

WHAT VARIABLES AFFECT SUICIDE IN THE US?

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SUMMARY

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 - Scatter diagram
 - Model
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 - Total rate of suicide
 - Male rate of suicide
 - Women rate of suicide

Objective

The purpose of our study is to discover which variables may have affected the rate of suicide in 2009 in the United States.

Variables:

- Unemployment
- GSP - Gross State Product
- Marriage
- Divorces
- Average Temperature
- Precipitation

Hypothesis

H1= Because of the crisis, a lower GSP will increase rate of suicide.

H2= An increase on unemployment rate will have a negative impact on the suicide rate by increasing it.

H3= Divorces or unhappy marriages could also increase the rate of suicide.

H4= In the states where precipitation are higher, suicide rate will be higher.

H5= In the states where temperature is lower, people will commit more suicide.

To fulfill our purpose we have done three different studies:

- Histogram
- Scatter
- Model

1) States with lowest rate of suicide:

- New York has one of the highest rates of GSP
- Massachusetts has a very low divorce rate

2) States with highest rate of suicide

- Alaska has the lowest GSP and the lowest temperatures
- Nevada has the minimum precipitation rate and the highest rate of divorces and marriages
- Montana has the lowest GSP

With the scatter we can say that the rate of suicide increase when:

- GSP decrease
- Unemployment slightly decrease for total and male suicide rate, when unemployment increases, female rate of suicide increases
- Marriages increase
- Divorces increase
- Temperature slightly decrease
- Precipitation decrease

The variables that make an impact are:

- divorces, precipitations, GSP and marriages (males)
- precipitations, divorces and unemployment (females)

Importance of Variables (%)	TOTAL	MALE	FEMALE
GSP	19	23	7
Unemployment	2	3	3
Marriages	9	7	12
Divorces	44	44	39
Temperature	2	2	4
Precipitation	28	24	27

Conclusions

General

Variable	GSP		Unemployment		Marriages		Divorces		Temperature		Precipitation	
	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter
Affects Suicide (total)	YES	The greater the GSP the lower the rate of suicide	NO	No effect	YES	The higher the marriages the lower the rate of suicide	YES	The higher the divorces the higher the rate of suicide	NO	No effect	YES	At high rate of precipitation, lower rate of suicide
Affects Male Suicide	YES	The higher the GSP the lower the rate of male suicide	NO	No effect	YES	The higher the marriages the lower the rate of male suicide	YES	The higher the divorces the higher the rate of male suicide	NO	No effect	YES	At high rate of precipitation, lower rate of male suicide
Affects Female Suicide	NO	The higher the GSP the lower the rate of female suicide	YES	No effect	NO	The higher the marriages the lower the rate of female suicide	YES	The higher the divorces the higher the rate of female suicide	NO	No effect	YES	At high rate of precipitation, lower rate of female suicide

Conclusion

TOTAL RATE OF SUICIDE

Variables which affect are: divorces, precipitations, marriages and GSP. Massachusetts, New Jersey and New York have the lowest rate of total suicide.

Alaska, Colorado, Idaho, Montana, Nevada, New Mexico and Wyoming are the group with the highest rate of suicide.

Variables	GSP	Unemployment	Divorce	Marriage	Temperature	Precipitations
Max	California New York Texas	Michigan	Nevada	Nevada	Florida Hawaii	Hawaii
Min	Alaska, Arkansas, Delaware, Hawaii, Idaho, Maine, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Rhode Island, South Dakota, Vermont, West Virginia, Wyoming	Nebraska North Dakota South Dakota	Iowa Massachusetts	Mississippi	Alaska	Nevada

Conclusion

MALE RATE OF SUICIDE

For the male rate of suicides the variables which affect are: divorces, precipitations, GSP and marriages.

The states with the lowest rate of male suicide are New Jersey and New York.

The states with the highest rate of male suicide are Montana and Wyoming.

Variables	GSP	Unemployment	Divorce	Marriage	Temperature	Precipitations
Max	California New York Texas	Michigan	Nevada	Nevada	Florida Hawaii	Hawaii
Min	Alaska, Arkansas, Delaware, Hawaii, Idaho, Maine, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Rhode Island, South Dakota, Vermont, West Virginia, Wyoming	Nebraska North Dakota South Dakota	Iowa Massachusetts	Mississippi	Alaska	Nevada

Conclusion

FEMALE RATE OF SUICIDE

For the female rate of suicides the variables which have an impact are: precipitations, divorces and unemployment.

The state with the lowest rate of female suicide is New Jersey.

The states with the highest rate of male suicide are Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico and Oregon.

Variables	GSP	Unemployment	Divorce	Marriage	Temperature	Precipitations
Max	California New York Texas	Michigan	Nevada	Nevada	Florida Hawaii	Hawaii
Min	Alaska , Arkansas, Delaware, Hawaii, Idaho , Maine, Mississippi, Montana , Nebraska, New Hampshire, New Mexico , North Dakota, Rhode Island, South Dakota, Vermont, West Virginia, Wyoming	Nebraska North Dakota South Dakota	Iowa Massachusetts	Mississippi	Alaska	Nevada

Conclusion

Hypothesis

Hypothesis	Variable	GSP		Unemployment		Marriages		Divorces		Temperature		Precipitation	
		Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter	Model (Y/N)	Scatter
↓ GSP ↑ suicide ↑ unemp ↑ suicide ↑ precip ↑ suicide ↑ divor ↑ suicide ↓ temp ↑ suicide	Affects Suicide (total)	YES	The greater the GSP the lower the rate of suicide	NO	No effect	YES	The higher the marriages the lower the rate of suicide	YES	The higher the divorces the higher the rate of suicide	NO	No effect	YES	At high rate of precipitation, lower rate of suicide
	Affects Male Suicide	YES	The higher the GSP the lower the rate of male suicide	NO	No effect	YES	The higher the marriages the lower the rate of male suicide	YES	The higher the divorces the higher the rate of male suicide	NO	No effect	YES	At high rate of precipitation, lower rate of male suicide
	Affects Female Suicide	NO	The higher the GSP the lower the rate of female suicide	YES	The higher the unemployment the lower the rate of female suicide	NO	The higher the marriages the lower the rate of female suicide	YES	The higher the divorces the higher the rate of female suicide	NO	No effect	YES	At high rate of precipitation, lower rate of female suicide

Conclusion

The variable which has a greater impact on suicide rate is divorces

Temperature doesn't affect people to commit suicide

Rate of suicide increases when precipitations decrease

Men and women have different reasons to commit suicide

THANK YOU FOR YOUR ATTENTION