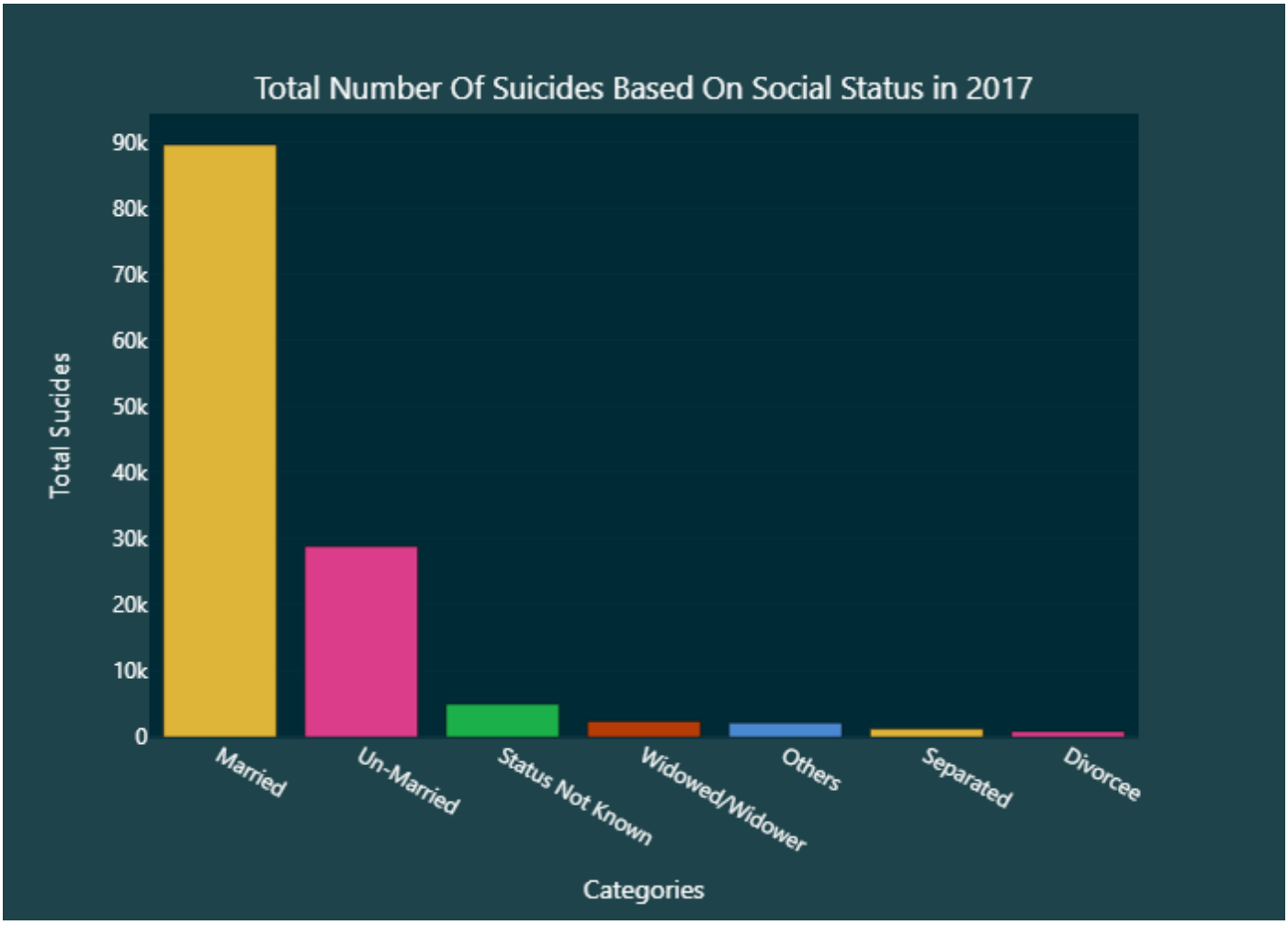


Fig38: Total Number of suicides based on social categories

In the figure above, the first thing that catches the eye is that the married people commit the highest number of suicides. This could be because most of the Indians are married and so the suicide cases of most people are of married people. On the other hand, India has a very low divorce rate, so people are rarely having a divorce and even in that small population of divorced people a very small fractions are committing suicide, so the number of divorce people may be a very less for suicide.

There could also be other reasons for suicides like:

Financial stress

Domestic violence or abuse

Mental health issues

Infidelity or extramarital affairs

Lack of social support

Substance abuse

- **Male and Female suicides based on Social Status:**

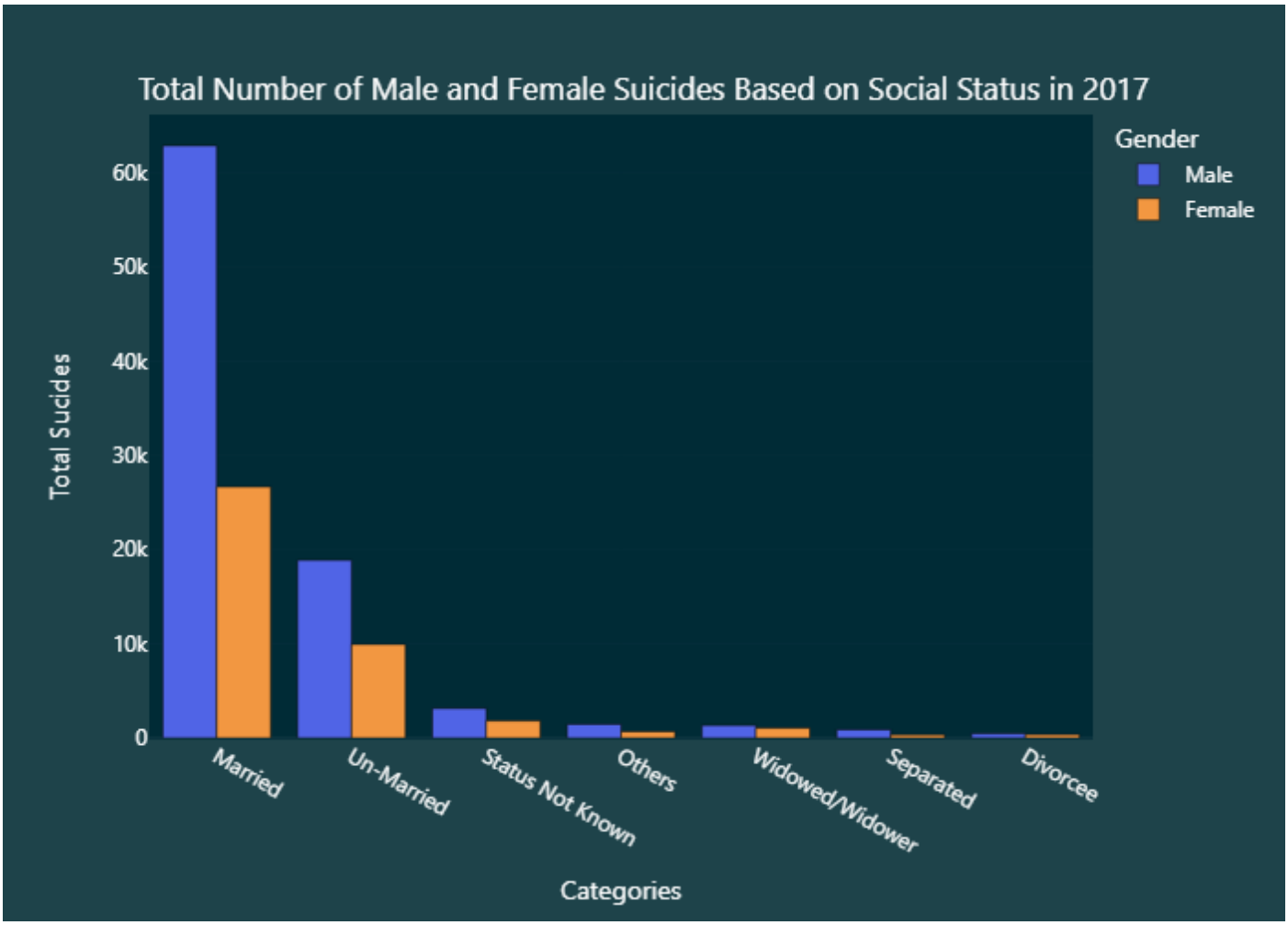


Fig39: Total Number of Male and Female suicides based on social categories

In the above figure two things can be observed that in the married category, males are committing more suicides than female, but in widow and divorced category the number of suicides by male and female is almost same.

The reason for married male to have a higher number of suicides could be related to financial problems and problems in the family because of financial instability. As most of the workforce in India is male dominated lack of financial security could cause married male to commit suicide.

On the other hand, widower have same number of suicides regardless of gender, this could be based on factor related to social stigma over the concept of being widow. Similarly, for divorced people they also face social pressure, which can lead them to commit suicide.

- **Suicide Means Analysis:**

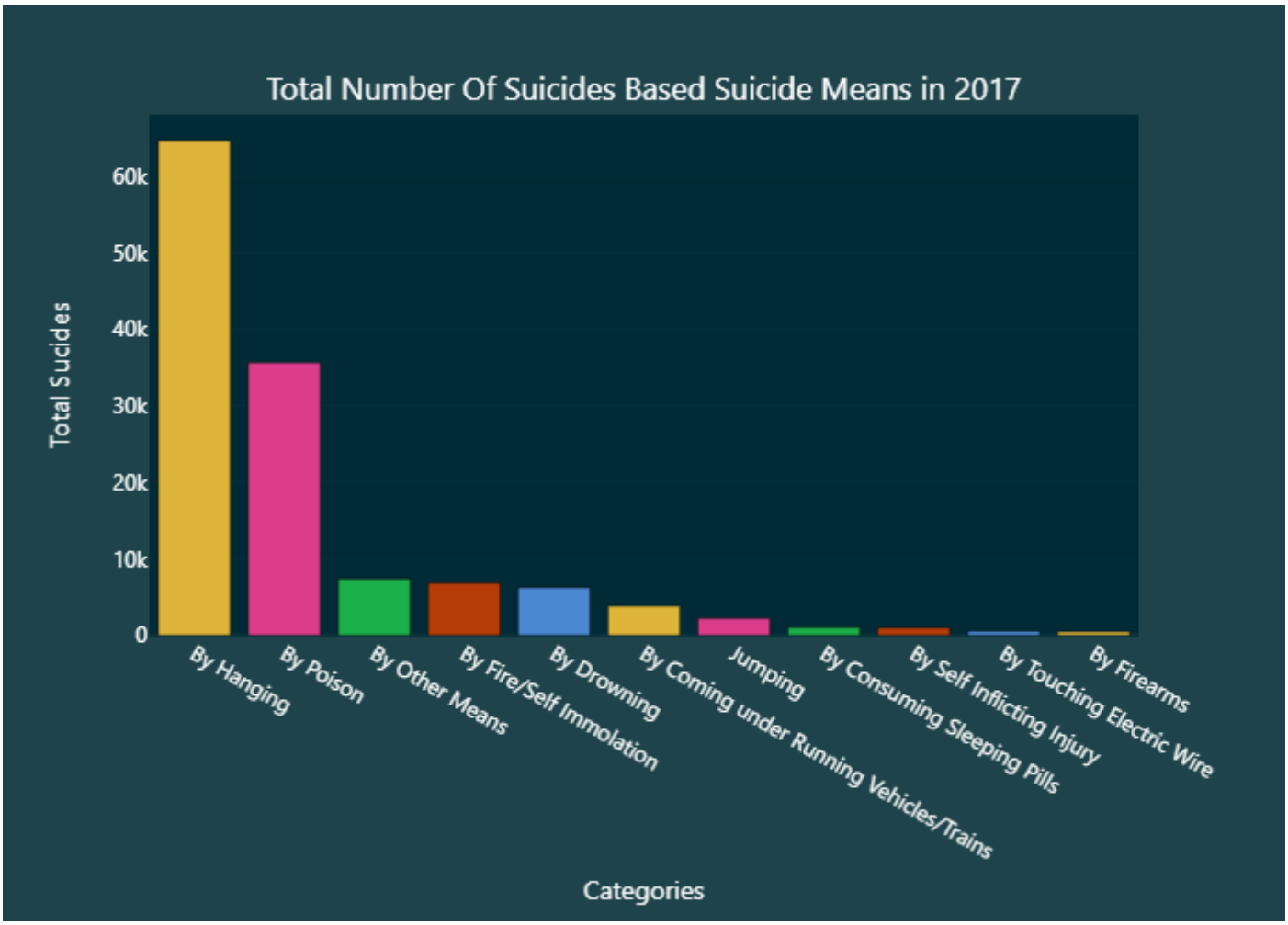


Fig40: Total Number of suicides based on Suicide Means Groups

In the above figure, we can see the most common way of suicide is by hanging, because it is the most common method of suicide because it is relatively easy to access and requires no special tools or weapons. Additionally, it is often seen as a quick and efficient way to end one's life.

The next most used way to commit suicide is by poison, this could be because, it is often easy to access household or commonly used substances that can be toxic in high doses, such as prescription or over-the-counter drugs, cleaning supplies, or pesticides. This method may also be perceived as a more painless way to end one's life.

On the other hand, Suicide by firearm is the least used way to commit suicide in India, this could be because firearm suicide is less common because firearms are usually used in a smaller proportion of suicides compared to other methods, such as poisoning. Additionally, access to firearms can be restricted through laws and regulations, reducing the likelihood that individuals will use them to take their own life. Furthermore, the impulsive nature of suicide may mean that individuals opt for quicker, less painful methods such as overdosing, rather than firearms.

- **Male and Female suicides based on Suicide Means:**

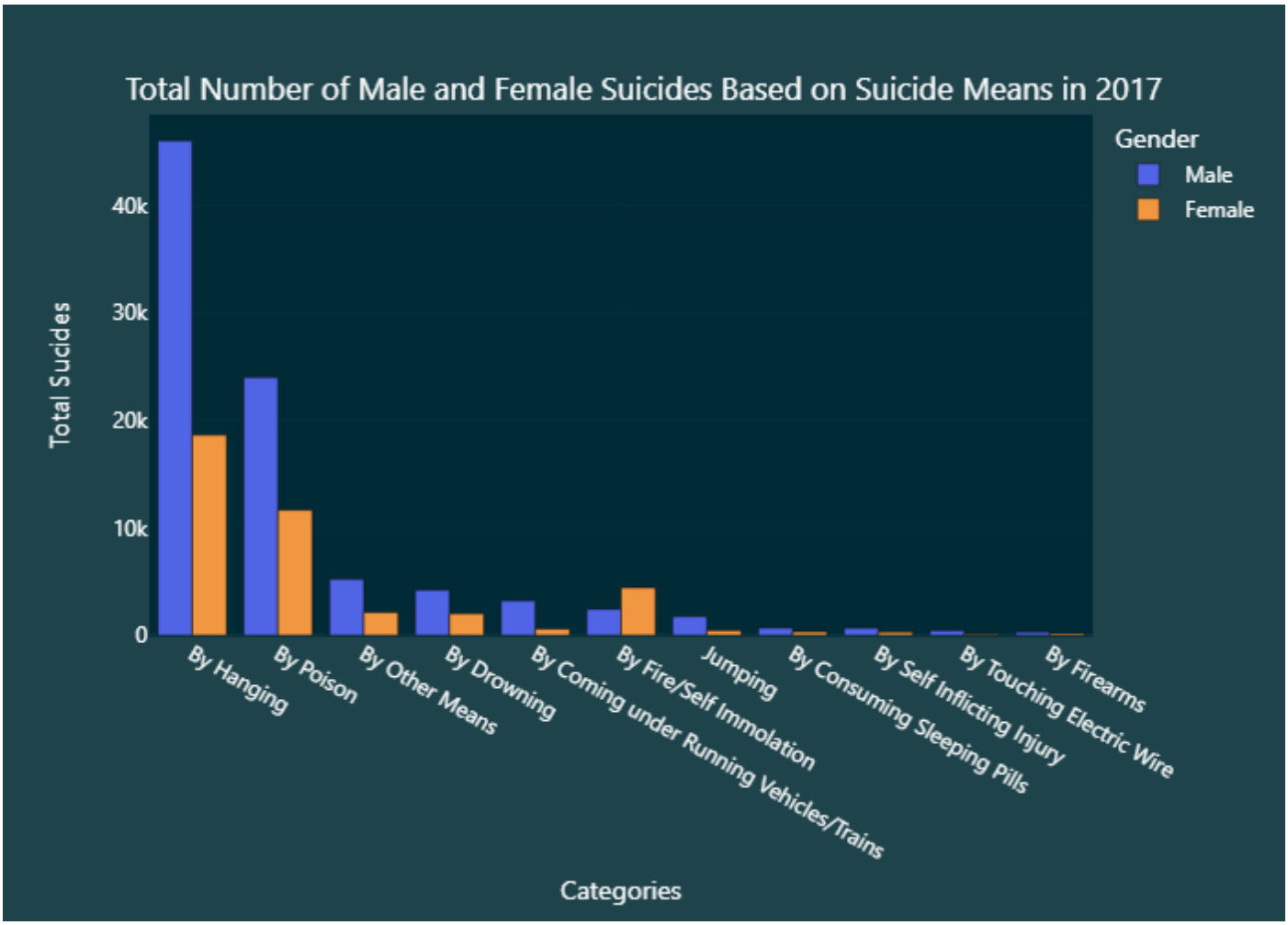


Fig41: Total Number of Male and Female suicides based on Suicide Means Groups

One thing we can see in the above figure is that, the suicide by fire has a higher female number. This means, female choose suicide using fire more than male. There is no definitive answer to why more women may choose to die by fire, but some studies suggest that women may be more likely to experience depression, anxiety, and other mental health issues that can contribute to suicidal ideation. Additionally, cultural and societal factors, such as stigma surrounding mental health and limited access to resources, may also play a role. However, it is important to note that suicide is a complex issue and there is no single cause.

Another thing to notice is that the vast difference in the number of male suicides using hanging. This could be because hanging is a very easy way to die and very effective.

D.Analysis of 2018:

- **Total Suicide in each State and Union Territory:**

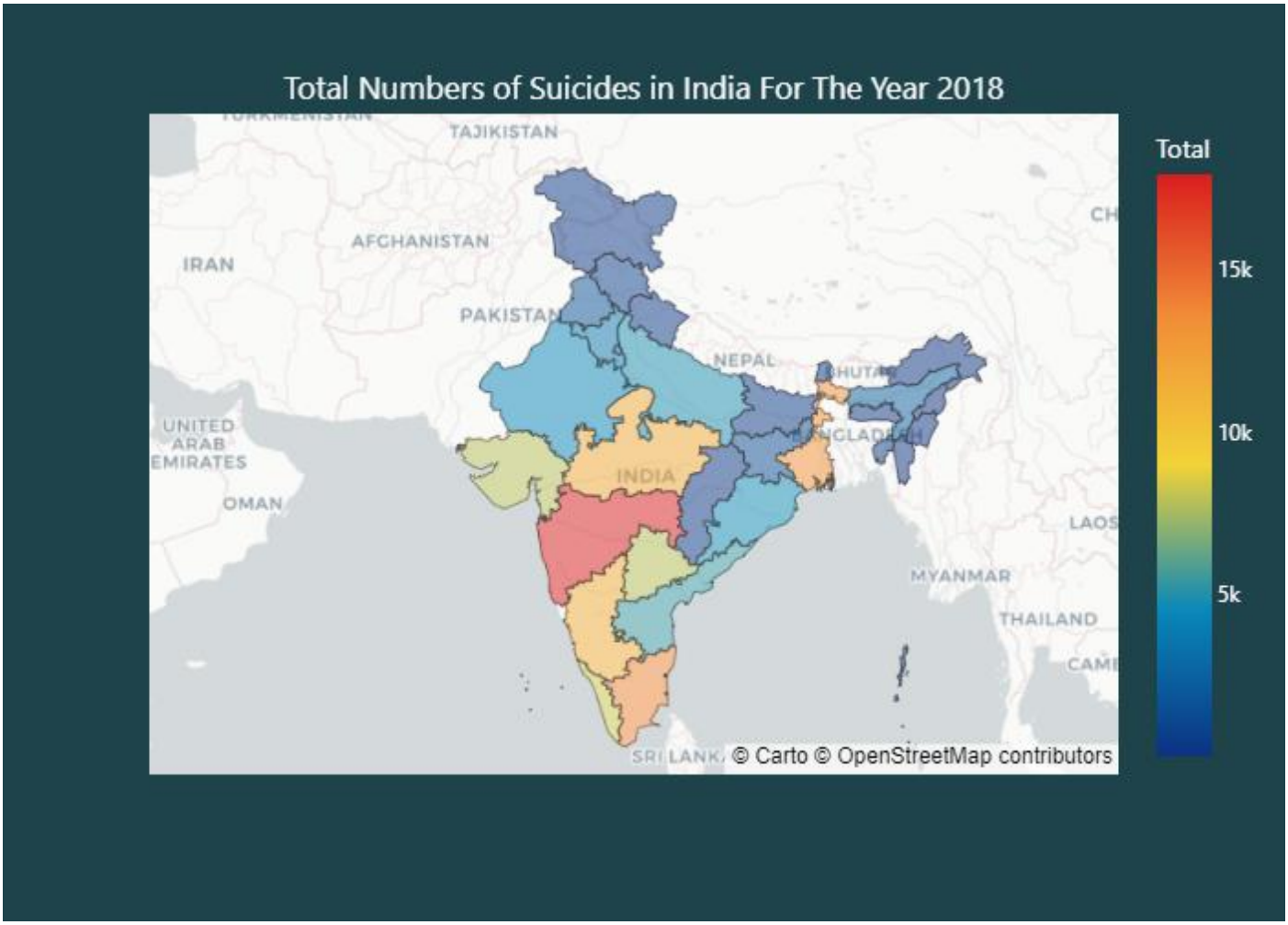


Fig42: Total Number of suicides in 2018

The top 5 states with the highest number of suicides are Maharashtra (17,971), Tamil Nadu (13,894), Karnataka (11,558), Madhya Pradesh (11,774), and West Bengal (13,255).

The bottom 5 states with the lowest number of suicides are Lakshadweep (3), Nagaland (36), Mizoram (79), Manipur (52), and Meghalaya (189).

The average number of suicides across all states and territories is 6,138.

Based on the data provided, here is a comparison of suicides across South, North, East, and West India:

South India:

States included: Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Telangana, and Puducherry.

Total suicides: 44,112

Average suicides per state: 7,352

North India:

States included: Chandigarh, Delhi (UT), Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttarakhand, and Uttar Pradesh.

Total suicides: 26,898

Average suicides per state: 2,988

East India:

States included: Arunachal Pradesh, Assam, Bihar, Jharkhand, Odisha, Sikkim, and West Bengal.

Total suicides: 19,917

Average suicides per state: 2,845

West India:

States included: Chhattisgarh, Goa, Gujarat, Maharashtra, and Rajasthan.

Total suicides: 33,601

Average suicides per state: 6,720

Range of suicides: 17,971 (Maharashtra) - 256 (Goa) = 17,715

This comparison shows that South India has the highest total number of suicides, followed by West India, North India, and East India. However, the average number of suicides per state is highest in West India, followed by South India, North India, and East India. The range of suicides is highest in West India, followed by South India, East India, and North India.

- **Male and Female Suicide Death Ratio in 2018:**

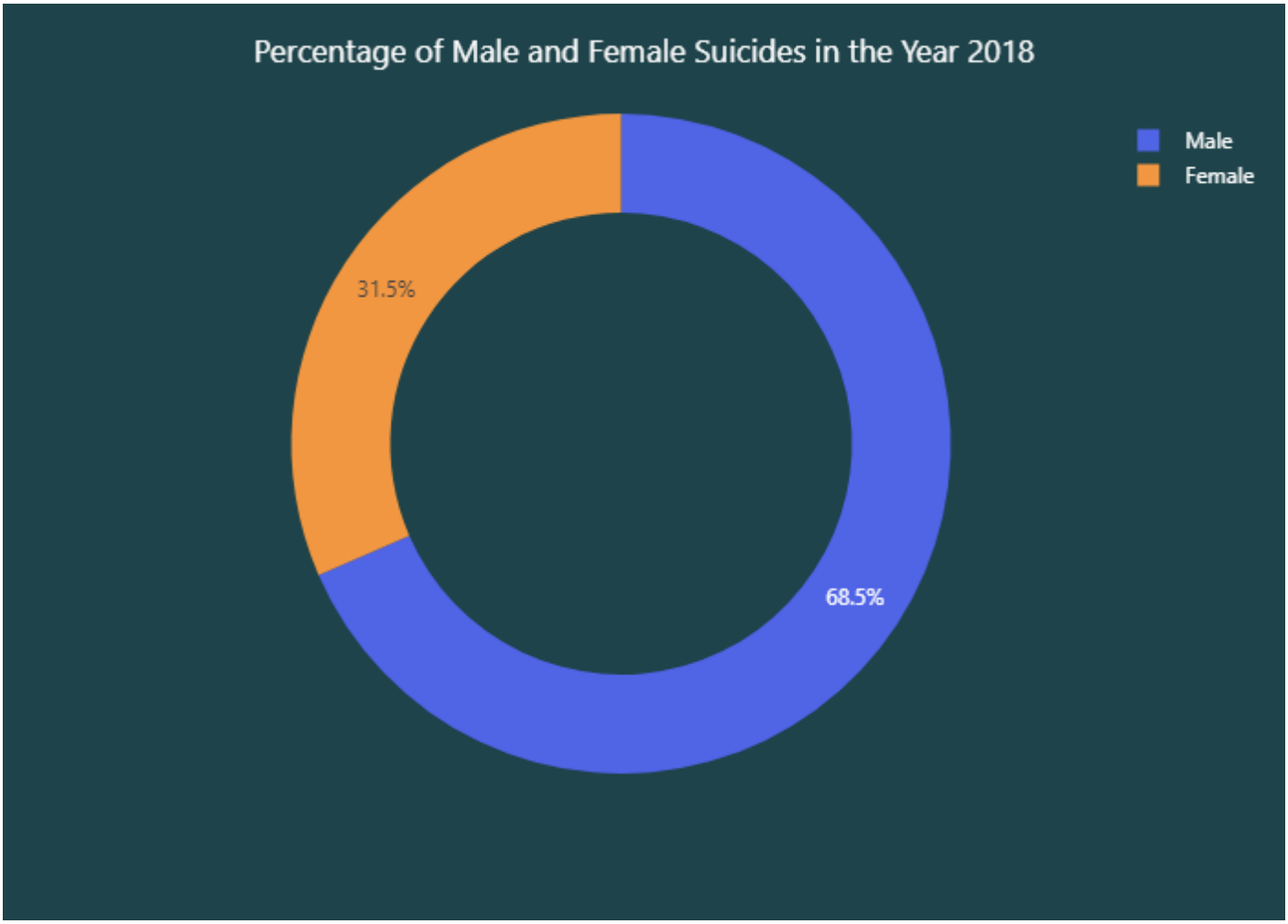


Fig43: Total Number of Male and Female suicides in 2018

In the above figure, we can see that males have the highest suicide ratio of 68.5%, which is slightly less than the last year, this could be due to various factors such as social stigma surrounding mental health and seeking help, lack of support systems, and stress related to financial and occupational pressures. Cultural norms that emphasize masculinity and discourage expressing emotions also play a role. Substance abuse and untreated mental health issues are also contributing factors to the high rate of male suicides in India.

Women also have a high suicide rate of 31.5%, this could be due to various factors such as domestic violence, marital problems, harassment, and abuse. Lack of social and financial independence, poverty, and limited educational and career opportunities are also contributing factors. Mental health issues, such as depression and anxiety, are often not addressed due to social stigma surrounding mental illness. In addition, access to lethal means, such as pesticides, is also a factor in the high rate of female suicides in India.

- **Economic Wise Analysis:**

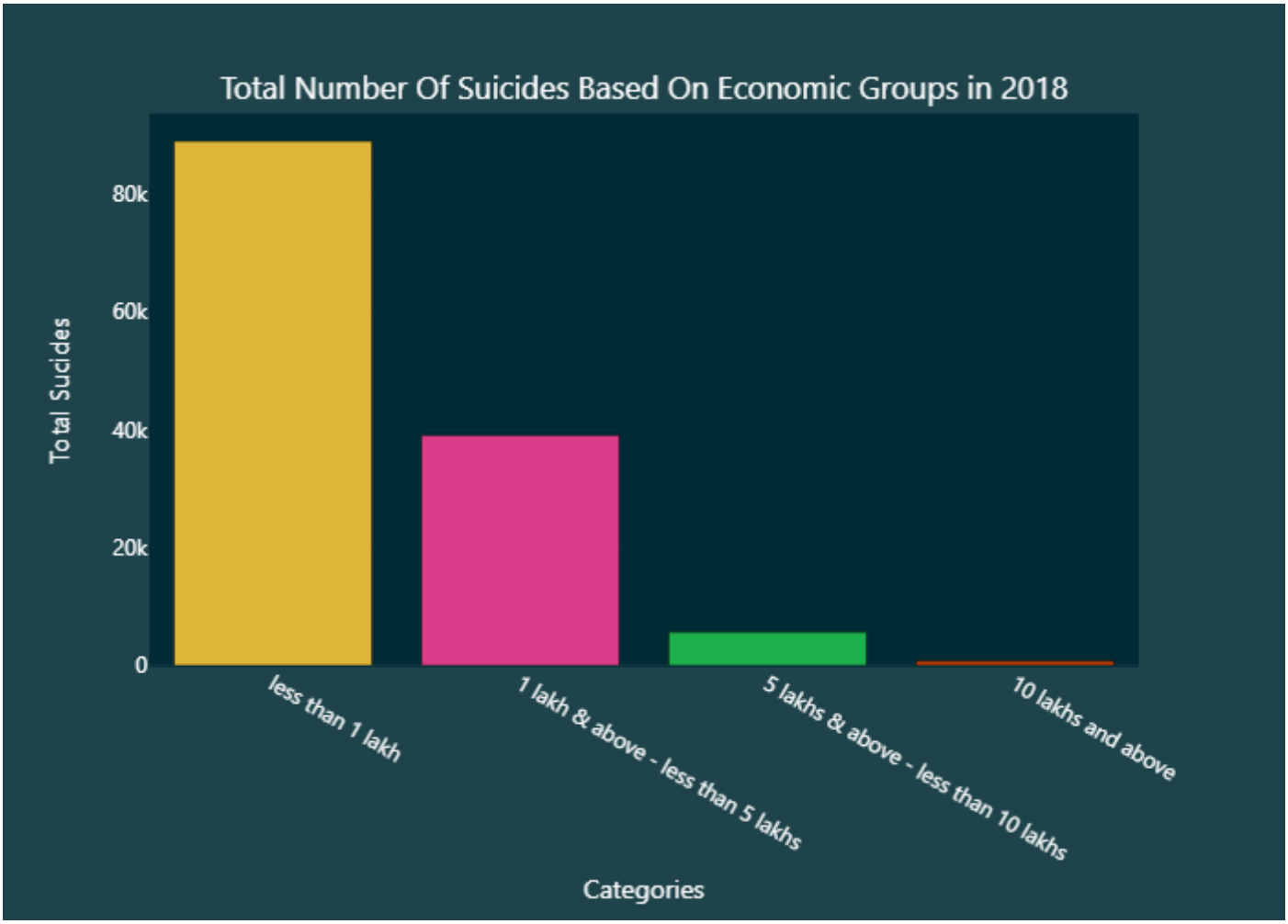


Fig44: Total Number of suicides based on economic category

The above figure shows that:

Less than 1 lakh: 88977 suicides

1 lakh & above - less than 5 lakhs: 39078 suicides

5 lakhs & above - less than 10 lakhs: 5642 suicides

10 lakhs and above: 808 suicides.

The data suggests that the number of suicides is higher in lower economic categories, with the highest number of suicides occurring in the category of less than 1 lakh. This may suggest that financial difficulties and stress related to finances play a role in suicide among individuals with lower economic status. However, it's important to keep in mind that there are multiple factors that contribute to suicide, and this data should not be interpreted as the sole cause.

The information can inform the development of targeted interventions and policies aimed at reducing suicide rates and supporting those at risk.

- **Male and Female suicides based on Economic categories:**

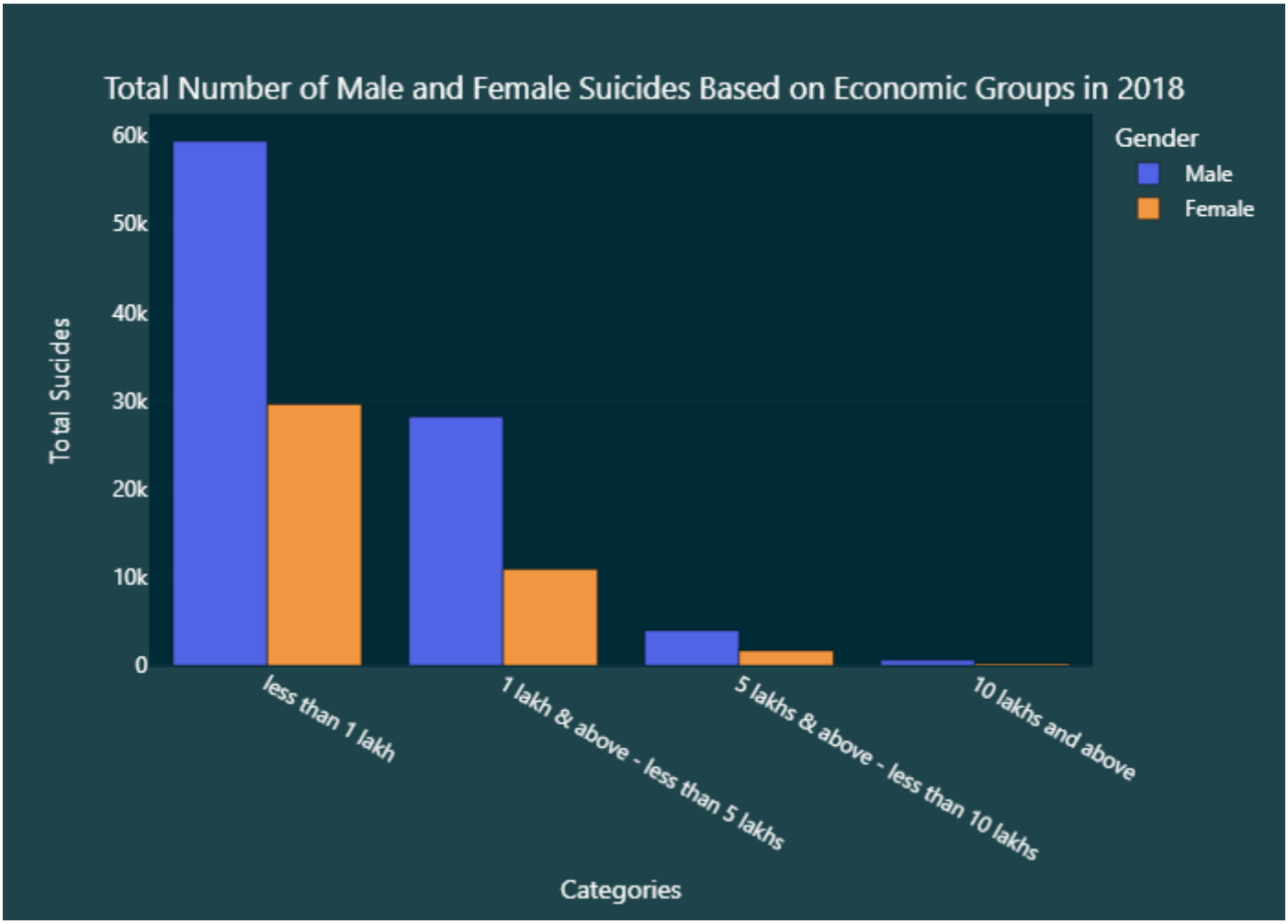


Fig45: Total Number of Male and Female suicides based on economic category

This data is about the number of suicides in India based on economic categories and gender. It appears that in general, males have a higher rate of suicide than females. Additionally, the number of suicides increases as the economic status increases, with the highest number of suicides occurring among those earning 10 lakhs or more.

Gender: The data shows that males have a higher rate of suicide compared to females, regardless of their economic status.

Economic Categories: The number of suicides increases as the economic status increases. Individuals earning less than 1 lakh have the highest number of suicides, while those earning 10 lakhs or more have the lowest.

Comparison between genders: Within each economic category, males still have a higher rate of suicide compared to females. The largest gap in suicides between males and females is seen in the highest earning category (less than 1 lakh), where males have nearly three times the number of suicides as females.

In conclusion, the data suggests a correlation between higher economic status and higher rates of suicide, with a higher number of suicides among males compared to females.

- **Education Wise Analysis:**

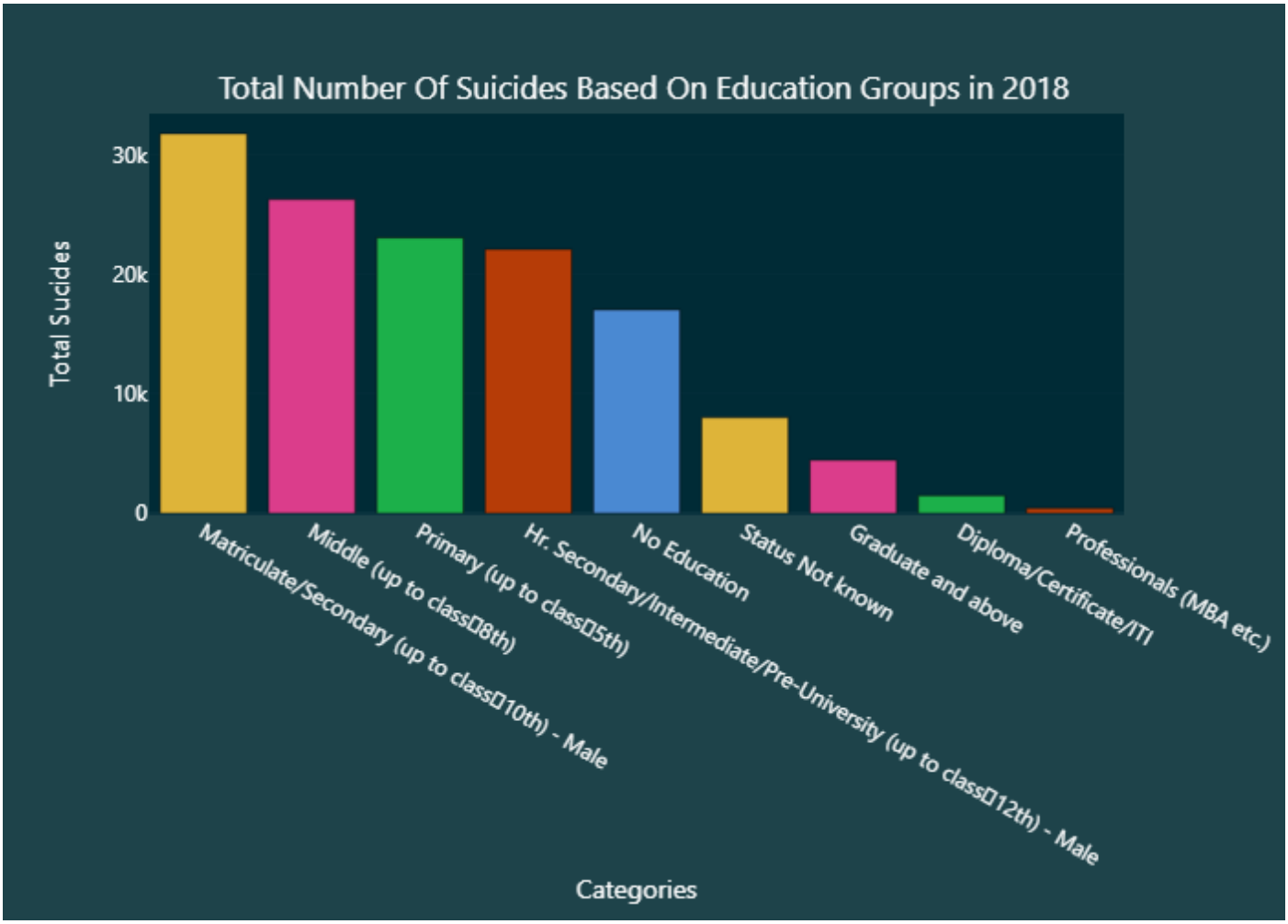


Fig46: Total Number of suicides based on education categories

based on the data, the following observations can be made:

Education level and suicides: The data shows a general trend of lower number of suicides as the level of education increases. For example, those who did not receive any education had the highest number of suicides (17023 cases), while those who were professionals (such as MBA) had the lowest number (430 cases).

Middle School: The number of suicides among those who completed middle school (up to 8th class) was particularly high (26248 cases), which may indicate that this stage of education may be a particularly stressful or challenging period in an individual's life.

Status unknown: The category of "status not known" had a relatively high number of suicides (8013 cases), which may suggest that information about the education level of some individuals who committed suicide was not available.

This data may provide some insight into the relationship between education level and suicides, but it is important to consider other factors that may also contribute to suicides, such as mental health, economic factors, and societal pressures. Further analysis is needed to fully understand this complex issue.

- **Male and Female suicides based on Education categories:**

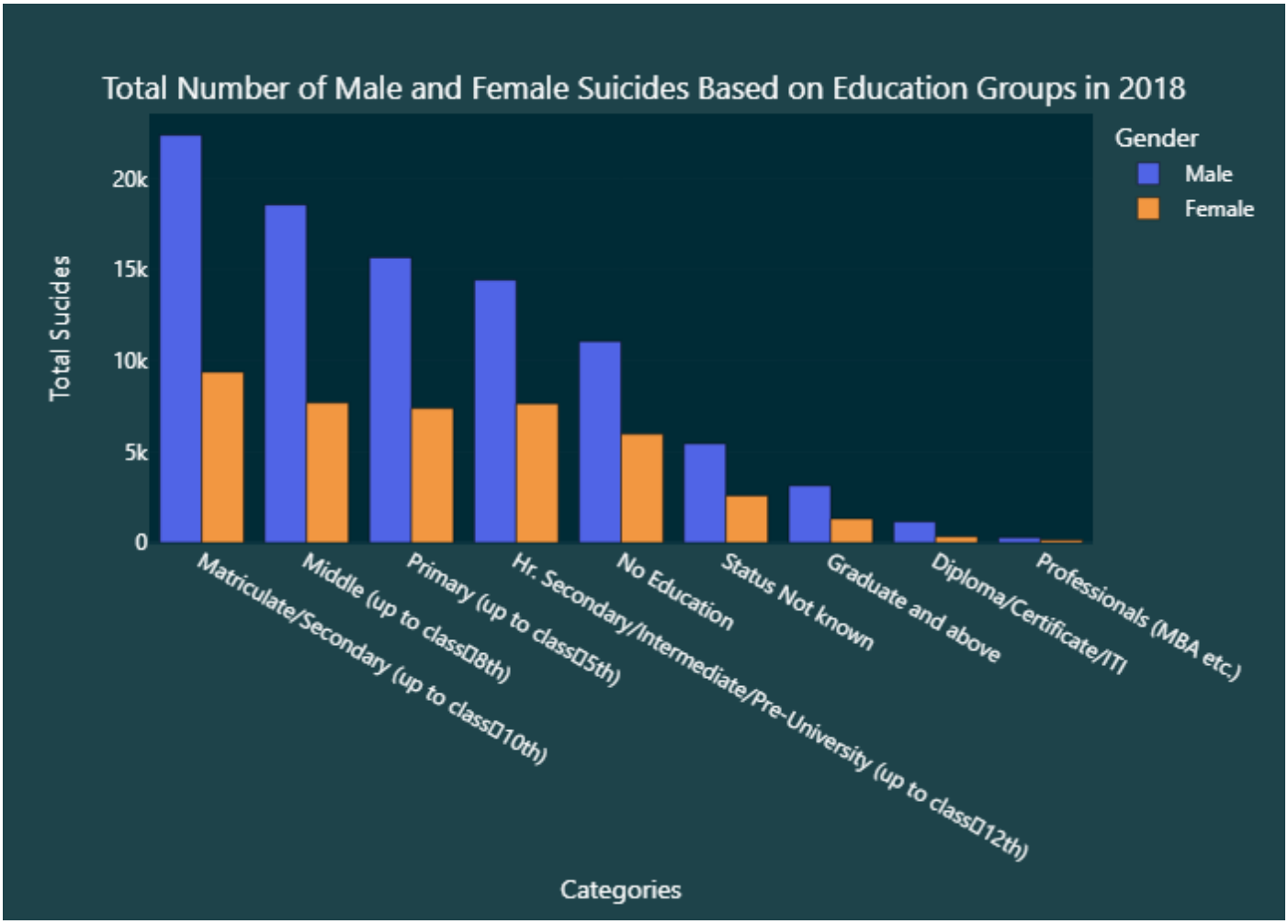


Fig47: Total Number of Male and Female suicides based on education categories

This data represents the number of suicides in India, broken down by education level and gender. Overall, the majority of suicides were committed by men (98,252 suicides) compared to women (42,875 suicides).

For men, the highest number of suicides was recorded among those with matriculate/secondary education. Those with middle (up to class 8) education and higher secondary/intermediate education also recorded high numbers of suicides. The number of suicides decreases as the education level increases, with the lowest number of suicides recorded among professionals with advanced degrees (MBA, etc.).

For women, the highest number of suicides was recorded among those with matriculate/secondary. Those with middle school education also recorded a high number of suicides. The number of suicides decreases as the education level increases, with the lowest number of suicides recorded among professionals with advanced degrees (MBA, etc.).

It is important to note that the "status not known" category for both men and women recorded a significant number of suicides. This suggests that the actual number of suicides in India may be higher than the data suggests.

- **Profession Wise Analysis:**

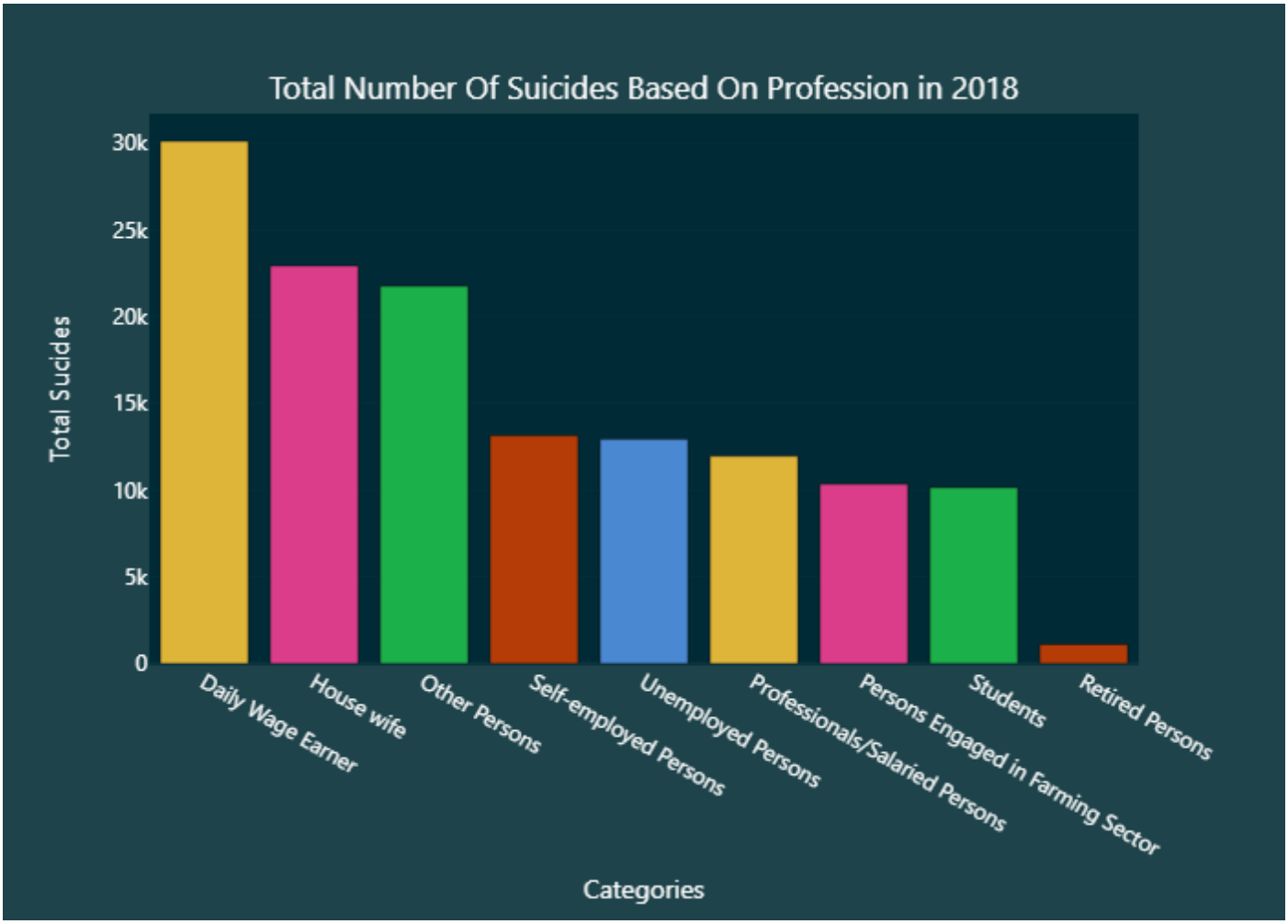


Fig48: Total Number of suicides based on Professional categories

This data shows the number of suicides in India based on different professional categories. The highest number of suicides is among daily wage earners (30,124) and the lowest is among retired persons (1,114). Housewives have the second highest number of suicides (22,937), followed by unemployed persons (12,935) and self-employed persons (13,149). Students (10,159) and persons engaged in the farming sector (10,349) have relatively lower numbers of suicides. In India are among those who are either daily wage earners or housewives, while the lowest number of suicides are among retired persons. This suggests that financial instability and/or domestic stress may be contributing factors to the high suicide rates in these groups. Additionally, the relatively high number of suicides among students and those who are unemployed may indicate issues related to education and employment. These findings highlight the importance of addressing socio-economic and domestic stressors in suicide prevention efforts in India.

- **Male and Female suicides based on Professional categories:**

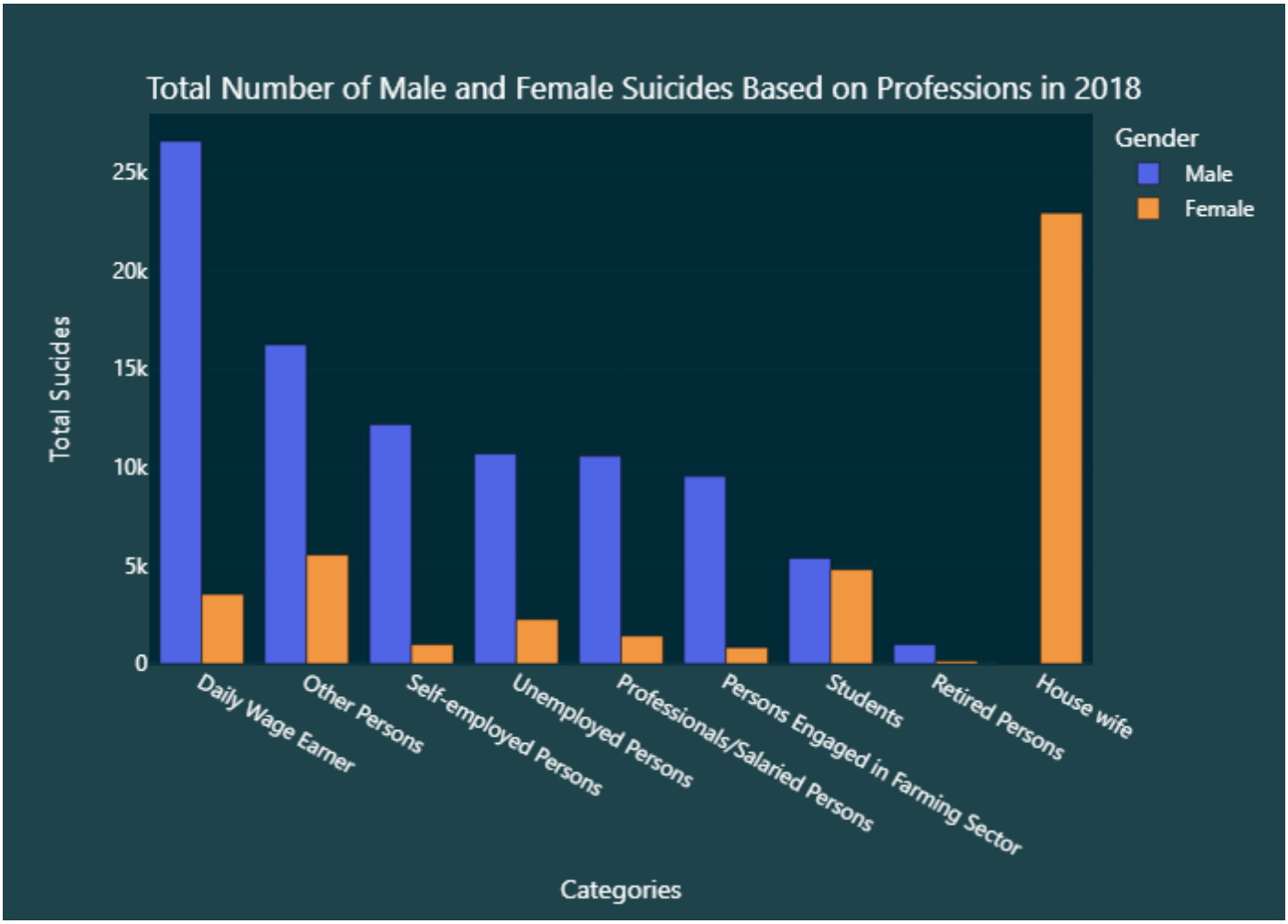


Fig49: Total Number of Male and Female suicides based on Professional categories

This data presents the number of suicides in India, grouped by the individual's profession and gender.

Gender differences: The highest number of suicides among females was among housewives (22937), while the highest number of suicides among males was among daily wage earners (26589).

High incidence of suicides among housewives: The number of suicides among housewives was much higher among females (22937) compared to males (0), which is a concerning trend. This highlights the need to address the factors that may contribute to suicide among women who are housewives and to provide them with appropriate support and resources.

High number of suicides among daily wage earners: The number of suicides among daily wage earners was higher among males (26589) compared to females (3535), which suggests that males who work in low-wage, insecure jobs may be at a higher risk of suicide.

Professionals and salaried persons: The number of suicides among professionals/salaried persons was higher among males (10569) compared to females (1412), which suggests that the stress and pressures that individuals in these professions may face, may be higher for males.

High number of suicides among students: The number of suicides among students was higher among males compared to females, which highlights the need to address the stress and pressures that students may face, and to provide them with appropriate support and resources.

Unemployed and self-employed: The number of suicides among unemployed persons was higher among males compared to females, while the number of suicides among self-employed persons was higher among males compared to females. This suggests that both unemployment and self-employment may be associated with an increased risk of suicide for males.

Low incidence of suicides among retired persons: The number of suicides among retired persons was lower among females compared to males, which suggests that retirement may be associated with a lower risk of suicide for females.

Other categories: The "other persons" category had a higher number of suicides among males compared to females, which suggests that it is important to collect more detailed information on the characteristics of this population to understand their risk of suicide.

In conclusion, the data provides important insights into the relationship between profession, gender and suicide in India. By understanding these trends, policymakers, mental health professionals, and community leaders can work together to design and implement targeted suicide prevention efforts that address the unique needs and challenges of different professional groups and genders.

- **Social Status Wise Analysis:**

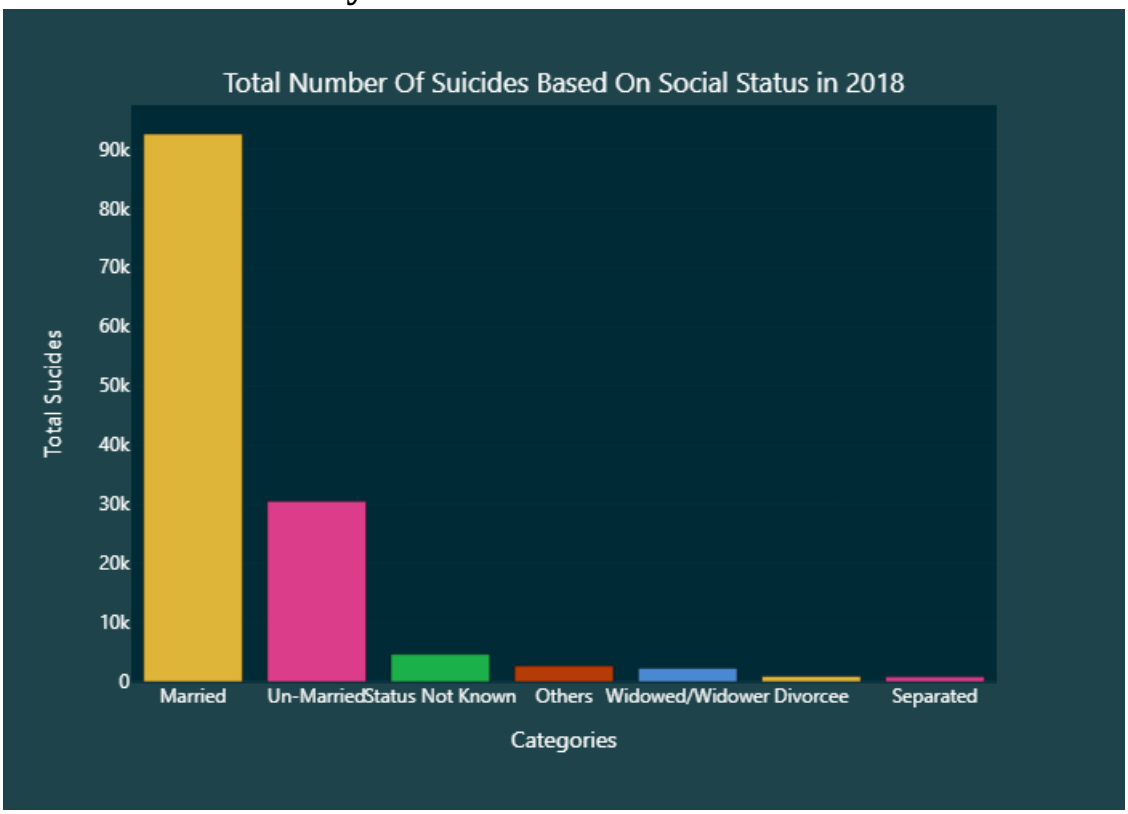


Fig50: Total Number of suicides based on social categories

This data provides information on the number of suicides in India, broken down by social categories such as marital status.

The highest number of suicides occurred among married individuals, followed by individuals whose marital status is unknown. The number of suicides among un-married individuals is also significant. Meanwhile, fewer suicides were recorded among separated, divorced, widowed/widower, and "others" categories.

It is important to keep in mind that this data only provides a partial picture of the situation and does not reveal the underlying reasons for the suicides. Further investigation and analysis, such as exploring factors like mental health, socio-economic status, and access to support, would be necessary to gain a deeper understanding of the issue.

It is also important to note that suicide is a complex issue with multiple contributing factors, and reducing suicides requires a multi-faceted approach, including mental health support, reducing stigma, and addressing socio-economic challenges.

- **Male and Female suicides based on social categories:**

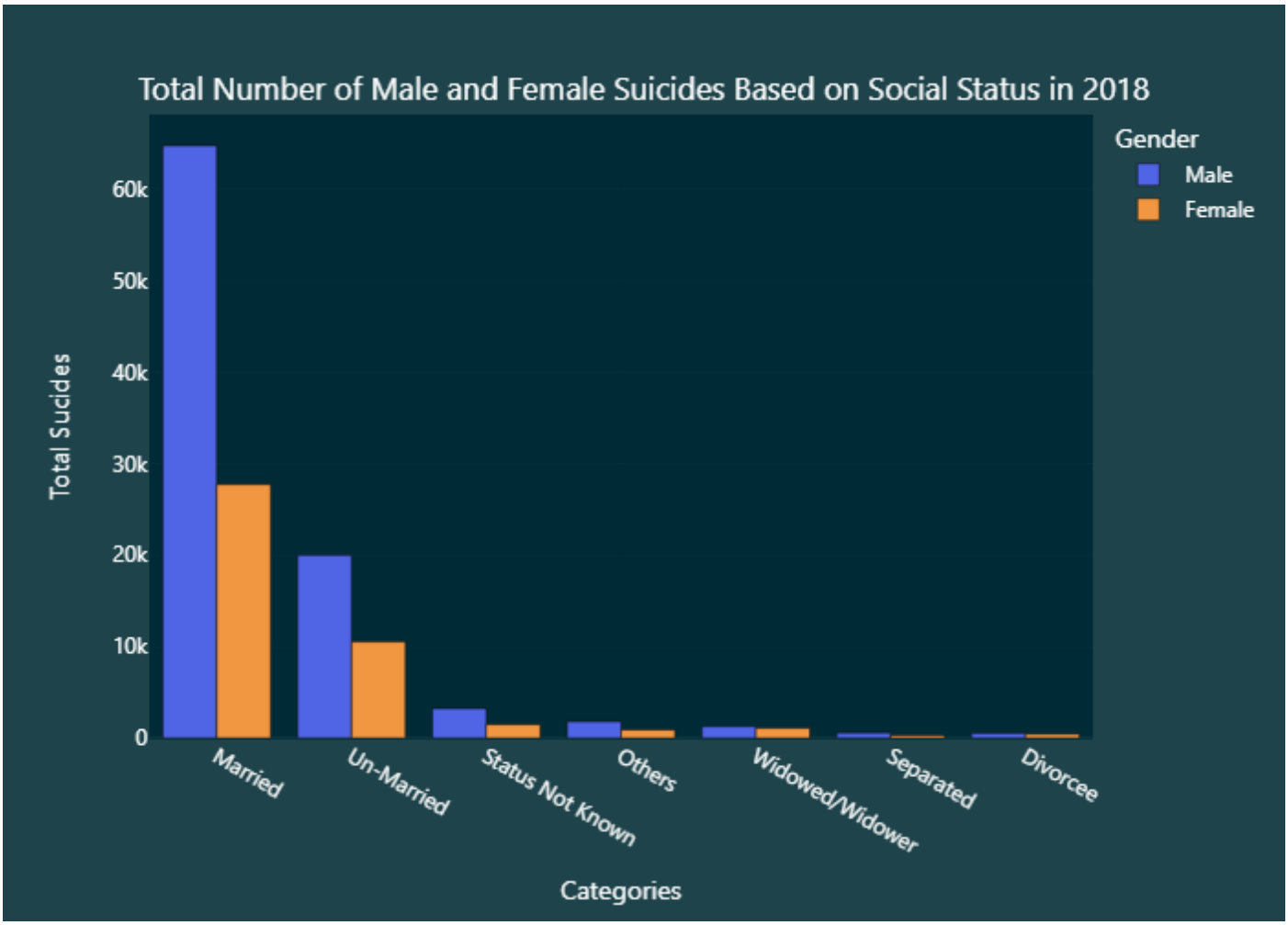


Fig51: Total Number of Male and Female suicides based on social categories

This data provides information on the number of suicides in India, broken down by social categories and gender.

The highest number of suicides among males occurred among the married population, followed by individuals with a status not known. The number of suicides among un-married males is also significant. Meanwhile, fewer suicides were recorded among separated, divorced, widowed/widower, and "others" categories.

In comparison, the highest number of suicides among females occurred among the married population, followed by those with a status not known. The number of suicides among un-married females is also significant. Fewer suicides were recorded among separated, divorced, widowed/widower, and "others" categories.

It is important to keep in mind that this data only provides a partial picture of the situation and does not reveal the underlying reasons for the suicides. Further investigation and analysis, such as exploring factors like mental health, socio-economic status, and access to support, would be necessary to gain a deeper understanding of the issue.

It is also important to note that suicide is a complex issue with multiple contributing factors, and reducing suicides requires a multi-faceted approach, including mental health support, reducing stigma, and addressing socio-economic challenges. Additionally, there may be gender-specific challenges contributing to the differences in suicide rates, and these should also be explored.

- **Suicide Means Analysis:**

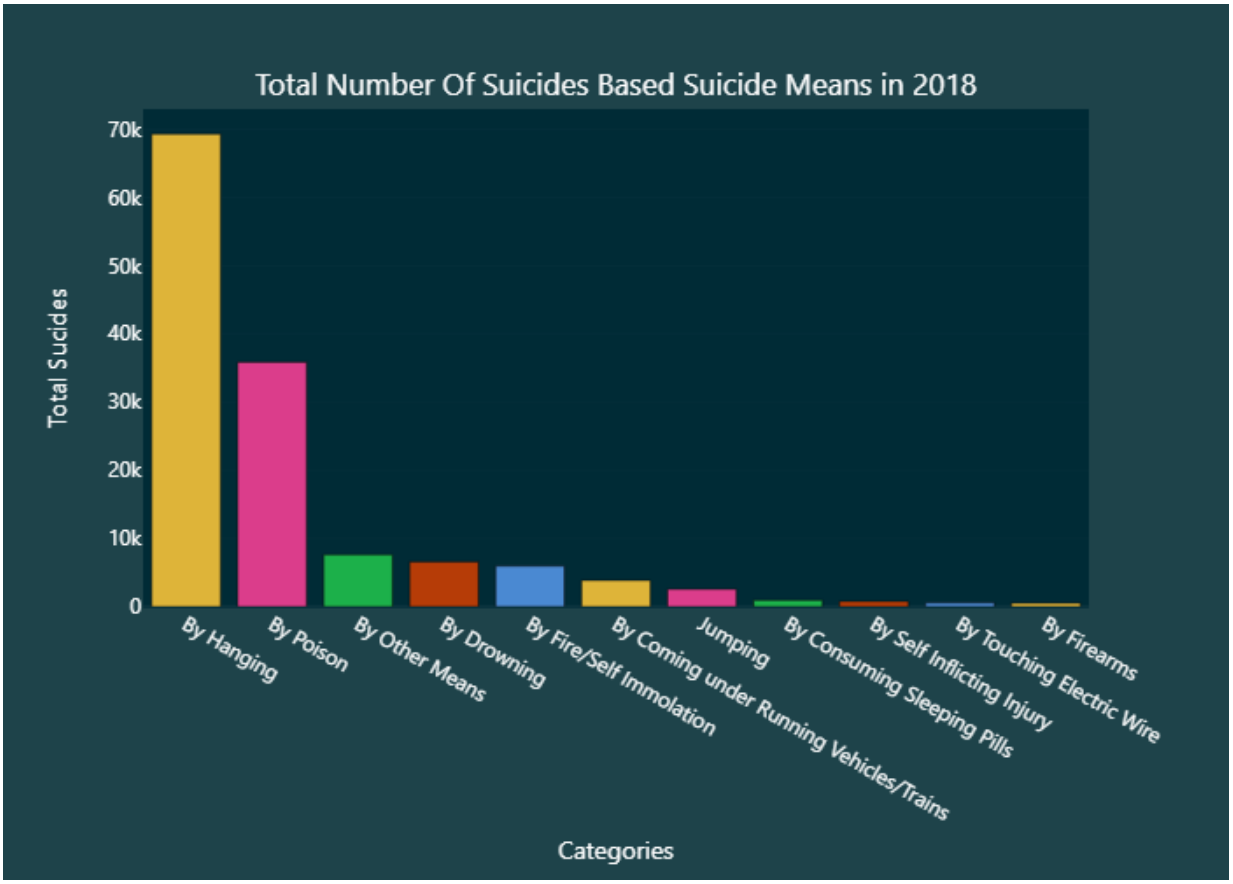


Fig52: Total Number of suicides based on suicide methods

This data represents the number of suicides committed using different methods in a given period of time. The most common method of suicide is by hanging, followed by poisoning. The least common methods of suicide are by consuming sleeping pills and by self-inflicting injury.

On the other hand, Suicide by firearm is the least used way to commit suicide in India, this could be because firearm suicide is less common because firearms are usually used in a smaller proportion of suicides compared to other methods, such as poisoning. Additionally, access to firearms can be restricted through laws and regulations, reducing the likelihood that individuals will use them to take their own life. Furthermore, the impulsive nature of suicide may mean that individuals opt for quicker, less painful methods such as overdosing, rather than firearms.

It is important to note that this data only represents the number of completed suicides and does not take into account attempted suicides or individuals who may have survived after attempting suicide. The data suggests that it is necessary to address and prevent suicide through various means such as mental health support, access to resources, and education.

- **Male and Female suicides based on Suicide Means:**

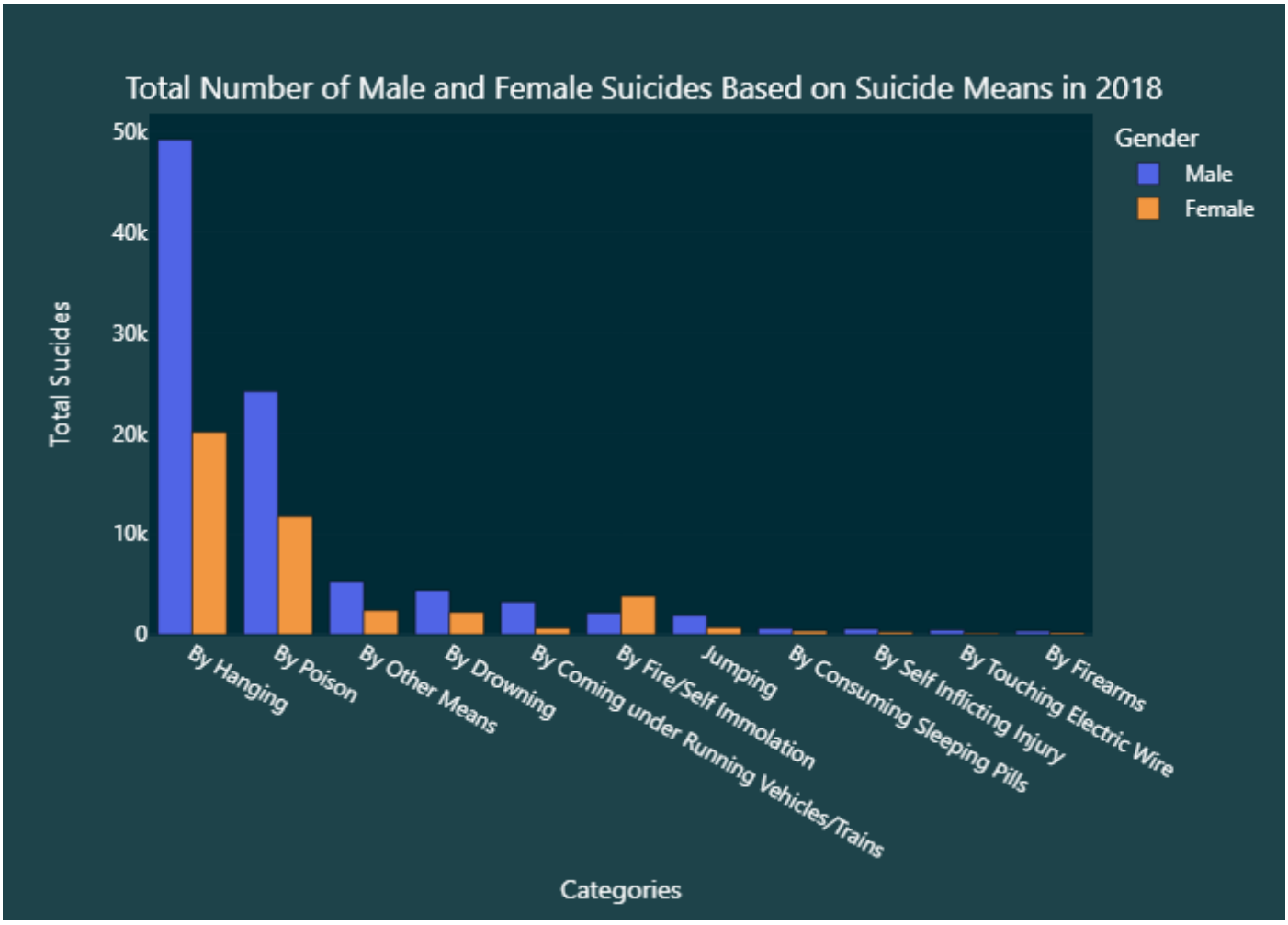


Fig53: Total Number of Male and Female suicides based on suicide methods

One thing we can see in the above figure is that, the suicide by fire has a higher female number. This means, female choose suicide using fire more than male. There is no definitive answer to why more women may choose to die by fire, but some studies suggest that women may be more likely to experience depression, anxiety, and other mental health issues that can contribute to suicidal ideation. Additionally, cultural and societal factors, such as stigma surrounding mental health and limited access to resources, may also play a role. However, it is important to note that suicide is a complex issue and there is no single cause.

Another thing to notice is that the vast difference in the number of male suicides using hanging. This could be because hanging is a very easy way to die and very effective.

E. Analysis of 2019:

- **Total Suicide in each State and Union Territory:**

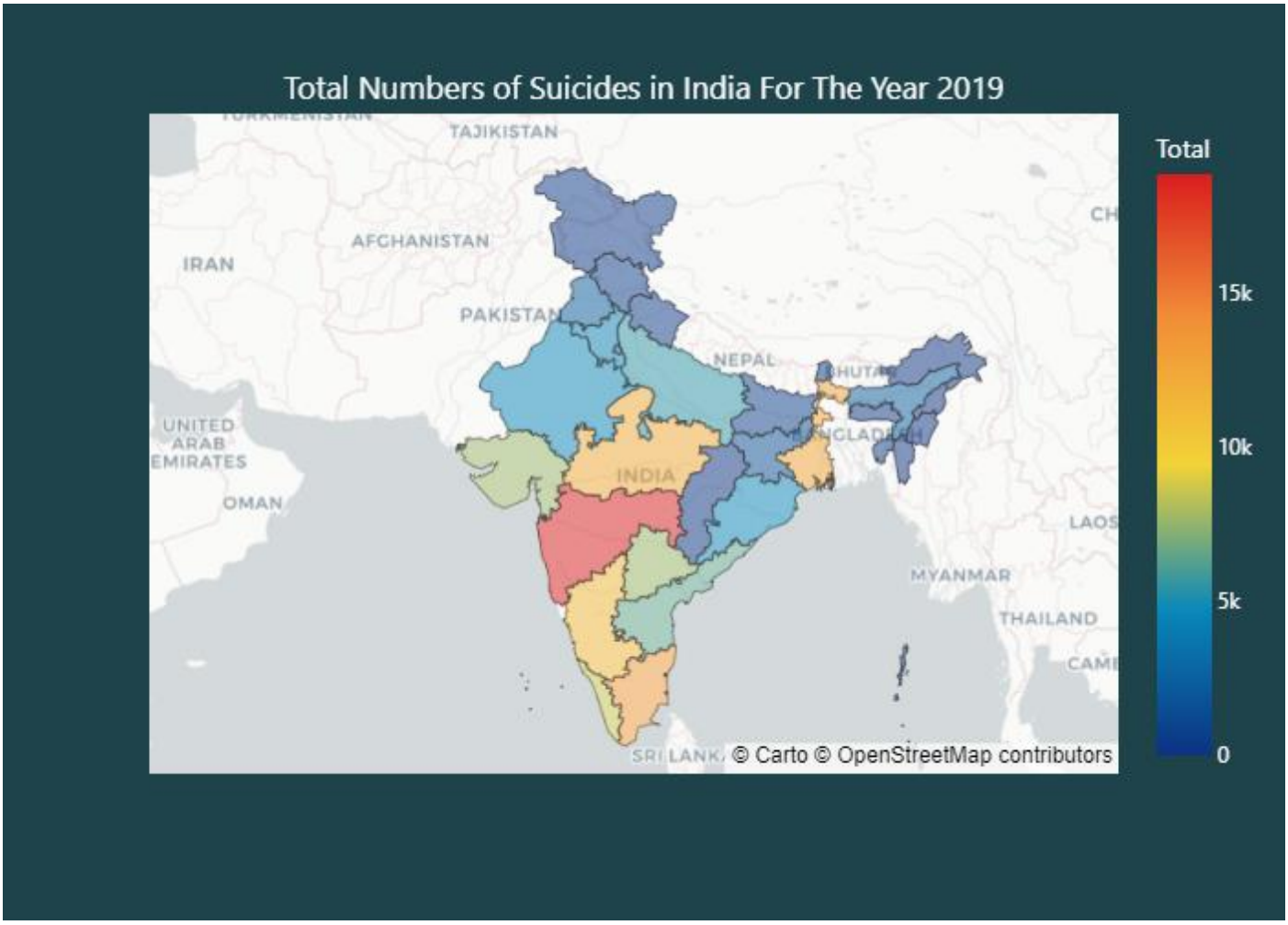


Fig54: Total Number suicides in 2019

The data lists the total number of suicides in each state in India.

The highest number of suicides is in Maharashtra with 18914 cases.

The lowest number of suicides is in Lakshadweep with 0 cases.

The states with a high number of suicides include Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, and Chhattisgarh.

The states with a low number of suicides include Lakshadweep, Daman & Diu, and A & N Islands.

Examining the distribution of suicides across states: The distribution of suicides seems to be uneven, with some states reporting a much higher number of suicides compared to others. This could indicate regional differences in socio-economic, cultural, and/or mental health factors that contribute to suicide.

Trend analysis: To fully understand the picture, it would be important to analyze the trend in suicides over time, to see if there has been any increase or decrease in suicides in each state.

Correlating with other factors: To understand the root causes of suicides, it would be important to look at the data in conjunction with other relevant factors such as poverty levels, access to mental health services, cultural attitudes towards mental health, etc. This can help identify any potential risk factors and inform public health interventions.

Comparing with national averages: The state-wise data can be compared to the national average of suicides to see if the number of suicides in a particular state is higher or lower than the average.

This information could help in developing state-specific interventions and policies to prevent suicides and improve mental health.

- **Male and Female Suicide Death Ratio in 2019:**

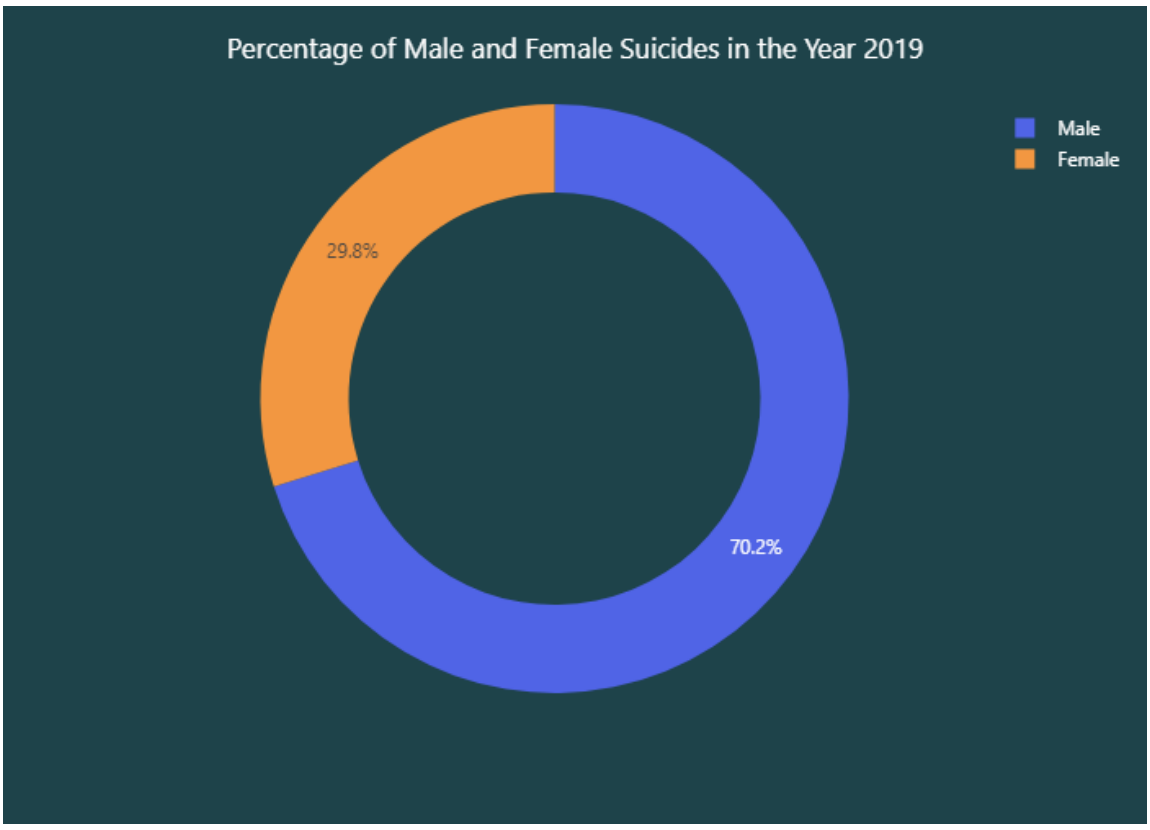


Fig55: Male and Female suicide ratio in 2019

The data shows the ratio of male to female suicides in India.

The majority of suicides (70.17%) were committed by males.

Only 29.83% of suicides were committed by females.

The total number of suicides is 97613 for males and 41493 for females.

It is important to note that these statistics may not accurately reflect the complete picture, as gender-based reporting and classification of suicides may vary in different regions and cultures. Further analysis, such as examining the reasons for suicide and other relevant factors, would be necessary to gain a better understanding of the issue.

- **Education Wise Analysis:**

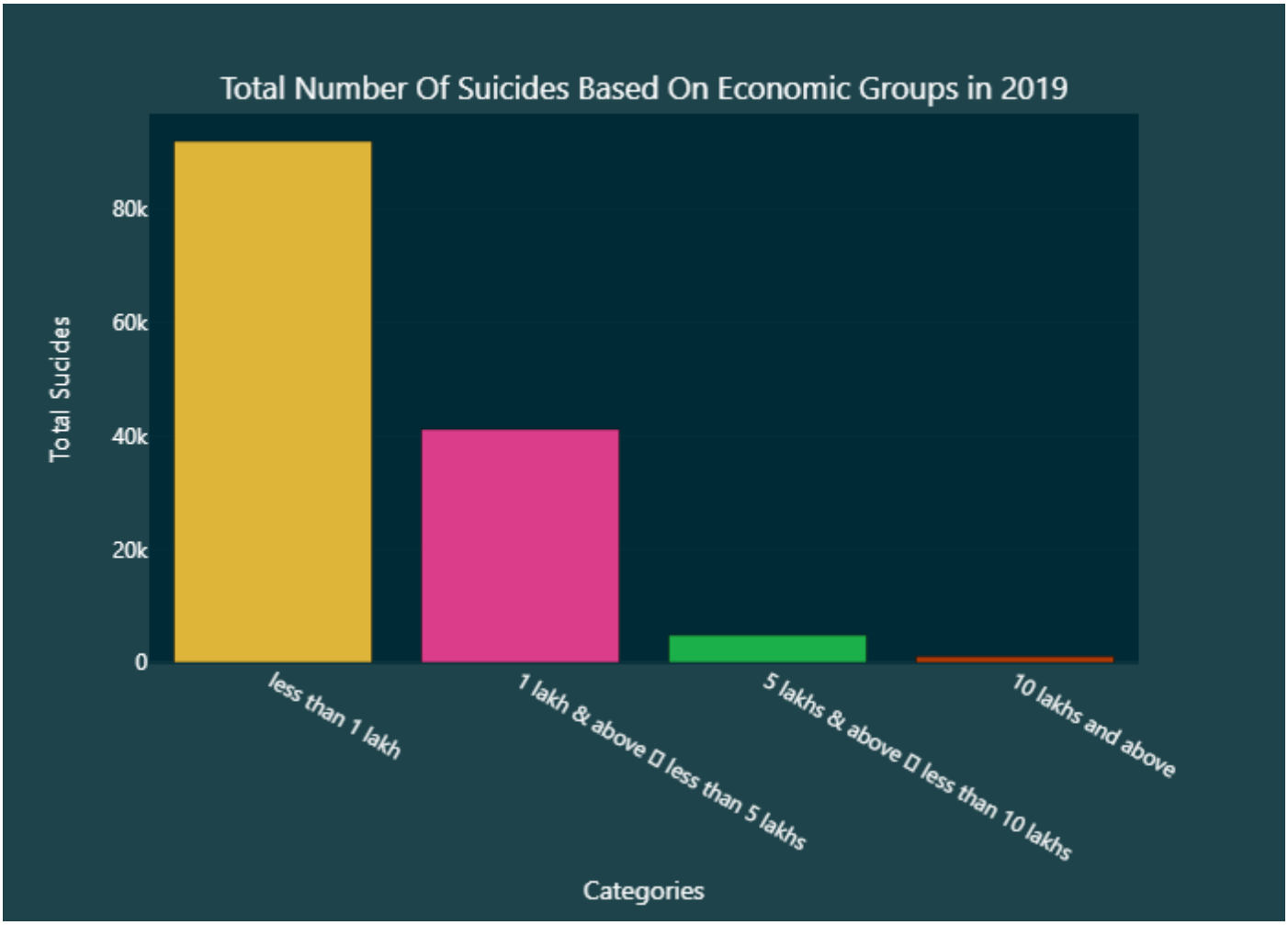


Fig56: Total number of suicides based on economic category

The data shows the number of suicides based on economic categories.

The majority of suicides (92068 cases) were committed by individuals in the "less than 1 lakh" category.

The second-largest group is "1 lakh & above less than 5 lakhs" with 41195 suicides.

The number of suicides decreases as the economic category increases, with only 4824 suicides in the "5 lakhs & above less than 10 lakhs" category and 1019 suicides in the "10 lakhs and above" category.

It is important to note that these statistics may not accurately reflect the complete picture as economic status is a complex issue that is influenced by many factors, such as employment status, education, and access to resources. Further analysis, such as examining the reasons for suicide and other relevant factors, would be necessary to gain a better understanding of the issue.

The data shows a pattern in which the incidence of suicides is higher in lower-income categories and decreases as income increases. This could suggest that financial insecurity and poverty may contribute to the risk of suicide.

However, it is important to keep in mind that there are many factors that can influence the relationship between income and suicide, such as access to resources, support systems, and overall well-being. For example, individuals in higher income categories may have greater access to resources such as mental health support, which can help mitigate the risk of suicide.

It is also worth noting that income may not be the only factor affecting suicide risk. Other factors such as mental health, social support, and access to resources play a role as well. A more comprehensive analysis would examine the interplay of these factors and their relationship with suicide.

Overall, the data provides a starting point for exploring the relationship between income and suicide, but further analysis and examination of other relevant factors is necessary to gain a deeper understanding of the issue.

- **Male and Female suicides based on Economic Status:**

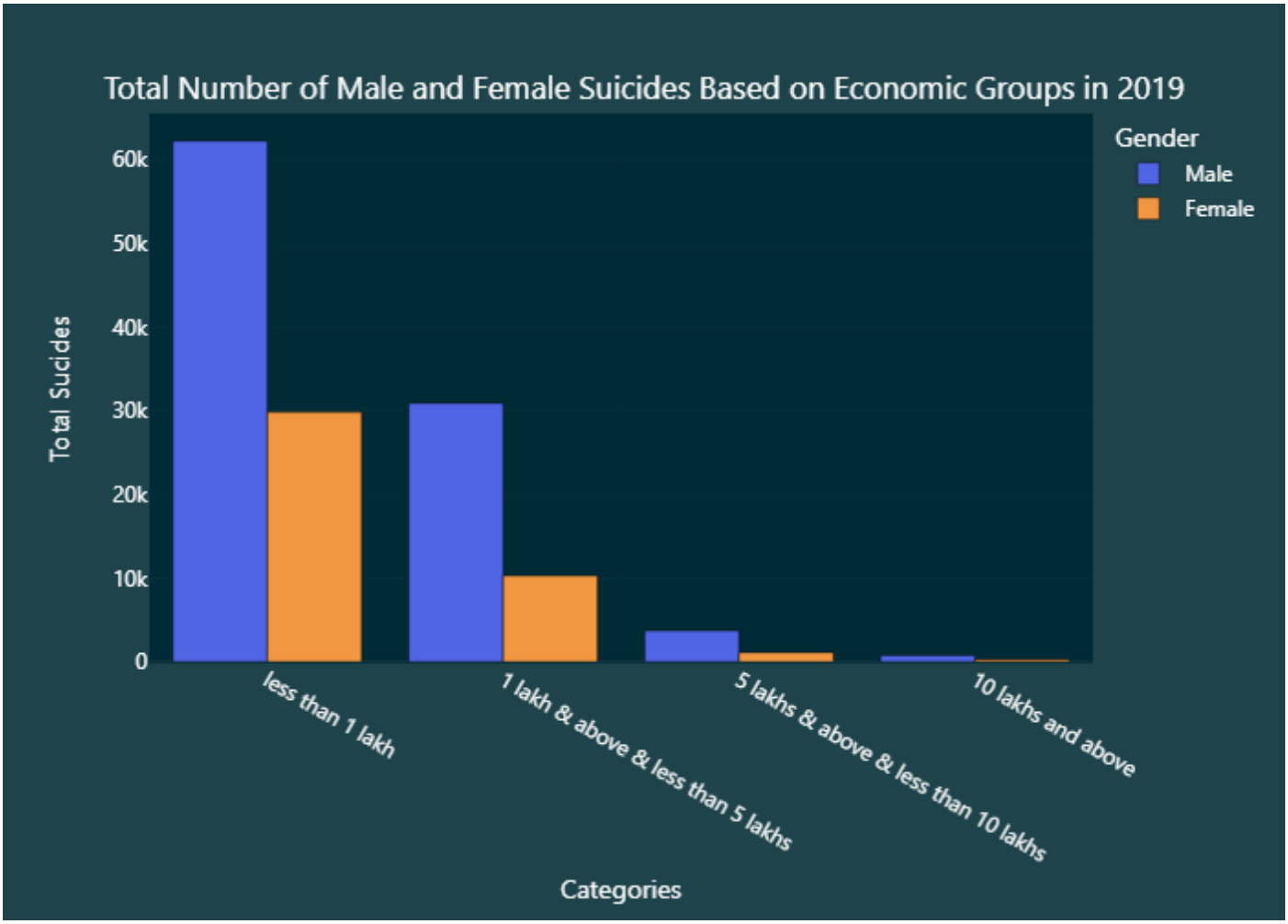


Fig57: Total number of Male and Female suicides based on economic category

The data shows the number of suicides based on economic categories and gender. The analysis reveals that male suicides are higher than female suicides in all income categories, which is a pattern that needs to be further studied.

The number of male suicides in the lowest income category, "less than 1 lakh," is 62236, which is over double the number of female suicides in the same category, 29832. This trend is also observed in the highest income category, "10 lakhs and above," where the number of male suicides (751) is more than double the number of female suicides (268).

This pattern suggests that male suicide rates may be higher across all income levels and that income may not be the only factor affecting suicide risk. Other factors such as mental health, social support, and access to resources need to be taken into consideration to understand the root causes of the higher rate of male suicides.

It is important to note that this analysis is based on only two variables, income and gender, and does not account for the many other factors that may contribute to suicide risk. Further research that takes into account a range of factors such as education, family background, employment status, and access to mental health services would provide a more comprehensive understanding of the issue.

In conclusion, this data highlights the need for further research to understand the reasons for the higher rate of male suicides and to develop evidence-based policies and interventions to address this issue.

- **Education Wise Analysis:**

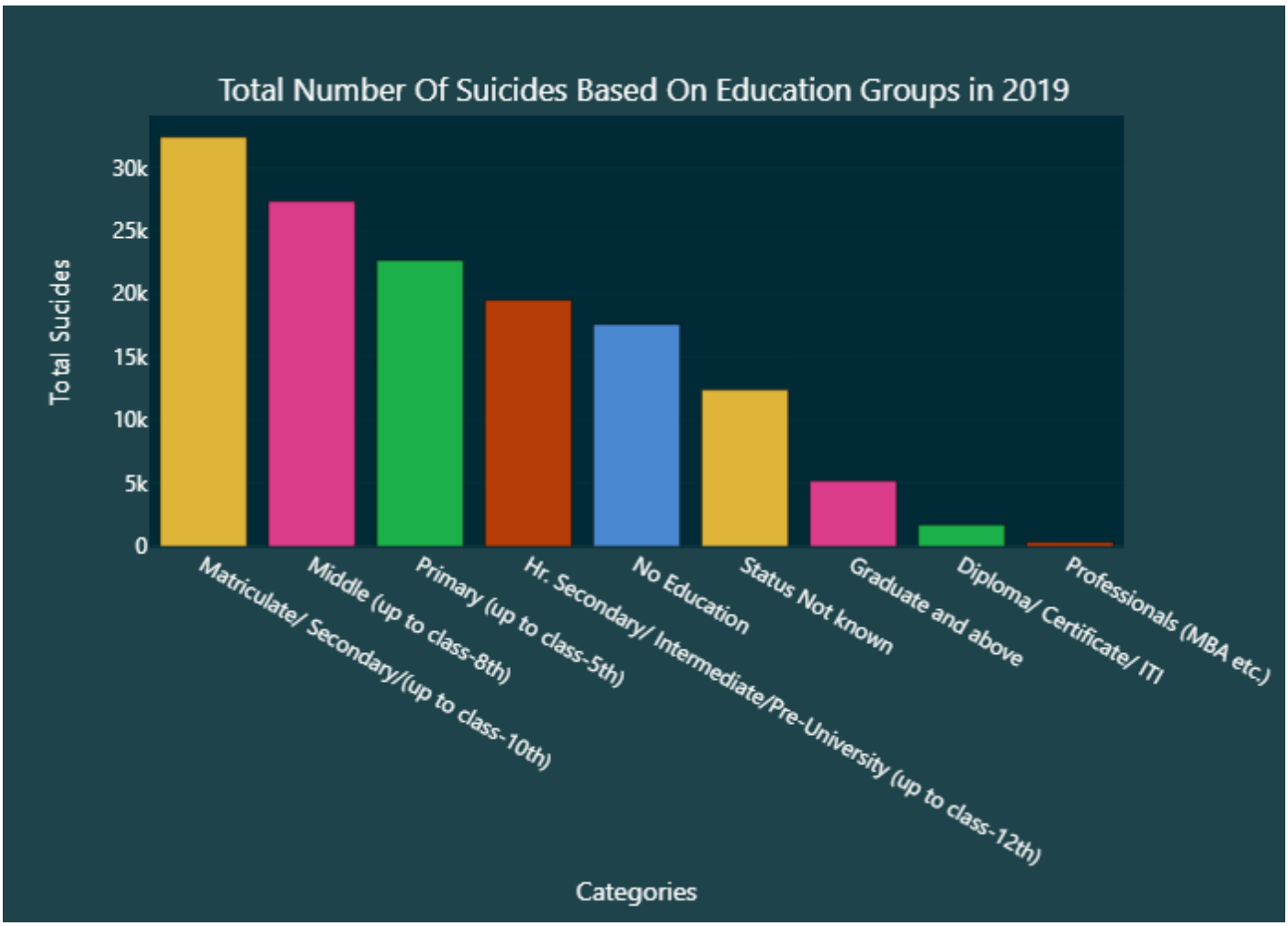


Fig58: Total number of suicides based on education category

The data is about the number of suicides in India based on education categories. Based on the information provided, the highest number of suicides is among individuals who have completed middle school (up to class 8th). It is followed by individuals who have completed matriculation/secondary education (up to class 10th). On the other hand, the lowest number of suicides is among individuals who have a professional degree (MBA etc.). This data gives us a picture of the education level that is most affected by suicide. It may indicate that individuals who face difficulty in continuing education beyond middle school are more vulnerable to suicide. It is important to understand the factors leading to this trend and implement measures to address the same.

- **Male and Female suicides based on Education Status:**

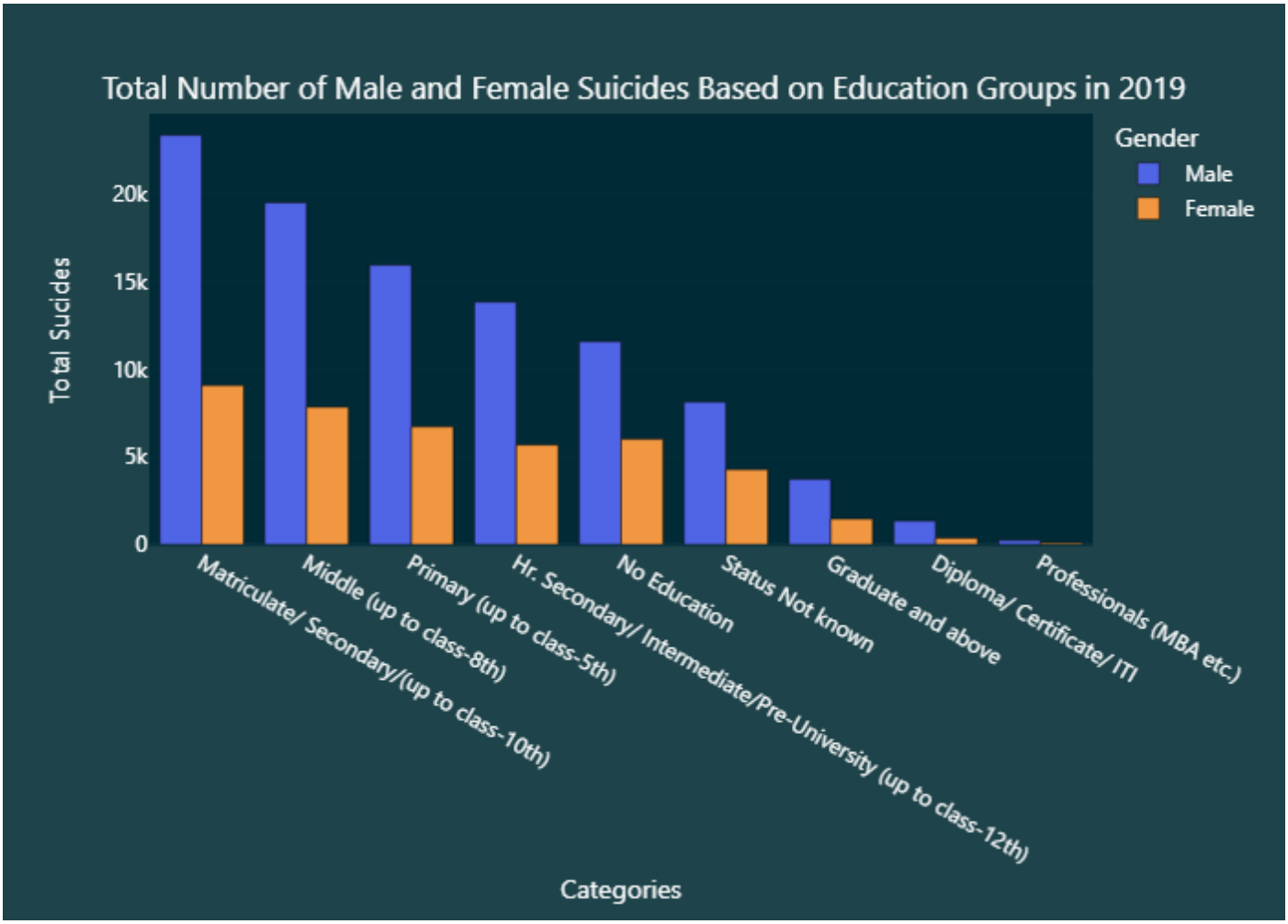


Fig59: Total number of Male and Female suicides based on education category

This dataset provides information about the number of suicides in India based on the education level and gender of individuals. It includes categories of education levels such as No Education, Primary (up to class-5th), Middle (up to class-8th), Matriculate/ Secondary (up to class-10th), Hr. Secondary/ Intermediate/Pre-University (up to class-12th), Diploma/ Certificate/ ITI, Graduate and above, and Professionals (MBA, etc.), as well as an additional category for individuals with unknown educational status. The dataset also indicates the total number of suicides for each category and for both males and females.

Analysis of this data can help to identify correlations between education level and suicide rates, as well as gender differences in suicide rates within different education categories.

Some key findings from this data include:

Among the individuals with known education status, the highest number of suicides were reported among those with Matriculate/ Secondary (up to class-10th) education, with a total of 32372 suicides.

The number of suicides decreased as the education level increased, with the lowest number of suicides reported among individuals with Graduate and above education, with a total of 5184 suicides.

A gender difference in suicides is also apparent, with a higher number of suicides among males compared to females in every education category except for the Status Not Known category.

The difference in suicides between males and females was highest among those with Matriculate/ Secondary (up to class-10th) education, with a difference of 30058 suicides.

The proportion of individuals with unknown educational status was higher among those who committed suicide, with a total of 12400 suicides in the Status Not Known category.

These findings suggest that there is a correlation between education level and suicide rates, with individuals who have lower levels of education being more likely to commit suicide. Additionally, the higher number of suicides among males compared to females across all education categories highlights the need for gender-specific approaches to suicide prevention and intervention.

- **Profession Wise Analysis:**

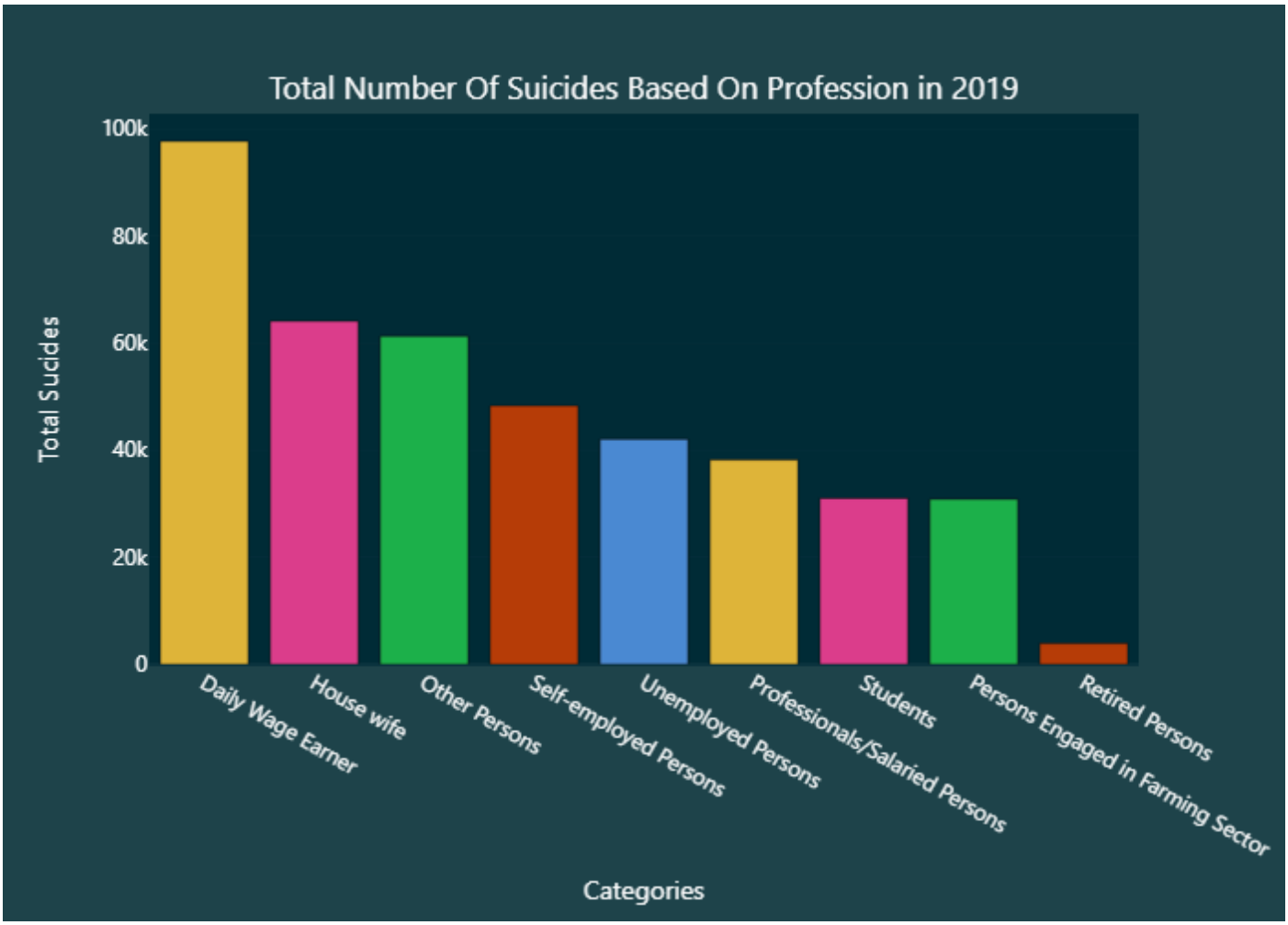


Fig60: Total number of suicides based on Profession category

The data shows the number of suicides in India based on different professions. It can be seen that the highest number of suicides are among housewives (64077), followed by daily wage

earners (97677) and professionals/salaried persons (38175). On the other hand, the lowest number of suicides are among retired persons (3906) and students (31002).

This information can be used to identify professions that are at higher risk of suicide, and target specific interventions and support programs towards those groups. It can also provide insight into factors such as job stress, financial stability, and work-life balance that may contribute to the high suicide rates in certain professions. However, it is important to consider other factors such as mental health, individual circumstances, and access to support resources, as these may also play a significant role in suicide rates.

- **Male and Female suicides based on Professional Status:**

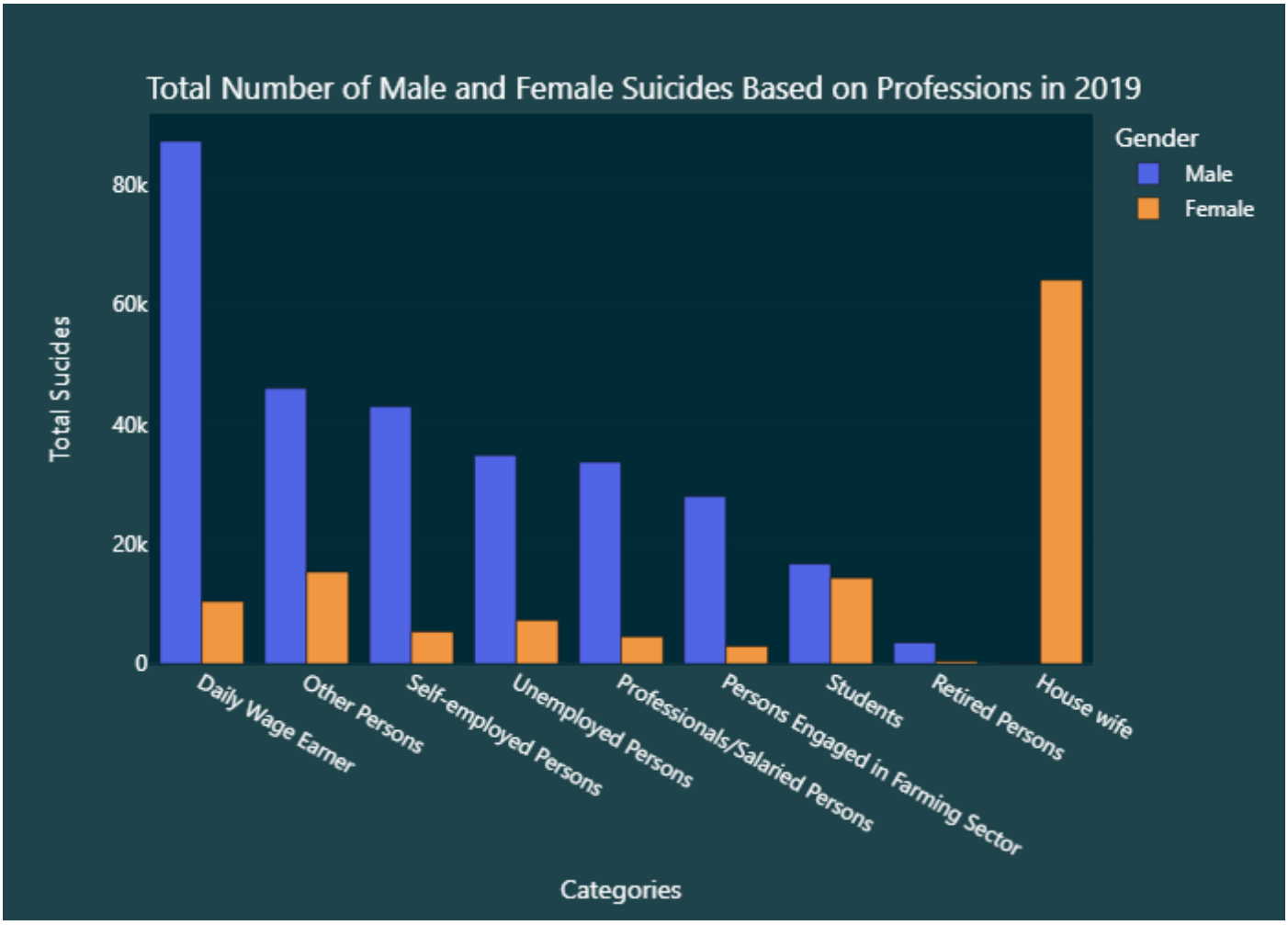


Fig61: Total number of Male and Female suicides based on Profession category

In terms of gender, female housewives account for the largest number of suicides (64077).

For males, the highest number of suicides is recorded for daily wage earners (87276).

On the other hand, the number of suicides among female professionals and salaried persons is the lowest (4509).

Additionally, while male students and unemployed persons record relatively high numbers of suicides, these numbers are lower among female students and unemployed persons.

It's worth noting that the data is likely to be influenced by various other factors such as access to resources, support systems, and cultural attitudes towards different professions. Further investigation may be required to determine the root causes of these suicides.

The age gap between the male and female in the daily wage, other persons and self-employed is very big showing that even in 2019 the working force in India is mostly made of male.

- **Social Status Wise Analysis:**

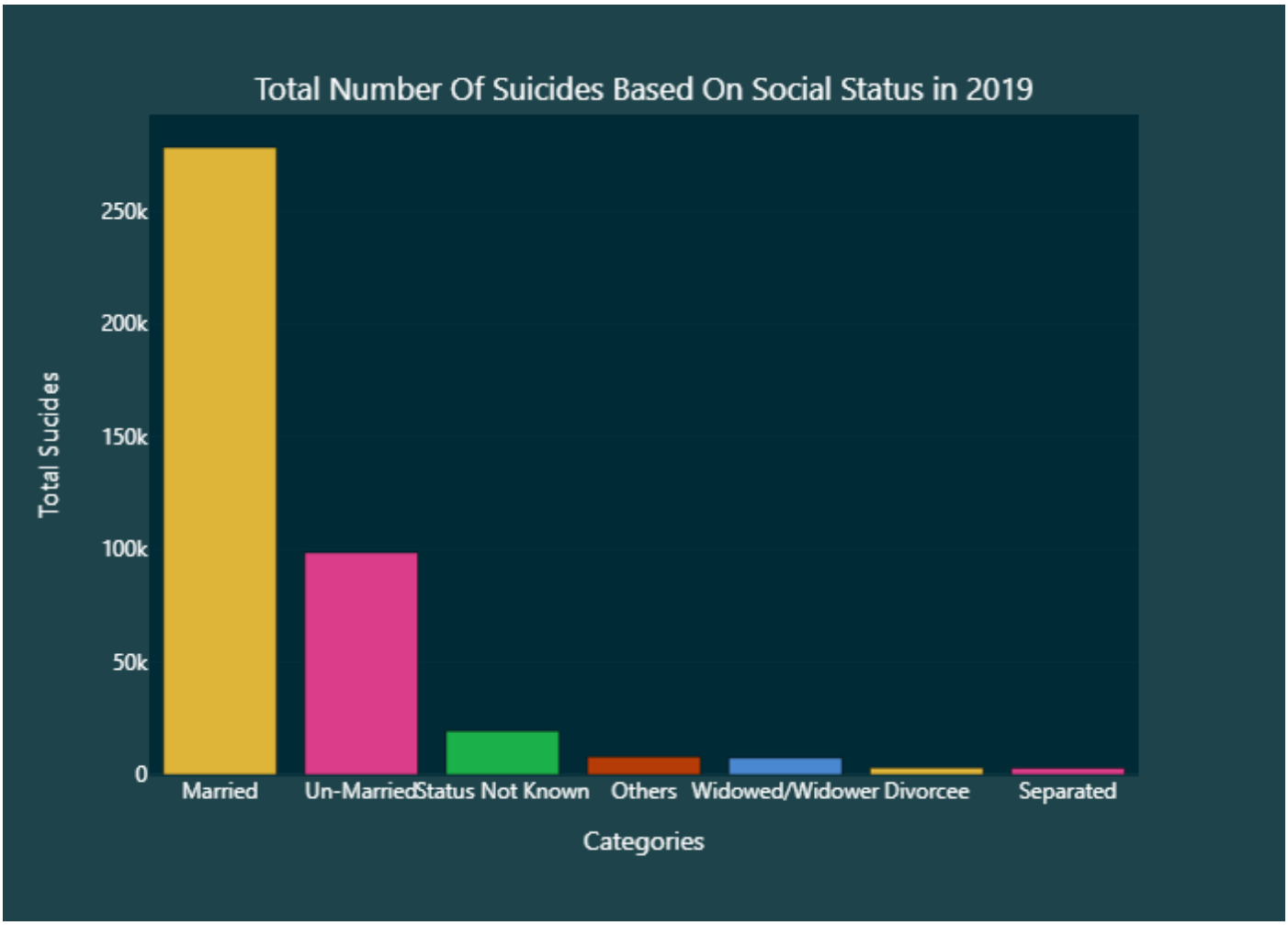


Fig62: Total number of suicides based on social status category

The data represents the number of suicides in India based on social status. It shows that the highest number of suicides were among the married individuals (278268) compared to other social statuses such as unmarried (98520), widowed/widower (7416), divorcee (2991), separated (2886), others (7854) and those with unknown status (19383).

It is important to note that the highest number of suicides are among married individuals which could indicate the pressure and stress related to married life. Further analysis and investigation would be required to determine the underlying factors contributing to the high number of suicides among married individuals

Male and Female suicides based on Social Status:

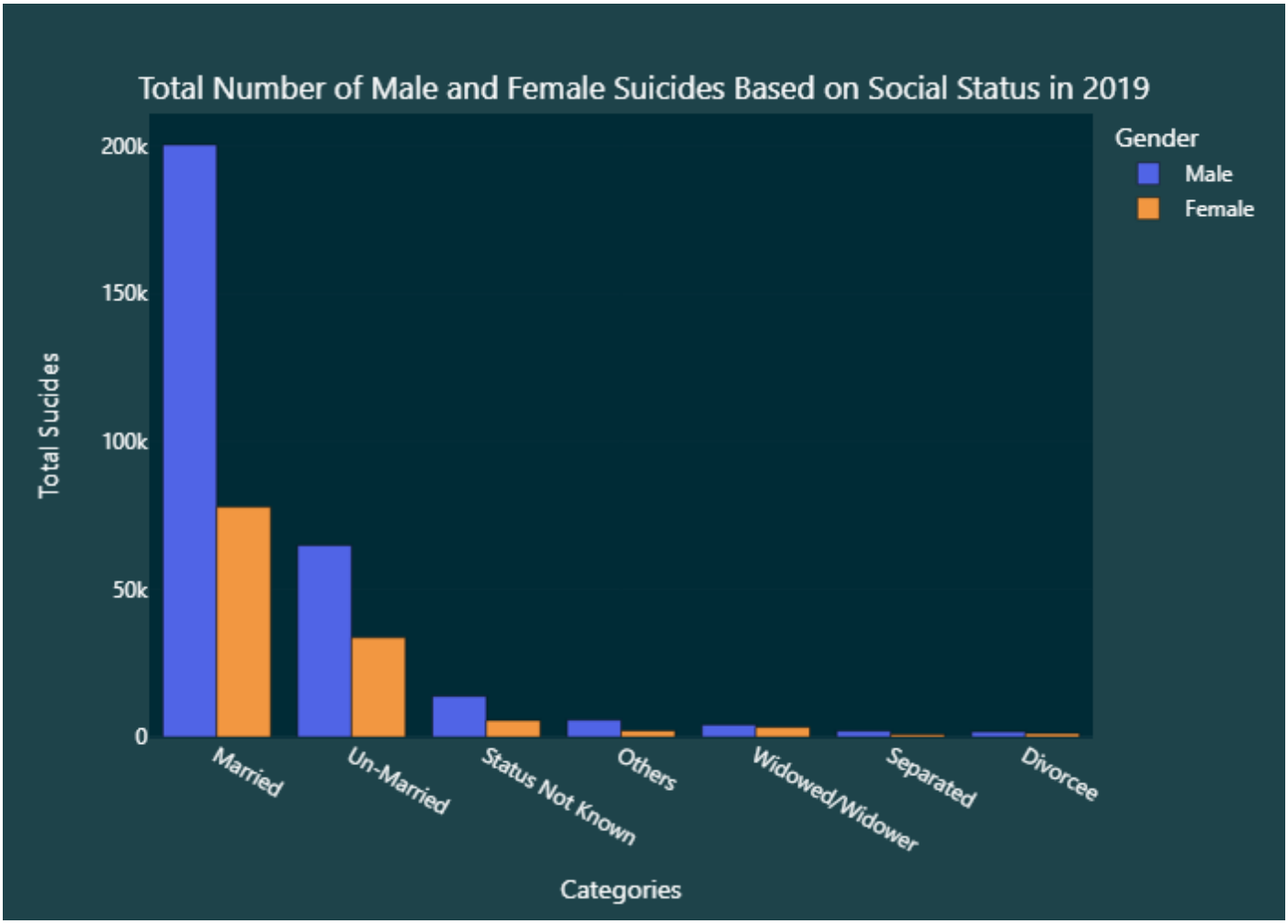


Fig63: Total number of Male and Female suicides based on social status category

The given data provides information on the number of suicides in India based on the individual's social status and gender. The social status categories include Un-Married, Married, Widowed/Widower, Divorcee, Separated, Others, and Status Not Known.

The analysis shows that the highest number of suicides were recorded among married individuals, both among males (200445) and females (77823). The second highest number of suicides were among Un-Married individuals, with 64914 among males and 33606 among females.

Among individuals with a known social status, Widowed/Widower had the least number of suicides, with 4134 among males and 3282 among females.

The data suggests that the social status of individuals could have a significant impact on their mental health and well-being, and could be a contributing factor in suicide. It is important to take this into consideration when addressing the issue of suicides and to provide support to individuals of all social statuses.

- **Suicide Mean Analysis:**

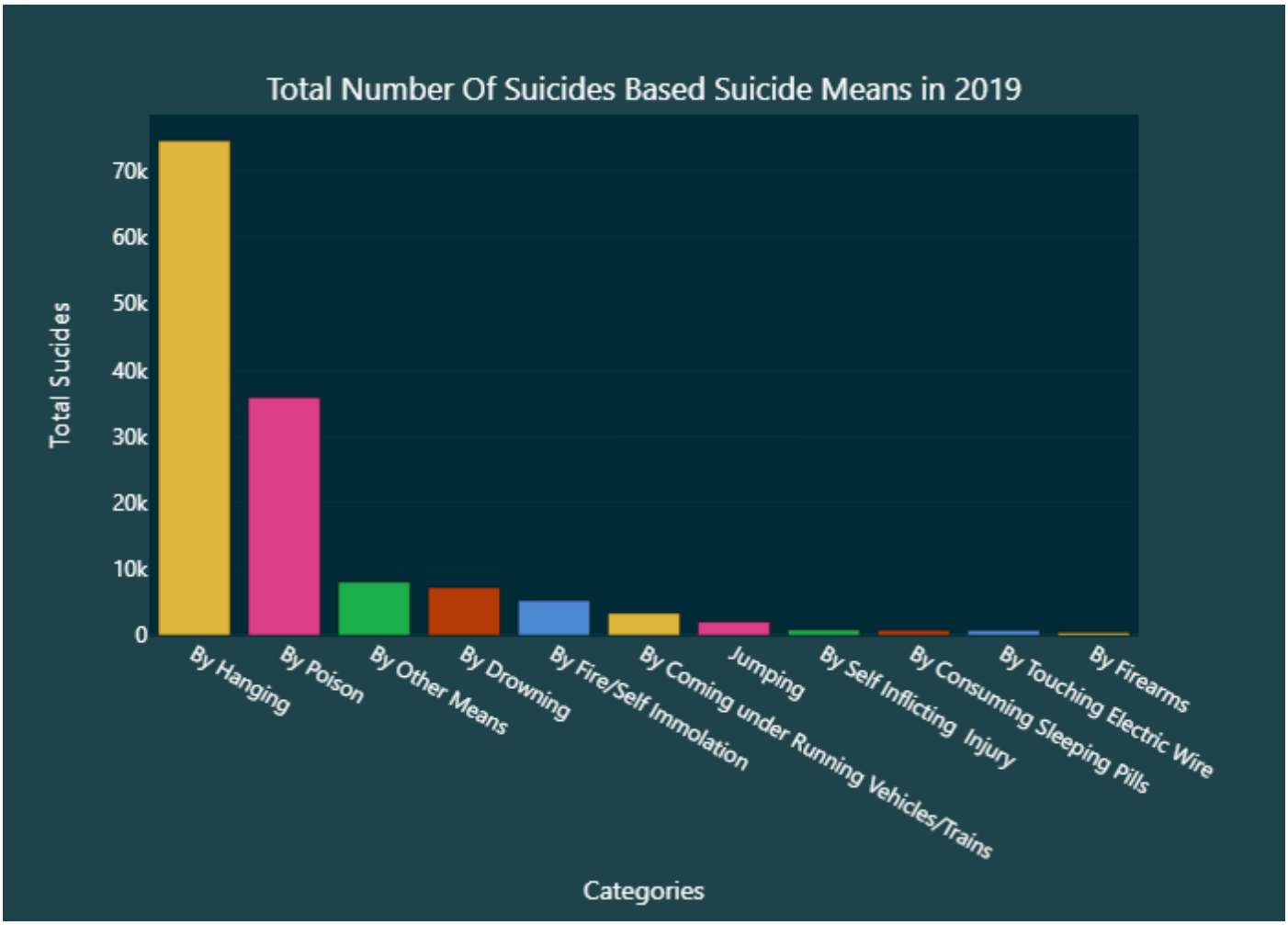


Fig64: Total number of suicides based on Suicide Methods

The data shows that among the different suicide methods, hanging is the most common method with 74,618 cases, followed by poisoning with 35,878 cases. By comparison, consuming sleeping pills and jumping account for fewer cases of suicide, with 753 and 2,034 cases respectively. The data also highlights that firearm, coming under running vehicles/trains, touching electric wire and other means account for a smaller percentage of suicides, with 428, 3,337, 752 and 8,038 cases respectively.

It's important to note that this data may not reflect the complete picture of suicides in India and the information may be limited due to underreporting or misclassification of suicides. Further research and analysis is necessary to gain a more complete understanding of the causes and contributing factors of suicide in India.

- **Male and Female suicides based on Suicide Means:**

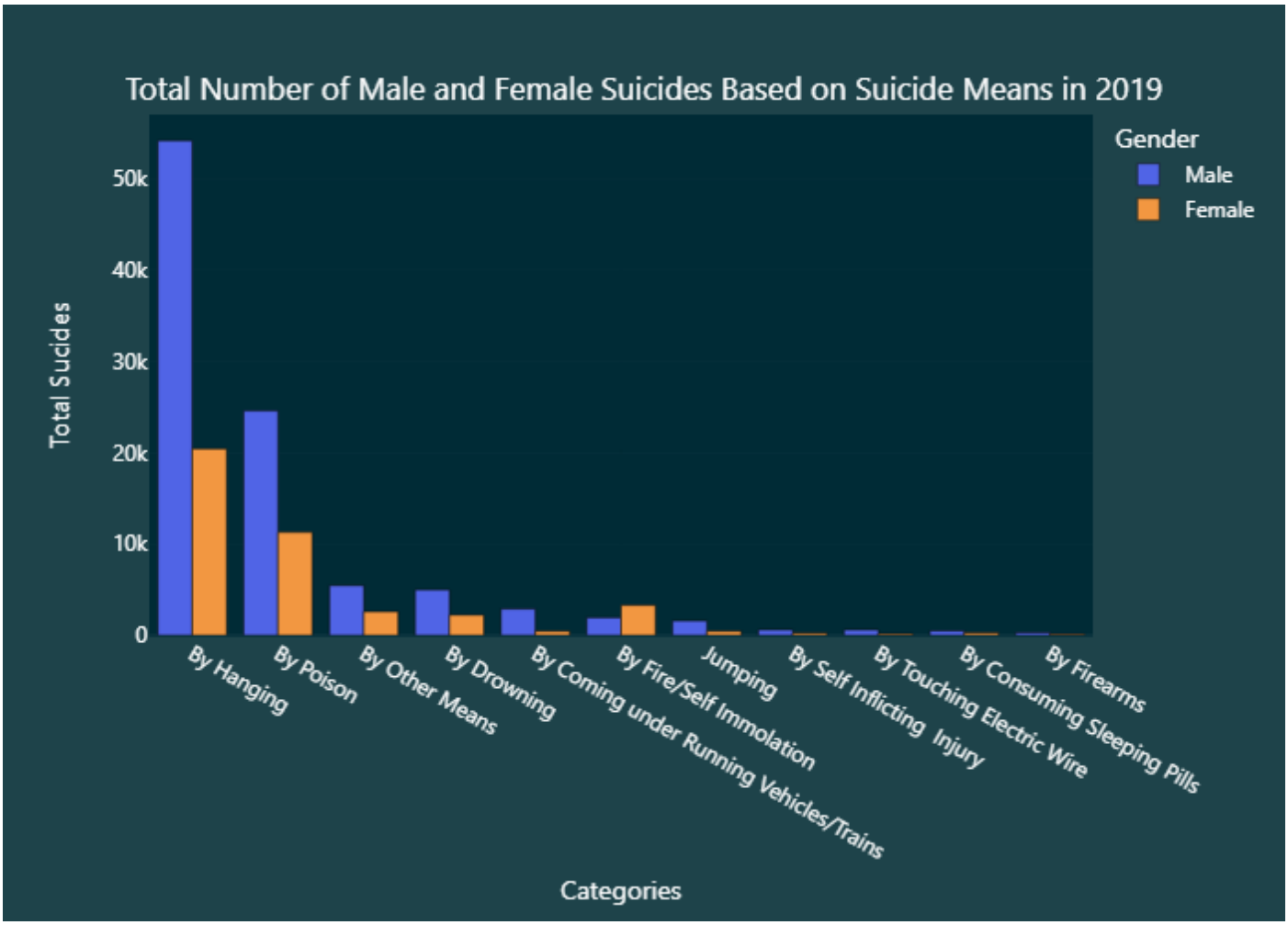


Fig65: Total number of Male and Female suicides based on Suicide Methods

Hanging is the most common method of suicide for both males and females. For males, it accounted for 54,198 suicides, while for females it accounted for 20,420 suicides.

Poison is the second most common method of suicide for both genders, with 24,594 suicides for males and 11,284 suicides for females.

Self-inflicted injury, coming under running vehicles/trains, and touching electric wire are relatively fewer common methods of suicide for both genders.

Female suicides are more likely to be by fire/self-immolation and drowning compared to males.

Consuming sleeping pills is the least common method of suicide for both genders.

It is worth noting that there are gender differences in the methods used to commit suicide. For example, a higher proportion of females tend to use poisoning as a method of suicide compared to males, whereas a higher proportion of males tend to use hanging as a method of suicide compared to females.

These findings highlight the need for further research and targeted interventions to address the specific causes of suicide among different demographic groups and to prevent suicide using specific methods.

F. Overall Analysis of all the years:

- **Total Number of Suicide between 2015-2019:**

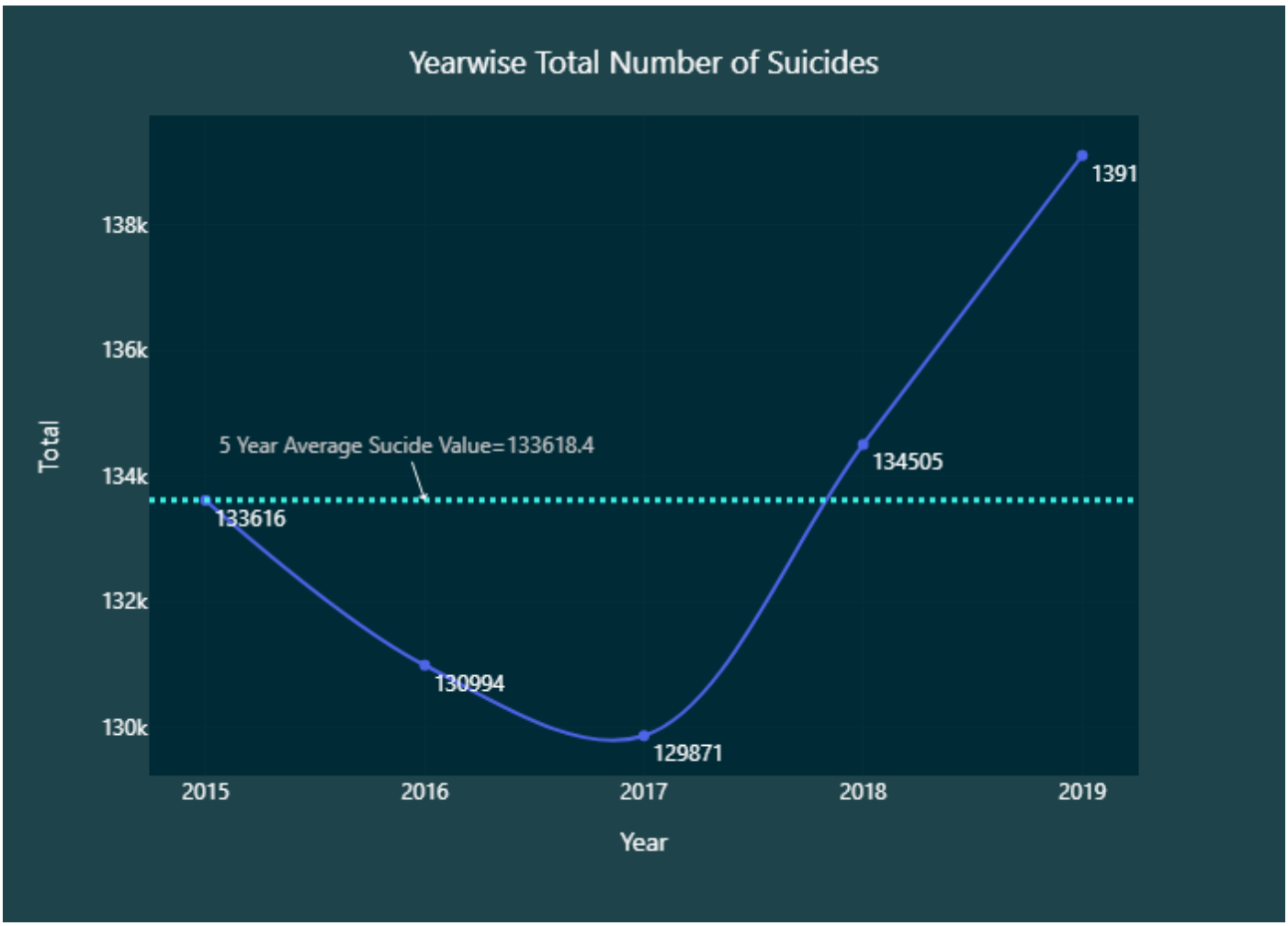


Fig66: Total number of suicides between 2015-2019

The data shows the total number of suicides in India from 2015 to 2019. Over the five-year period, the number of suicides has fluctuated, with a high of 139106 in 2019 and a low of 130994 in 2016. The overall trend appears to be increasing, with a rise in suicides from 2015 to 2019.

This data shows the number of suicides in India over the years 2015-2019. It is observed that the number of suicides has increased over the years, with the highest number recorded in 2019. It is crucial to understand the underlying reasons behind the increase in suicides and take necessary steps to address the issue. The government and social organizations should work together to create awareness and provide support to those in need. Mental health should be given more importance and resources should be allocated to ensure that people receive the

necessary support and treatment. Additionally, effective policies and programs should be implemented to reduce the incidents of suicides.

- **Total Number of Male Suicides between 2015-2019:**

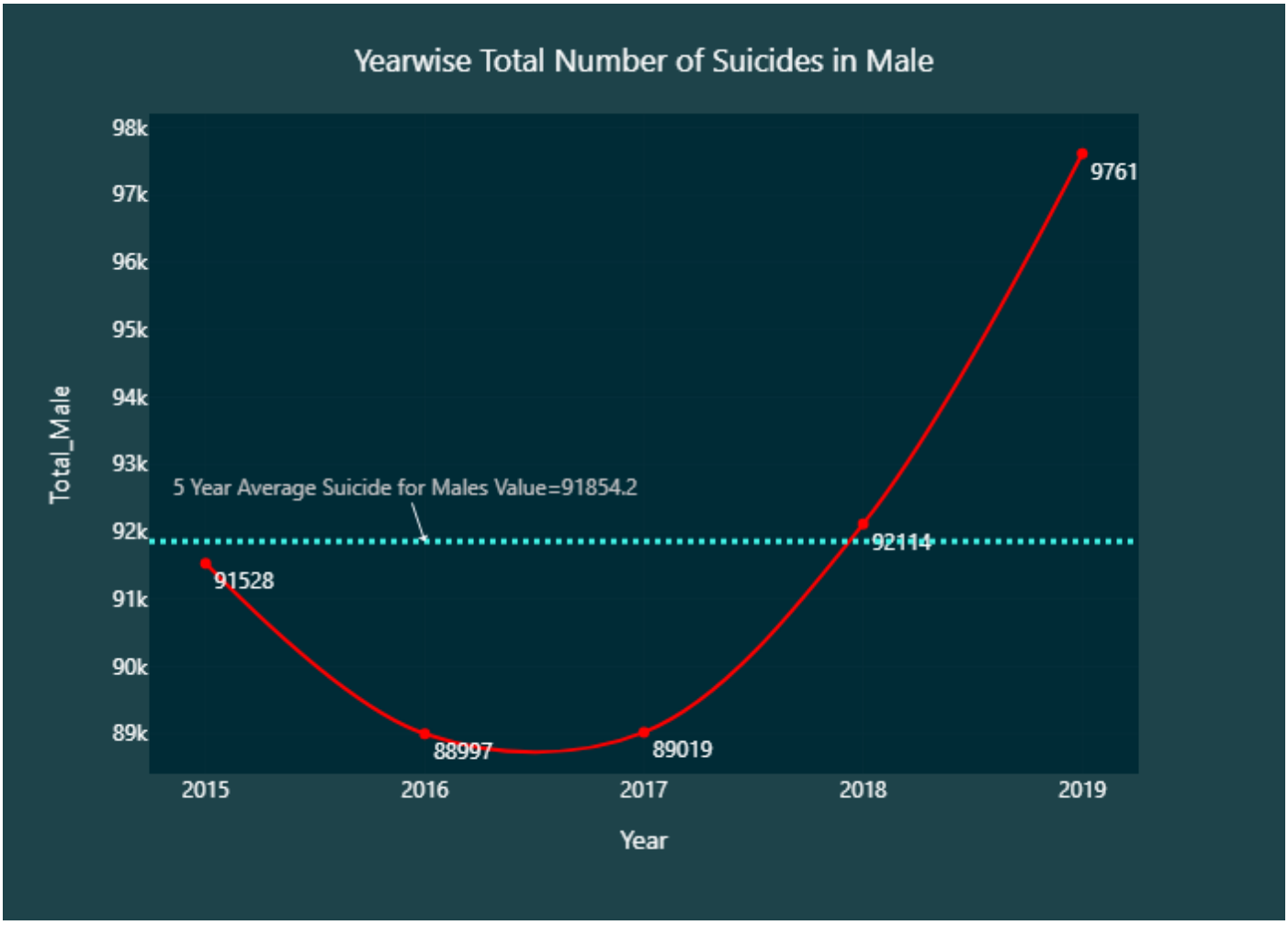


Fig67: Total number of Male suicides between 2015-2019

The data shows the number of male suicides from the year 2015 to 2019. It is observed that there is an upward trend in the number of suicides with the highest number recorded in 2016 (88997). The lowest number of suicides was recorded in 2015 (91,528). The data suggests that there has been an increase in male suicides over the five-year period.

In the given data, it can be seen that the number of male suicides in India increased from 2015 to 2019. In 2015, the number of male suicides was 91,528 which increased to 97,613 in 2019. This represents a 6.6% increase in male suicides from 2015 to 2019. This could be due to various factors such as stress, depression, financial problems, relationship issues, etc. It is important for government, health organizations, and the society to take necessary steps to address the rising trend of male suicides and provide support to those in need.

- **Total Number of Female Suicides between 2015-2019:**

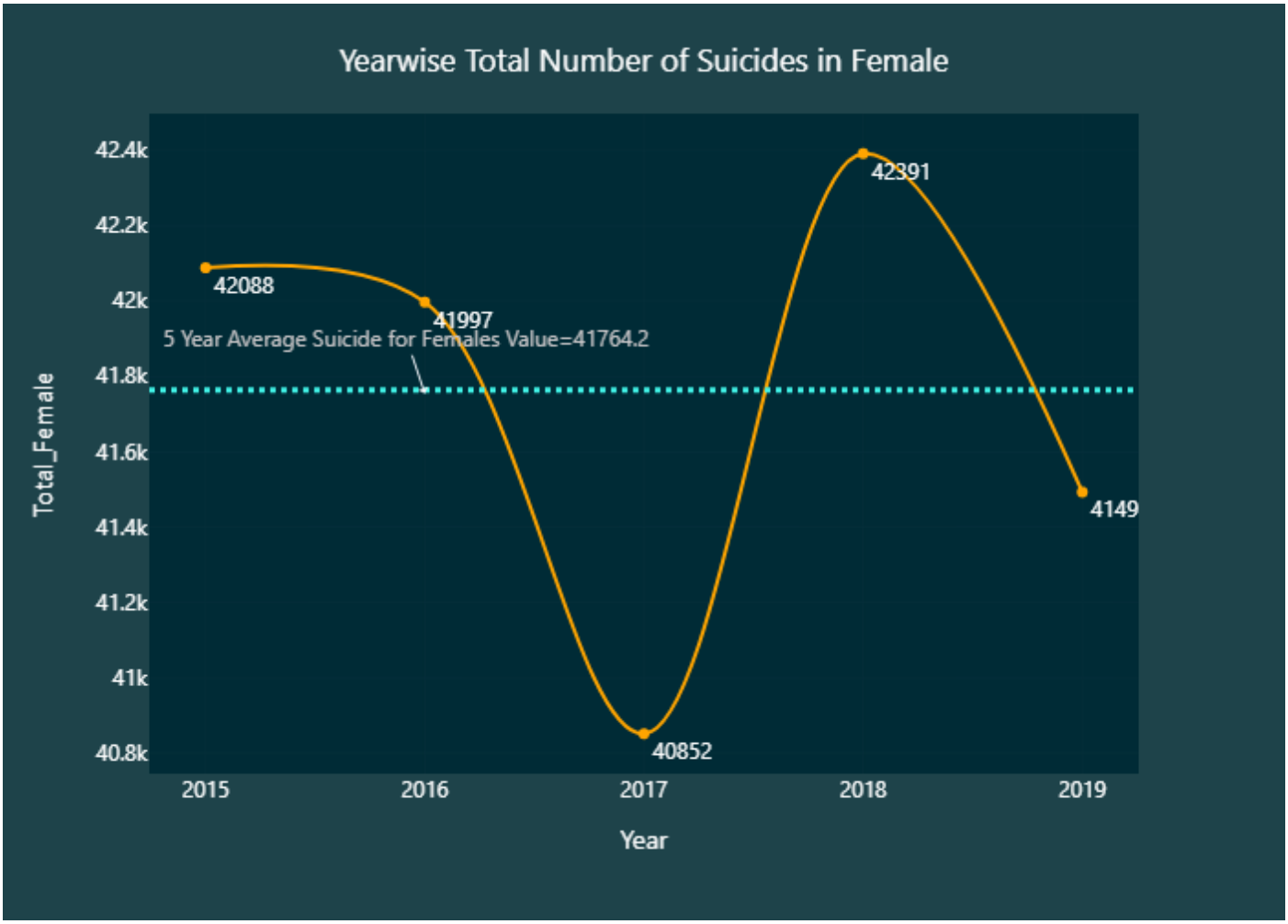


Fig68: Total number of Female suicides between 2015-2019

The data presents the number of female suicides recorded in India from 2015 to 2019. Over the 5 years, the number of female suicides ranged from 42088 in 2015 to 41493 in 2019, with a fluctuation of the numbers year to year. The highest number of female suicides were recorded in 2018 at 42391, and the lowest was in 2015 at 42088.

In 2015, there were 42088 suicides among female population. This number increased to 41997 in 2016, then decreased to 40852 in 2017 and increased to 42391 in 2018, before decreasing to 41493 in 2019.

Result

The year wise analysis of the suicide data was done using plotly module in python for its interactive graphs and web deployable nature. Python also supported another module named Dash. This module could be used to deploy a web-based dashboard while getting integrated with flask, html and bootstrap. So, the result of this analysis was turned into a dashboard using Dash and plotly.

The image below will show the GUI of the dashboard:

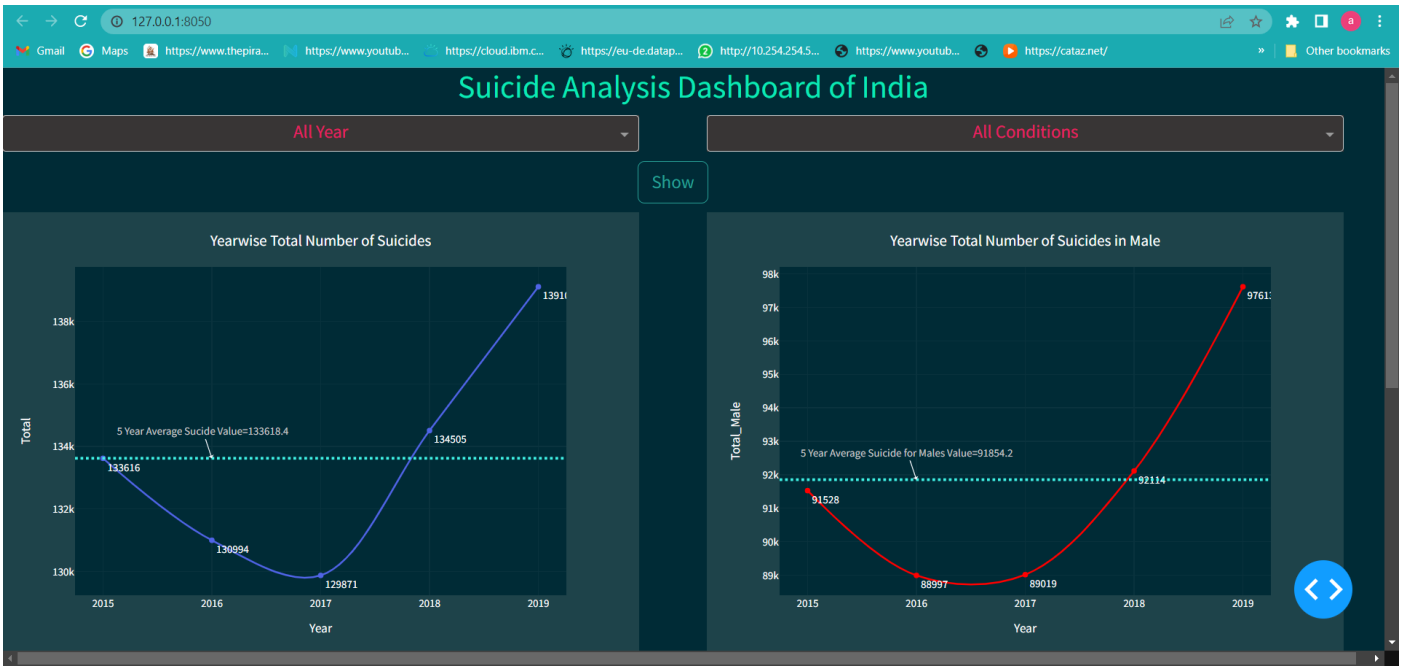
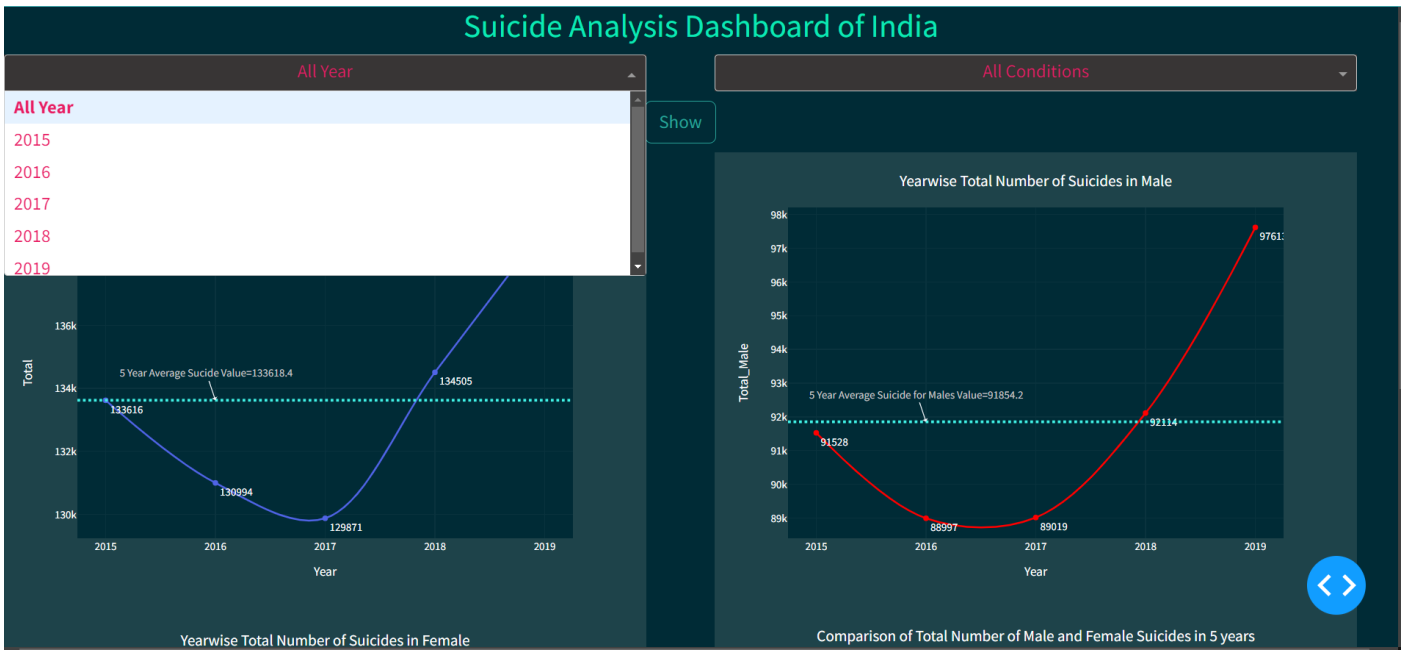


Fig69: The GUI of the Dashboard

The dash board has three components graph displaying section two dropdown menu and a submit button to take the input from the dropdown menu.



The above figure shows the values present in the dropdown menu on the left which has all the years, just like that the right menu has the dropdown menu with all the values of the categories.

With a combination of both the values the dash will display the respective graphs. The figure below will show the dashboard displaying graph for 2015-educationwise:

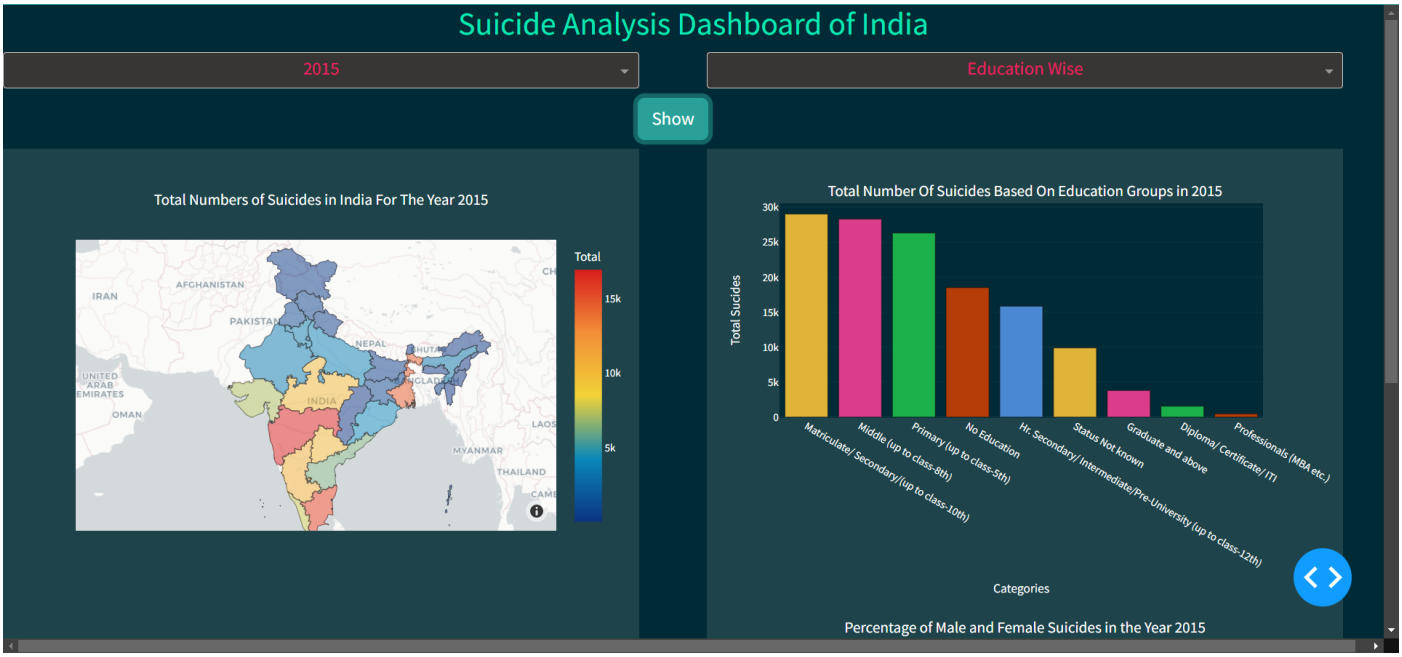


Fig71: The GUI of the Dashboard displaying graphs

As we can see for a certain combination the dash will show respective combinations graph. As the application is made using flask API, it is fully front end ready and could be deployed using any web services like Amazon AWS. This type of dashboard could be connected with database that holds dynamic data to generate real-time graphs. This could be use by government for understanding the suicide patterns and visualizing suicide trends for different years. This will help them to plan schemes ahead of time based on this type of dashboard. This dashboard also supports spatial data visualization, so, government could use systems like this to uniquely understand the suicide trends and reasons for each and every states and union territory. So, they can focus their resources where it is needed to reduce the rate of suicide all over India.

The code for the dashboard is available on GitHub: https://github.com/Ayush-Mitra-7/Sucide_Dash

Conclusion

The number of suicides in India has been increasing at an alarming rate in recent years. In 2015, there were 1,33,623 reported cases of suicide. This number rose to 1,34,599 in 2016 and 1,35,585 in 2017. The most recent data from 2018 shows that the number of suicides has increased yet again to 1,37,523.

There are many factors that contribute to the high rate of suicide in India. One major factor is the lack of awareness about mental health and available resources for those struggling with mental illness. Additionally, the economic situation in India is often very difficult, with many people living in poverty. The social situation in India can also be quite challenging, with a large gap between the rich and the poor. There is also a lot of pressure on women to conform to traditional gender roles.

The government role in preventing suicide is crucial. Unfortunately, there has not been a concerted effort by the government to address this issue. There is a need for more public awareness campaigns about mental health and available resources. Additionally, the government needs to do more to improve the economic and social situations in India.

The Government of India has taken various steps to prevent suicides in the country. Some of these steps include creating awareness about suicide prevention, improving the economic situation and providing social support to those who are vulnerable to suicide. Studies have shown that there is a significant difference in the rate of suicide between men and women. In 2015, the male suicide rate was nearly three times higher than the female suicide rate. However, this gap has been narrowing in recent years. Economic factors, such as unemployment and poverty, are also thought to contribute to the high incidence of suicide in India. The lack of awareness about mental health and wellbeing is another major factor that leads to suicides in India. According to a study conducted by the Indian Journal of Psychiatry, only 38% of Indians are aware of mental health disorders and their treatments. Additionally, only 10% of those suffering from mental health disorders receive any kind of treatment. The government has been working on increasing awareness about mental health through initiatives such as the Mental Healthcare Act 2017.The government also plays a role in preventing suicides through its various policies and programmes. For instance, the Pradhan Mantri Jan Dhan Yojana is a financial inclusion scheme that provides access to banking services for all Indian citizens. This scheme has helped reduce financial stress among people, which is one of the leading causes of suicide. Similarly, schemes like Pradhan Mantri Fasal Bima Yojana provide crop insurance for farmers, which helps protect them.