

2016 Suicides vs. Happiness Rankings

Question

Does the World Happiness Report have any correlation to country suicide rates?

Using two data sets, Suicides Per 100,000 and 2015/2016 World Happiness Report, we will look to see if there is a connection between the “happiest” countries and amount of suicides. The World Happiness Report uses economic and social development to determine happiness rank. The report negates the fact there is more to happiness than policy and economic well-being. With the help of data collected by the World Health Organization, a more in-depth analysis can be made about happiness per country.

Male to Female Ratio

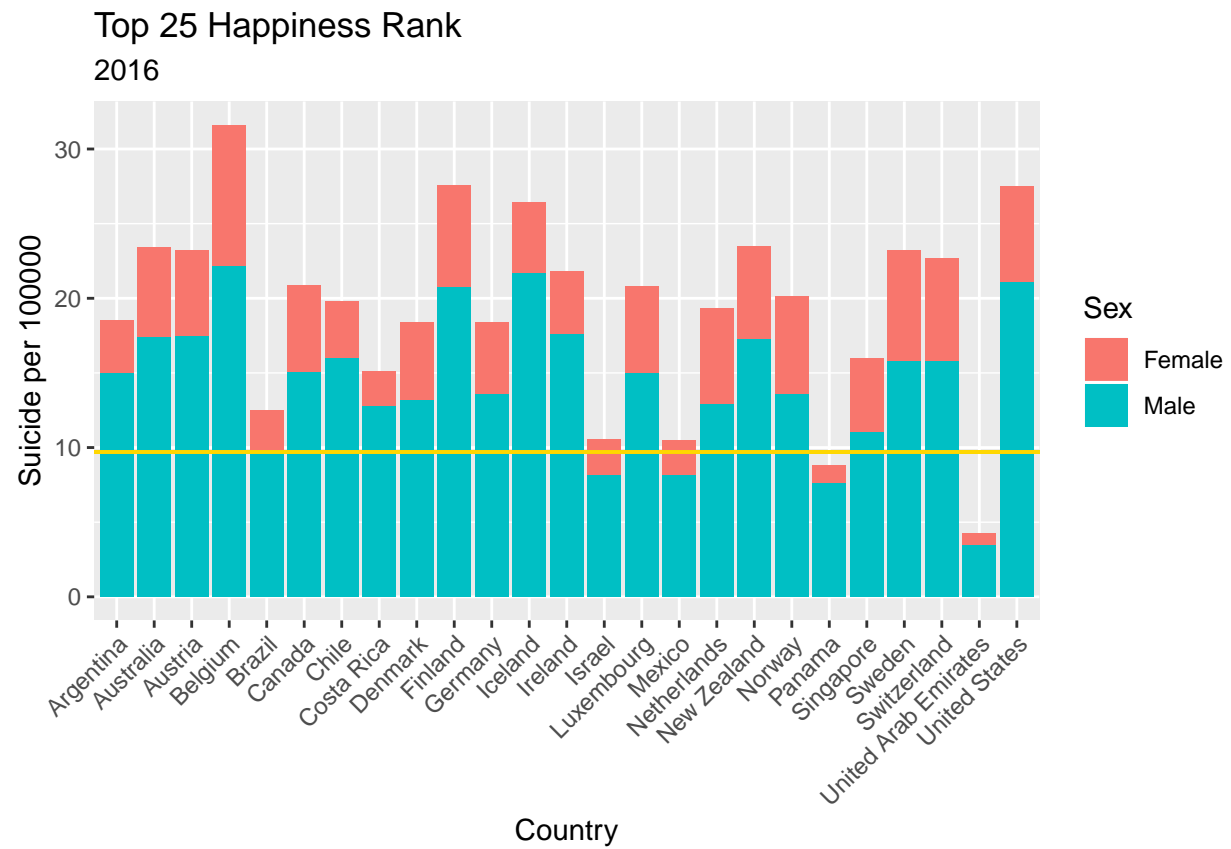
First, let's take a look at the ratio of male to female suicides per region.

Region	Male	Female	Year
Australia and New Zealand	17.4	6.1	2016
Central and Eastern Europe	19.4	4.02	2016
Latin America and Caribbean	14.2	3.76	2016
Middle East and Northern Africa	6.25	2.44	2016
North America	18.1	6.1	2016
Southern Asia	12.3	7.07	2016
Southeastern Asia	9.56	4.4	2016
Sub-Saharan Africa	17	7.31	2016
Western Europe	14.4	5.05	2016

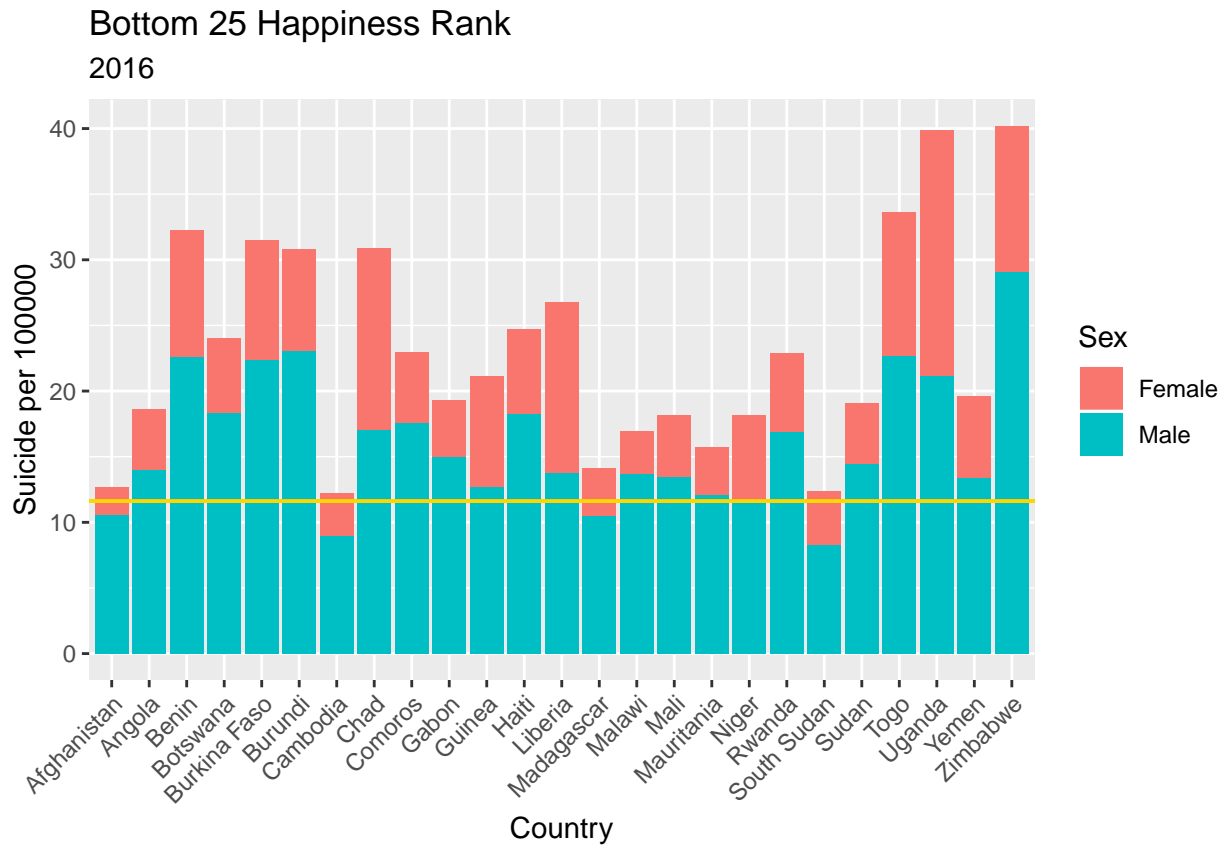
Happiness Rankings and Suicides

By rearranging the *HappinessRank* column into numerical order and taking only the top 25 and the bottom 25 ranked countries, the graphs do not look much different. The top 25 ranked countries have a mean of 9.70 suicides per 100000 while the bottom 25 have 11.6 suicides per 100000.

```
## Selecting by HappinessRank
```



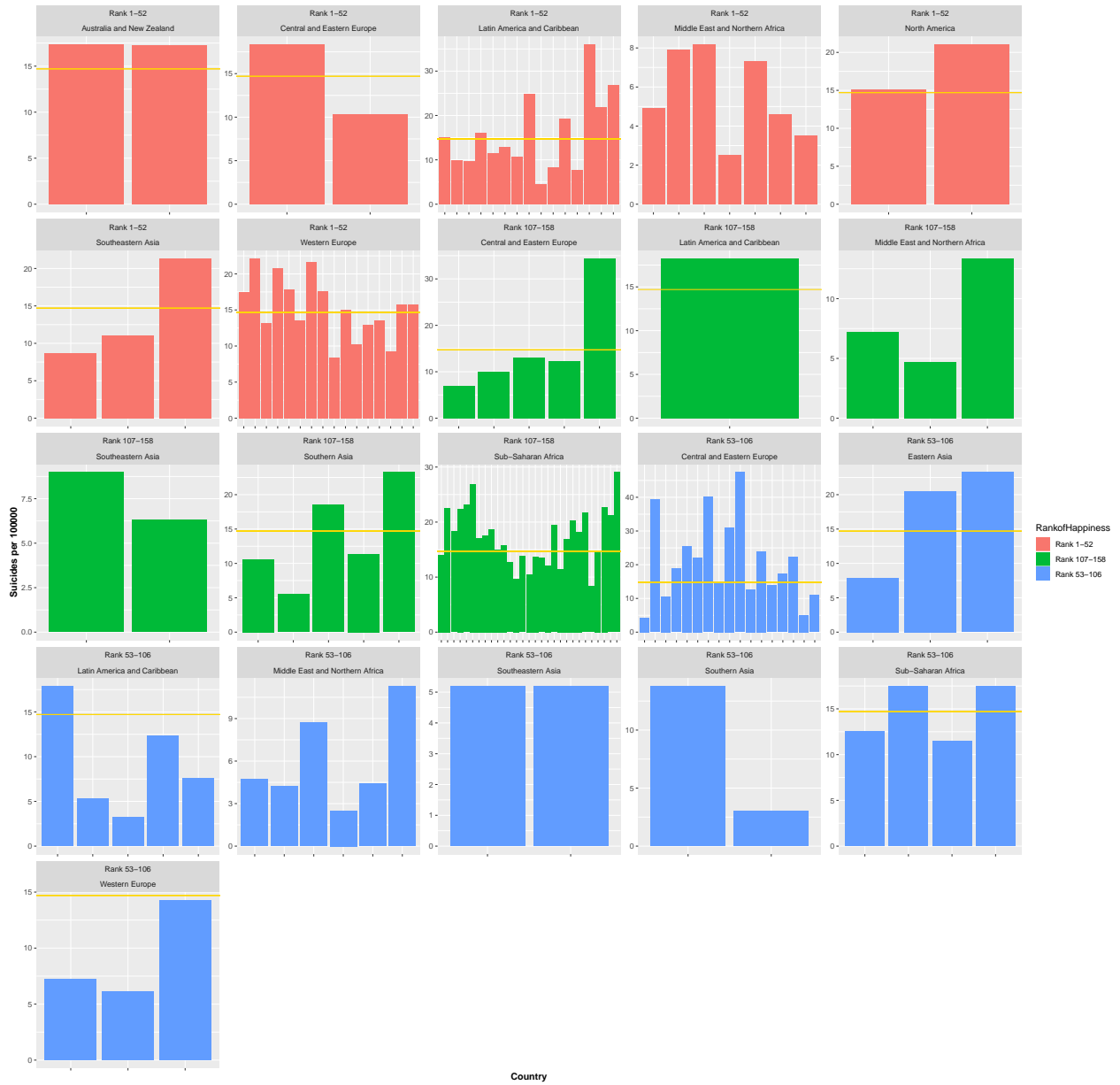
Selecting by HappinessRank



Regions, Ranks, and Suicides

Each region is broken down into tiers of Happiness Rank then separated into graphs. Each graph has the average number of suicides per 100000 based off sex. The only two regions that do not have countries in each tier are Western Europe and North America. Interestingly, the only region with average suicides for male and female below the world average is Middle East and Northern Africa besides one country.

Happiness Rank vs. Suicides
Males, 2016





Tibbles for each region in 2016

Each tibble shows the happiness rank of each country with the suicides per 100000 in 2016 broken up by region.

Australia and New Zealand

```
## # A tibble: 4 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Australia         9          17.4 Male
## 2 Australia         9           6 Female
```

```
## 3 New Zealand      8      17.3 Male
## 4 New Zealand      8      6.2 Female
```

Central and Eastern Europe

```
## # A tibble: 48 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Albania         109           7 Male
## 2 Albania         109          4.3 Female
## 3 Armenia         121          10.1 Male
## 4 Armenia         121           2 Female
## 5 Azerbaijan       81          4.3 Male
## 6 Azerbaijan       81           1 Female
## 7 Belarus          61          39.3 Male
## 8 Belarus          61           6.2 Female
## 9 Bosnia and Herzegovina 87          10.6 Male
## 10 Bosnia and Herzegovina 87           2.5 Female
## # ... with 38 more rows
```

Latin America and Caribbean

```
## # A tibble: 42 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Argentina       26          15 Male
## 2 Argentina       26           3.5 Female
## 3 Belize          52           9.9 Male
## 4 Belize          52           2 Female
## 5 Brazil           17           9.7 Male
## 6 Brazil           17           2.8 Female
## 7 Chile            24          16 Male
## 8 Chile            24           3.8 Female
## 9 Colombia         31          11.5 Male
## 10 Colombia         31           2.8 Female
## # ... with 32 more rows
```

Middle Eastern and Nothern Africa

```
## # A tibble: 32 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Algeria         38           4.9 Male
## 2 Algeria         38           1.8 Female
## 3 Bahrain         42           7.9 Male
## 4 Bahrain         42           2.1 Female
## 5 Egypt          120           7.2 Male
## 6 Egypt          120           1.7 Female
## 7 Iraq           112           4.7 Male
## 8 Iraq           112           3.4 Female
## 9 Israel           11           8.2 Male
## 10 Israel           11           2.4 Female
## # ... with 22 more rows
```

North America

```
## # A tibble: 4 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Canada           6          15.1 Male
## 2 Canada           6           5.8 Female
## 3 United States    13          21.1 Male
## 4 United States    13           6.4 Female
```

Southern Asia

```
## # A tibble: 14 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Afghanistan    154          10.6 Male
## 2 Afghanistan    154           2.1 Female
## 3 Bangladesh     110           5.5 Male
## 4 Bangladesh     110           6.7 Female
## 5 Bhutan          84          13.8 Male
## 6 Bhutan          84           8.9 Female
## 7 India          118          18.5 Male
## 8 India          118          14.5 Female
## 9 Nepal          107          11.4 Male
## 10 Nepal          107           8 Female
## 11 Pakistan       92           3 Male
## 12 Pakistan       92           3.1 Female
## 13 Sri Lanka      117          23.3 Male
## 14 Sri Lanka      117           6.2 Female
```

Southeastern Asia

```
## # A tibble: 14 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Cambodia       140           9 Male
## 2 Cambodia       140          3.2 Female
## 3 Indonesia       79           5.2 Male
## 4 Indonesia       79           2.2 Female
## 5 Malaysia        47           8.7 Male
## 6 Malaysia        47           3.6 Female
## 7 Myanmar        119           6.3 Male
## 8 Myanmar        119           9.8 Female
## 9 Philippines      82           5.2 Male
## 10 Philippines      82           2.3 Female
## 11 Singapore       22          11.1 Male
## 12 Singapore       22           4.9 Female
## 13 Thailand        33          21.4 Male
## 14 Thailand        33           4.8 Female
```

Sub-Saharan Africa

```
## # A tibble: 66 x 4
##   Country      HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Angola          141             14 Male
## 2 Angola          141             4.6 Female
## 3 Benin           153            22.6 Male
## 4 Benin           153             9.6 Female
## 5 Botswana        137            18.3 Male
## 6 Botswana        137             5.7 Female
## 7 Burkina Faso    145            22.4 Male
## 8 Burkina Faso    145             9.1 Female
## 9 Burundi         157            23.1 Male
## 10 Burundi        157             7.7 Female
## # ... with 56 more rows
```

Western Europe

```
## # A tibble: 38 x 4
##   Country HappinessRank SuicidePer100000 Sex
##   <chr>          <dbl>          <dbl> <chr>
## 1 Austria         12            17.5 Male
## 2 Austria         12             5.7 Female
## 3 Belgium         18            22.2 Male
## 4 Belgium         18             9.4 Female
## 5 Cyprus          69             7.2 Male
## 6 Cyprus          69             1.9 Female
## 7 Denmark          1            13.2 Male
## 8 Denmark          1             5.2 Female
## 9 Finland          5            20.8 Male
## 10 Finland          5             6.8 Female
## # ... with 28 more rows
```

Conclusion

Using the World Happiness Report and the Suicides Per 100000 from the World Health Organization it is determined that Happiness Rank and Suicides have no correlation. For example the United States is ranked 14th but have 21.1 suicides per 100000 for males when the average is 14.7. On the other hand Iraq is ranked 112th but males only have 4.7 suicides per 100000.