

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.

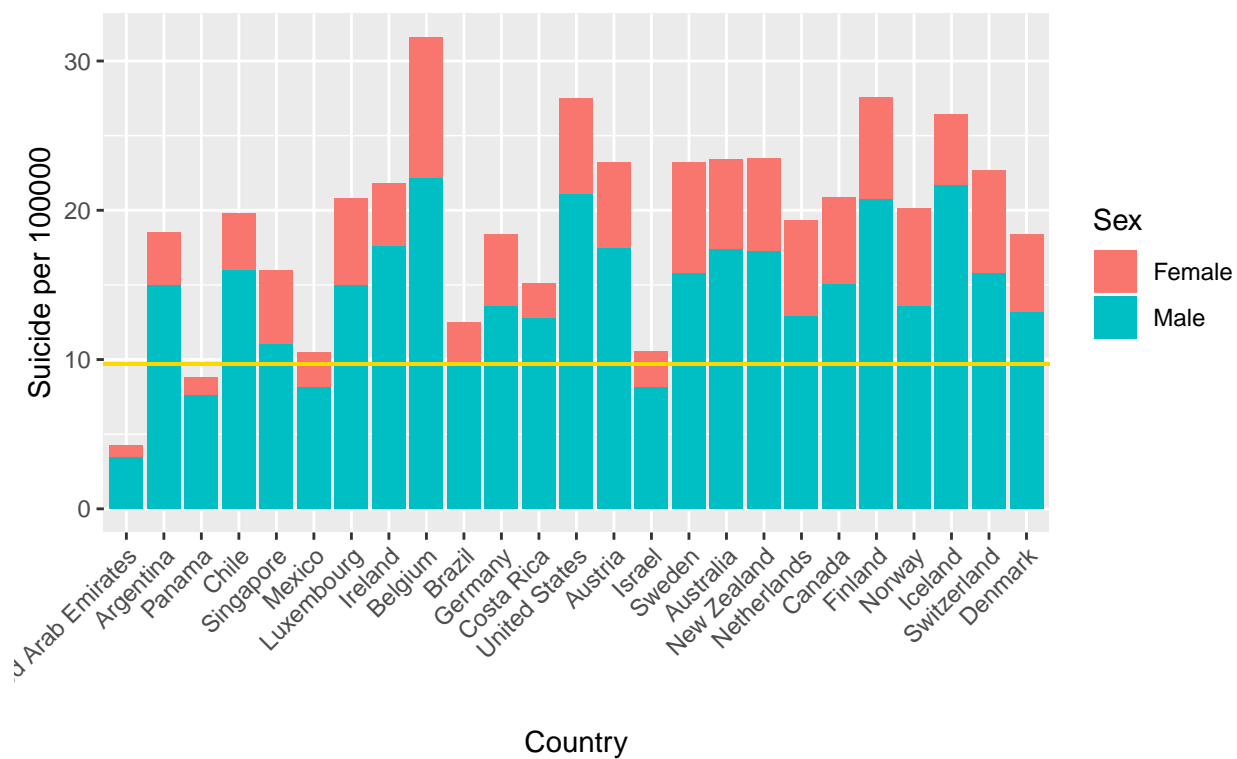
Region	Male	Female	Year
Australia and New Zealand	17.4	6.1	2016
Central and Eastern Europe	19.4	4.02	2016
Latin America and Caribbean	14.2	3.76	2016
Middle East and Northern Africa	6.25	2.44	2016
North America	18.1	6.1	2016
Southern Asia	12.3	7.07	2016
Southeastern Asia	9.56	4.4	2016
Sub-Saharan Africa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

Happiness Rankings and Suicides

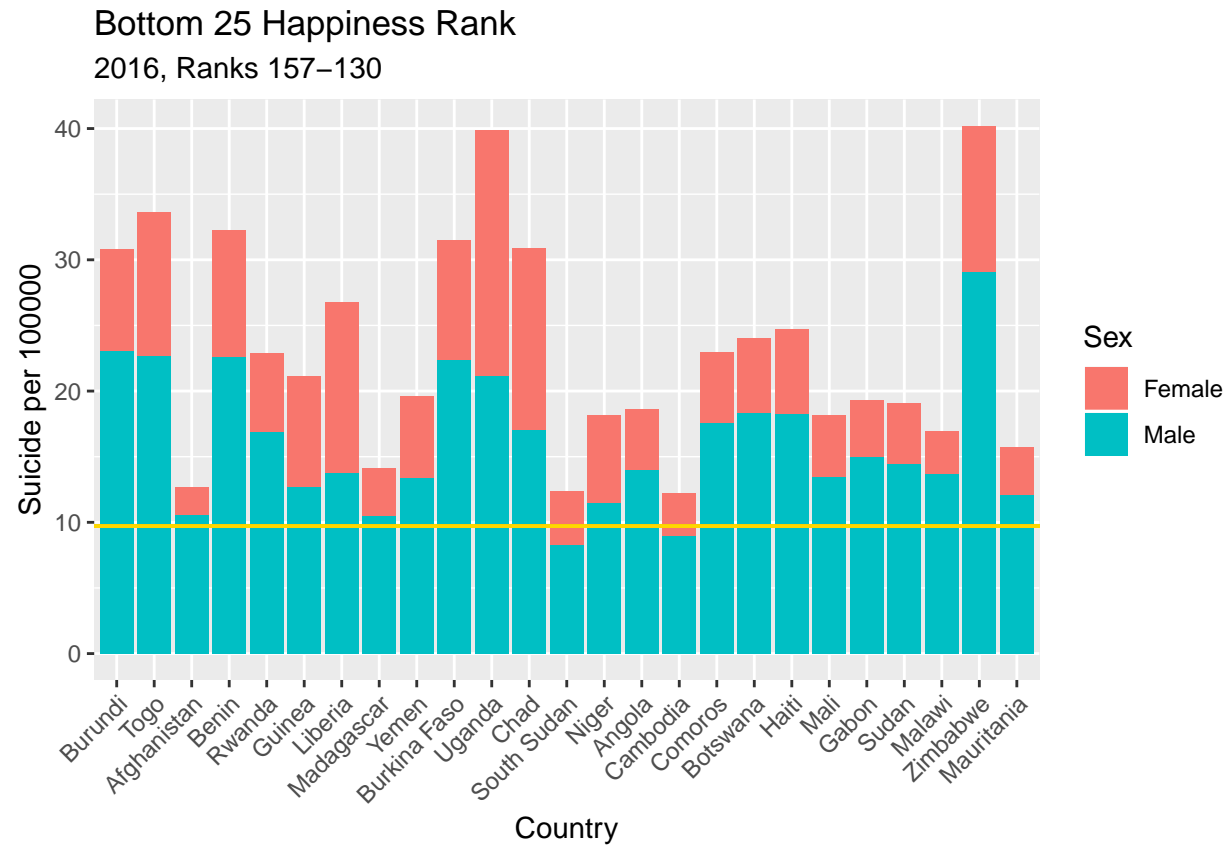
By rearranging the *HappinessRank* column into numerical order and taking only the top 25 and the bottom 25 ranked countries, the graphs do not look much different. The top 25 ranked countries have a mean of 9.70 suicides per 100000 while the bottom 25 have 11.6 suicides per 100000.

```
## Selecting by HappinessRank
```

Top 25 Happiness Rank 2016, Ranks 25–1



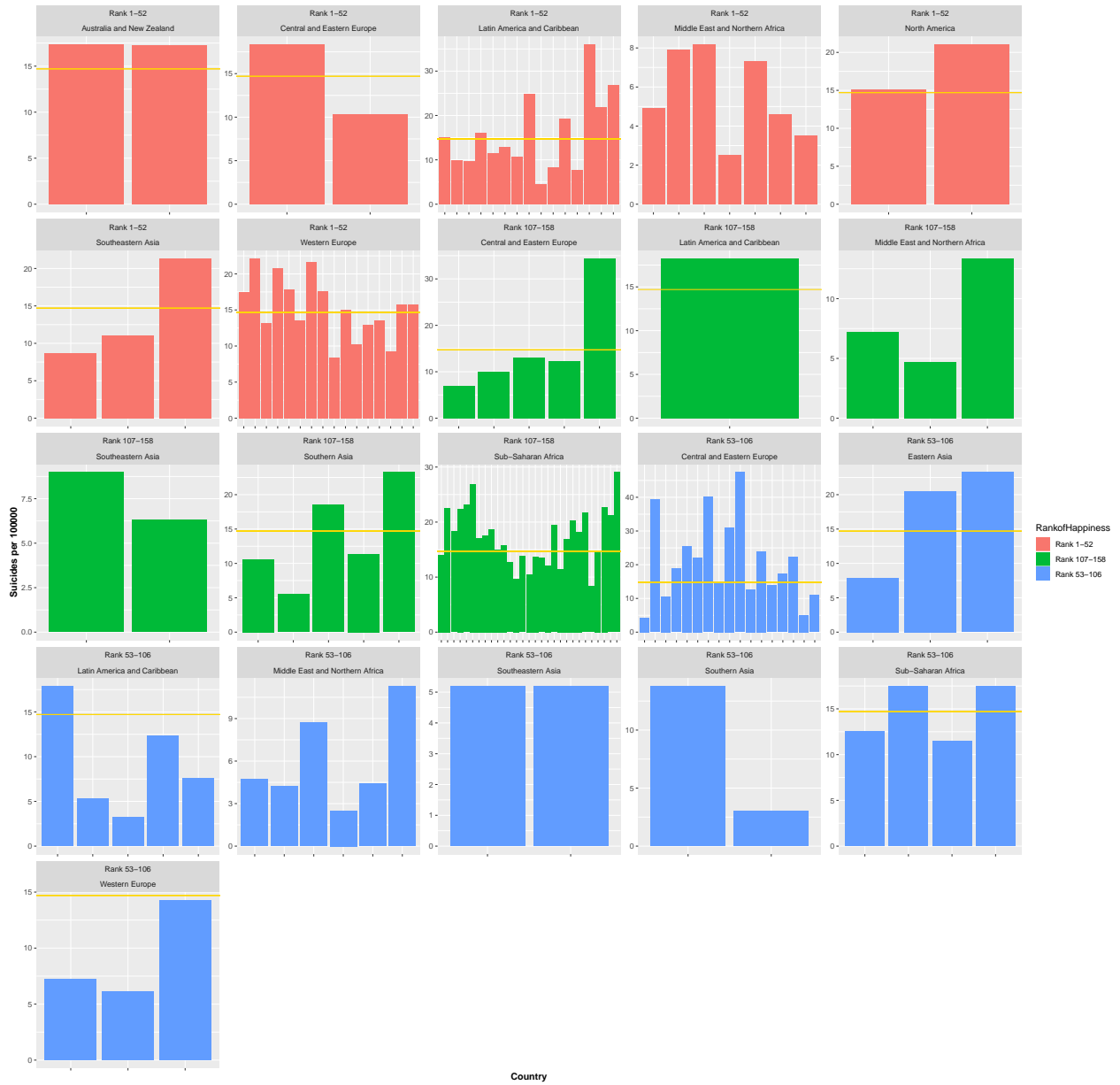
Selecting by HappinessRank



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 Northern 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.