Happiness Score

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Install required packages

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v ggplot2 3.3.5     v purrr   0.3.4
## v tibble  3.1.6     v dplyr   1.0.8
## v tidyr   1.2.0     v stringr 1.4.0
## v readr   2.1.2     v forcats 0.5.1

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

Read the files

```
Hscore_2015 <- read_csv("data/2015.csv")
```

```
## Rows: 158 Columns: 12
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr  (2): Country, Region
## dbl (10): Happiness Rank, Happiness Score, Standard Error, Economy (GDP per ...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
Hscore_2016 <- read_csv("data/2016.csv")
```

```
## Rows: 157 Columns: 13
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr  (2): Country, Region
## dbl (11): Happiness Rank, Happiness Score, Lower Confidence Interval, Upper ...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
Hscore_2017 <- read_csv("data/2017.csv")
```

```
## Rows: 155 Columns: 12
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr  (1): Country
## dbl (11): Happiness.Rank, Happiness.Score, Whisker.high, Whisker.low, Econom...
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

Including columne names

```
colnames(Hscore_2015)
```

```
##  [1] "Country"                       "Region"
##  [3] "Happiness Rank"                "Happiness Score"
##  [5] "Standard Error"                "Economy (GDP per Capita)"
##  [7] "Family"                        "Health (Life Expectancy)"
##  [9] "Freedom"                       "Trust (Government Corruption)"
## [11] "Generosity"                    "Dystopia Residual"
```

```
colnames(Hscore_2016)
```

```
##  [1] "Country"                       "Region"
##  [3] "Happiness Rank"                "Happiness Score"
##  [5] "Lower Confidence Interval"     "Upper Confidence Interval"
##  [7] "Economy (GDP per Capita)"      "Family"
##  [9] "Health (Life Expectancy)"      "Freedom"
## [11] "Trust (Government Corruption)" "Generosity"
## [13] "Dystopia Residual"
```

```
colnames(Hscore_2017)
```

```
##  [1] "Country"                       "Happiness.Rank"
##  [3] "Happiness.Score"               "Whisker.high"
##  [5] "Whisker.low"                   "Economy..GDP.per.Capita."
##  [7] "Family"                        "Health..Life.Expectancy."
##  [9] "Freedom"                       "Generosity"
## [11] "Trust..Government.Corruption." "Dystopia.Residual"
```

Rename the columnes to make them consistent

```
Hscore_2015 <- rename(Hscore_2015,"Happiness_Score" ="Happiness Score","Happiness_Rank" = "Happiness Ra
Hscore_2016 <- rename(Hscore_2016,"Happiness_Score" ="Happiness Score","Happiness_Rank" = "Happiness Ra
Hscore_2017 <- rename(Hscore_2017,"Happiness_Score" ="Happiness.Score","Happiness_Rank" = "Happiness.Ra
```

Lets check out the changes

```
str(Hscore_2015)
```

```
## spec_tbl_df [158 x 12] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ Country          : chr [1:158] "Switzerland" "Iceland" "Denmark" "Norway" ...
##  $ Region           : chr [1:158] "Western Europe" "Western Europe" "Western Europe" "Western Europe
##  $ Happiness_Rank   : num [1:158] 1 2 3 4 5 6 7 8 9 10 ...
##  $ Happiness_Score  : num [1:158] 7.59 7.56 7.53 7.52 7.43 ...
##  $ Standard Error   : num [1:158] 0.0341 0.0488 0.0333 0.0388 0.0355 ...
##  $ Economy          : num [1:158] 1.4 1.3 1.33 1.46 1.33 ...
##  $ Family           : num [1:158] 1.35 1.4 1.36 1.33 1.32 ...
##  $ Health           : num [1:158] 0.941 0.948 0.875 0.885 0.906 ...
##  $ Freedom          : num [1:158] 0.666 0.629 0.649 0.67 0.633 ...
##  $ Trust            : num [1:158] 0.42 0.141 0.484 0.365 0.33 ...
##  $ Generosity       : num [1:158] 0.297 0.436 0.341 0.347 0.458 ...
##  $ Dystopia_Residual: num [1:158] 2.52 2.7 2.49 2.47 2.45 ...
##  - attr(*, "spec")=
##   .. cols(
##   ..   Country = col_character(),
##   ..   Region = col_character(),
##   ..   `Happiness Rank` = col_double(),
##   ..   `Happiness Score` = col_double(),
##   ..   `Standard Error` = col_double(),
##   ..   `Economy (GDP per Capita)` = col_double(),
##   ..   Family = col_double(),
##   ..   `Health (Life Expectancy)` = col_double(),
##   ..   Freedom = col_double(),
##   ..   `Trust (Government Corruption)` = col_double(),
##   ..   Generosity = col_double(),
##   ..   `Dystopia Residual` = col_double()
##   .. )
##  - attr(*, "problems")=<externalptr>
```

```
str(Hscore_2016)
```

```
## spec_tbl_df [157 x 13] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ Country                   : chr [1:157] "Denmark" "Switzerland" "Iceland" "Norway" ...
##  $ Region                    : chr [1:157] "Western Europe" "Western Europe" "Western Europe" "Wester
##  $ Happiness_Rank            : num [1:157] 1 2 3 4 5 6 7 8 9 10 ...
##  $ Happiness_Score           : num [1:157] 7.53 7.51 7.5 7.5 7.41 ...
##  $ Lower Confidence Interval: num [1:157] 7.46 7.43 7.33 7.42 7.35 ...
##  $ Upper Confidence Interval: num [1:157] 7.59 7.59 7.67 7.58 7.47 ...
##  $ Economy                   : num [1:157] 1.44 1.53 1.43 1.58 1.41 ...
##  $ Family                    : num [1:157] 1.16 1.15 1.18 1.13 1.13 ...
##  $ Health                    : num [1:157] 0.795 0.863 0.867 0.796 0.811 ...
##  $ Freedom                   : num [1:157] 0.579 0.586 0.566 0.596 0.571 ...
##  $ Trust                     : num [1:157] 0.445 0.412 0.15 0.358 0.41 ...
##  $ Generosity                : num [1:157] 0.362 0.281 0.477 0.379 0.255 ...
##  $ Dystopia_Residual         : num [1:157] 2.74 2.69 2.83 2.66 2.83 ...
##  - attr(*, "spec")=
##   .. cols(
```

```
##   ..   Country = col_character(),
##   ..   Region = col_character(),
##   ..   `Happiness Rank` = col_double(),
##   ..   `Happiness Score` = col_double(),
##   ..   `Lower Confidence Interval` = col_double(),
##   ..   `Upper Confidence Interval` = col_double(),
##   ..   `Economy (GDP per Capita)` = col_double(),
##   ..   Family = col_double(),
##   ..   `Health (Life Expectancy)` = col_double(),
##   ..   Freedom = col_double(),
##   ..   `Trust (Government Corruption)` = col_double(),
##   ..   Generosity = col_double(),
##   ..   `Dystopia Residual` = col_double()
##   .. )
##  - attr(*, "problems")=<externalptr>
```

```
str(Hscore_2017)
```

```
## spec_tbl_df [155 x 12] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ Country                   : chr [1:155] "Norway" "Denmark" "Iceland" "Switzerland" ...
##  $ Happiness_Rank            : num [1:155] 1 2 3 4 5 6 7 8 9 10 ...
##  $ Happiness_Score           : num [1:155] 7.54 7.52 7.5 7.49 7.47 ...
##  $ Upper Confidence Interval: num [1:155] 7.59 7.58 7.62 7.56 7.53 ...
##  $ Lower Confidence Interval: num [1:155] 7.48 7.46 7.39 7.43 7.41 ...
##  $ Economy                   : num [1:155] 1.62 1.48 1.48 1.56 1.44 ...
##  $ Family                    : num [1:155] 1.53 1.55 1.61 1.52 1.54 ...
##  $ Health                    : num [1:155] 0.797 0.793 0.834 0.858 0.809 ...
##  $ Freedom                   : num [1:155] 0.635 0.626 0.627 0.62 0.618 ...
##  $ Generosity                : num [1:155] 0.362 0.355 0.476 0.291 0.245 ...
##  $ Trust                     : num [1:155] 0.316 0.401 0.154 0.367 0.383 ...
##  $ Dystopia_Residual         : num [1:155] 2.28 2.31 2.32 2.28 2.43 ...
##  - attr(*, "spec")=
##   .. cols(
##   ..   Country = col_character(),
##   ..   Happiness.Rank = col_double(),
##   ..   Happiness.Score = col_double(),
##   ..   Whisker.high = col_double(),
##   ..   Whisker.low = col_double(),
##   ..   Economy..GDP.per.Capita. = col_double(),
##   ..   Family = col_double(),
##   ..   Health..Life.Expectancy. = col_double(),
##   ..   Freedom = col_double(),
##   ..   Generosity = col_double(),
##   ..   Trust..Government.Corruption. = col_double(),
##   ..   Dystopia.Residual = col_double()
##   .. )
##  - attr(*, "problems")=<externalptr>
```

number of observations eliminating duplicates

```
n_distinct(Hscore_2015)
```

```
## [1] 158
```

```
n_distinct(Hscore_2016)
```

```
## [1] 157
```

```
n_distinct(Hscore_2017)
```

```
## [1] 155
```

number of rows in years

```
nrow(Hscore_2015)
```

```
## [1] 158
```

```
nrow(Hscore_2016)
```

```
## [1] 157
```

```
nrow(Hscore_2017)
```

```
## [1] 155
```

Bind the data for further calculations

```
Total <- bind_rows(Hscore_2015, Hscore_2016, Hscore_2017)
```

Inspect the new table that has been created

```
colnames(Total)  #List of column names
```

```
##  [1] "Country"                    "Region"
##  [3] "Happiness_Rank"             "Happiness_Score"
##  [5] "Standard Error"             "Economy"
##  [7] "Family"                     "Health"
##  [9] "Freedom"                    "Trust"
## [11] "Generosity"                 "Dystopia_Residual"
## [13] "Lower Confidence Interval" "Upper Confidence Interval"
```

```
nrow(Total)  #How many rows are in data frame?
```

```
## [1] 470
```

```
dim(Total)  #Dimensions of the data frame?
```

```
## [1] 470  14
```

```
head(Total)  #See the first 6 rows of data frame.  Also tail(all_trips)
```

```
## # A tibble: 6 x 14
##   Country  Region Happiness_Rank Happiness_Score `Standard Error` Economy Family
##   <chr>    <chr>           <dbl>           <dbl>            <dbl>   <dbl>  <dbl>
## 1 Switzer~ Weste~              1            7.59           0.0341    1.40   1.35
## 2 Iceland  Weste~              2            7.56           0.0488    1.30   1.40
## 3 Denmark  Weste~              3            7.53           0.0333    1.33   1.36
## 4 Norway   Weste~              4            7.52           0.0388    1.46   1.33
## 5 Canada   North~              5            7.43           0.0355    1.33   1.32
## 6 Finland  Weste~              6            7.41           0.0314    1.29   1.32
## # ... with 7 more variables: Health <dbl>, Freedom <dbl>, Trust <dbl>,
## #   Generosity <dbl>, Dystopia_Residual <dbl>,
## #   `Lower Confidence Interval` <dbl>, `Upper Confidence Interval` <dbl>
```

```
str(Total)  #See list of columns and data types (numeric, character, etc)
```

```
## spec_tbl_df [470 x 14] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ Country                   : chr [1:470] "Switzerland" "Iceland" "Denmark" "Norway" ...
##  $ Region                    : chr [1:470] "Western Europe" "Western Europe" "Western Europe" "Western
##  $ Happiness_Rank            : num [1:470] 1 2 3 4 5 6 7 8 9 10 ...
##  $ Happiness_Score           : num [1:470] 7.59 7.56 7.53 7.52 7.43 ...
##  $ Standard Error            : num [1:470] 0.0341 0.0488 0.0333 0.0388 0.0355 ...
##  $ Economy                   : num [1:470] 1.4 1.3 1.33 1.46 1.33 ...
##  $ Family                    : num [1:470] 1.35 1.4 1.36 1.33 1.32 ...
##  $ Health                    : num [1:470] 0.941 0.948 0.875 0.885 0.906 ...
##  $ Freedom                   : num [1:470] 0.666 0.629 0.649 0.67 0.633 ...
##  $ Trust                     : num [1:470] 0.42 0.141 0.484 0.365 0.33 ...
##  $ Generosity                : num [1:470] 0.297 0.436 0.341 0.347 0.458 ...
##  $ Dystopia_Residual         : num [1:470] 2.52 2.7 2.49 2.47 2.45 ...
##  $ Lower Confidence Interval: num [1:470] NA NA NA NA NA NA NA NA NA NA ...
##  $ Upper Confidence Interval: num [1:470] NA NA NA NA NA NA NA NA NA NA ...
##  - attr(*, "spec")=
##   .. cols(
##   ..   Country = col_character(),
##   ..   Region = col_character(),
##   ..   `Happiness Rank` = col_double(),
##   ..   `Happiness Score` = col_double(),
##   ..   `Standard Error` = col_double(),
##   ..   `Economy (GDP per Capita)` = col_double(),
##   ..   Family = col_double(),
##   ..   `Health (Life Expectancy)` = col_double(),
##   ..   Freedom = col_double(),
```

```
##   ..   `Trust (Government Corruption)` = col_double(),
##   ..   Generosity = col_double(),
##   ..   `Dystopia Residual` = col_double()
##   .. )
##  - attr(*, "problems")=<externalptr>
```

```
summary(Total)  #Statistical summary of data. Mainly for numerics
```

```
##    Country             Region          Happiness_Rank   Happiness_Score
##  Length:470         Length:470         Min.   :  1.00   Min.   :2.693
##  Class :character   Class :character   1st Qu.: 40.00   1st Qu.:4.509
##  Mode  :character   Mode  :character   Median : 79.00   Median :5.282
##                                        Mean   : 78.83   Mean   :5.371
##                                        3rd Qu.:118.00   3rd Qu.:6.234
##                                        Max.   :158.00   Max.   :7.587
##
##  Standard Error       Economy           Family           Health
##  Min.   :0.01848   Min.   :0.0000   Min.   :0.0000   Min.   :0.0000
##  1st Qu.:0.03727   1st Qu.:0.6053   1st Qu.:0.7930   1st Qu.:0.4023
##  Median :0.04394   Median :0.9954   Median :1.0257   Median :0.6301
##  Mean   :0.04788   Mean   :0.9278   Mean   :0.9903   Mean   :0.5800
##  3rd Qu.:0.05230   3rd Qu.:1.2524   3rd Qu.:1.2287   3rd Qu.:0.7683
##  Max.   :0.13693   Max.   :1.8708   Max.   :1.6106   Max.   :1.0252
##  NA's   :312
##     Freedom           Trust           Generosity     Dystopia_Residual
##  Min.   :0.0000   Min.   :0.00000   Min.   :0.0000   Min.   :0.3286
##  1st Qu.:0.2976   1st Qu.:0.05978   1st Qu.:0.1528   1st Qu.:1.7380
##  Median :0.4183   Median :0.09950   Median :0.2231   Median :2.0946
##  Mean   :0.4028   Mean   :0.13479   Mean   :0.2422   Mean   :2.0927
##  3rd Qu.:0.5169   3rd Qu.:0.17316   3rd Qu.:0.3158   3rd Qu.:2.4556
##  Max.   :0.6697   Max.   :0.55191   Max.   :0.8381   Max.   :3.8377
##
##  Lower Confidence Interval Upper Confidence Interval
##  Min.   :2.521             Min.   :2.865
##  1st Qu.:4.366             1st Qu.:4.552
##  Median :5.211             Median :5.395
##  Mean   :5.269             Mean   :5.467
##  3rd Qu.:6.087             3rd Qu.:6.383
##  Max.   :7.480             Max.   :7.669
##  NA's   :158               NA's   :158
```

```
mean(Total$`Happiness_Score`) #straight average (total score / n)
```

```
## [1] 5.370728
```

```
median(Total$`Happiness_Score`) #midpoint number in the ascending array of score
```

```
## [1] 5.2825
```

```
max(Total$`Happiness_Score`) #high score
```

```
## [1] 7.587
```

```r
min(Total$`Happiness_Score`) #low score
```

```
## [1] 2.693
```

```r
sd(Total$Happiness_Score,na.rm = FALSE)
```

```
## [1] 1.136998
```

Provide summary

```r
summary(Total$`Happiness_Score`)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   2.693   4.509   5.282   5.371   6.234   7.587
```

Find aggregation of Score and Family

```r
aggregate(Total$`Happiness_Score` ~ Total$Family, FUN = mean)
```

```
##     Total$Family Total$Happiness_Score
## 1      0.0000000              3.224667
## 2      0.1041900              3.484000
## 3      0.1103700              3.360000
## 4      0.1399500              2.839000
## 5      0.1470000              4.156000
## 6      0.1486600              3.069000
## 7      0.1851900              3.832000
## 8      0.1924900              4.252000
## 9      0.2344200              2.905000
## 10     0.2474900              4.643000
## 11     0.2613500              5.132000
## 12     0.2924700              4.404000
## 13     0.2956100              4.028000
## 14     0.3028500              3.575000
## 15     0.3109000              3.607000
## 16     0.3361300              5.440000
## 17     0.3538600              3.340000
## 18     0.3793200              4.508000
## 19     0.3817400              4.565000
## 20     0.3856200              4.297000
## 21     0.3859500              5.151000
## 22     0.3885700              4.813000
## 23     0.3961026              3.462000
## 24     0.4113400              4.292000
## 25     0.4141100              5.194000
## 26     0.4158700              2.905000
```

```
## 27     0.4310600             4.694000
## 28     0.4316500             5.045000
## 29     0.4318825             3.495000
## 30     0.4352998             3.657000
## 31     0.4611500             3.695000
## 32     0.4647500             3.656000
## 33     0.4748900             3.006000
## 34     0.4749300             3.724000
## 35     0.4779900             4.236000
## 36     0.4935300             4.276000
## 37     0.4981300             4.362000
## 38     0.5016300             4.655000
## 39     0.5035300             3.622000
## 40     0.5125688             3.970000
## 41     0.5375000             3.907000
## 42     0.5444700             4.686000
## 43     0.5497000             4.876000
## 44     0.5706149             4.286000
## 45     0.5757600             3.916000
## 46     0.5815433             3.794000
## 47     0.5920500             4.575000
## 48     0.5920700             4.369000
## 49     0.6013231             3.591000
## 50     0.6032300             3.956000
## 51     0.6040600             4.512000
## 52     0.6042900             4.739000
## 53     0.6053000             3.856000
## 54     0.6080900             5.488000
## 55     0.6158600             3.515000
## 56     0.6247700             4.360000
## 57     0.6254200             4.513000
## 58     0.6273600             3.819000
## 59     0.6280000             4.635000
## 60     0.6297936             2.905000
## 61     0.6305400             3.739000
## 62     0.6317800             3.763000
## 63     0.6376000             4.795000
## 64     0.6404498             3.603000
## 65     0.6409500             5.013000
## 66     0.6418400             5.129000
## 67     0.6436700             5.163000
## 68     0.6449800             4.875000
## 69     0.6606200             5.401000
## 70     0.6629000             3.989000
## 71     0.6636600             3.866000
## 72     0.6680100             3.681000
## 73     0.6726907             5.269000
## 74     0.6795400             4.633000
## 75     0.6809300             4.077000
## 76     0.6865500             5.956000
## 77     0.6969900             4.793000
## 78     0.6998100             4.395000
## 79     0.7036200             4.574000
## 80     0.7069700             5.546000
```

```
## 81     0.7090500             4.307000
## 82     0.7115512             4.692000
## 83     0.7146000             6.778000
## 84     0.7147800             4.193000
## 85     0.7162900             4.754000
## 86     0.7211514             5.151000
## 87     0.7219400             5.835000
## 88     0.7236800             4.121000
## 89     0.7280300             5.528000
## 90     0.7351317             4.608000
## 91     0.7380300             4.876000
## 92     0.7417300             5.161000
## 93     0.7430200             4.518000
## 94     0.7470000             4.194000
## 95     0.7543726             4.315000
## 96     0.7547300             5.033000
## 97     0.7559600             4.871000
## 98     0.7560200             4.996000
## 99     0.7569500             5.648000
## 100    0.7586200             5.057000
## 101    0.7604200             5.291000
## 102    0.7606200             3.667000
## 103    0.7624000             4.356000
## 104    0.7711500             3.655000
## 105    0.7726500             3.845000
## 106    0.7737000             3.465000
## 107    0.7741600             4.219000
## 108    0.7748644             5.235000
## 109    0.7762300             3.666000
## 110    0.7771100             4.350000
## 111    0.7786600             6.269000
## 112    0.7823600             5.121000
## 113    0.7896800             4.571000
## 114    0.7911700             5.061000
## 115    0.7912447             3.507000
## 116    0.7927300             3.956000
## 117    0.7938100             5.245000
## 118    0.7962400             5.759000
## 119    0.8000100             4.839000
## 120    0.8036852             4.644000
## 121    0.8043400             4.959000
## 122    0.8067600             4.272000
## 123    0.8097500             6.068000
## 124    0.8119800             5.589000
## 125    0.8125500             5.743000
## 126    0.8132900             5.177000
## 127    0.8182600             5.771000
## 128    0.8188900             4.677000
## 129    0.8192800             4.139000
## 130    0.8313200             5.897000
## 131    0.8320444             4.291000
## 132    0.8330900             6.355000
## 133    0.8377900             5.822000
## 134    0.8414200             4.201000
```

```
## 135    0.8478300             4.415000
## 136    0.8482900             6.379000
## 137    0.8518800             3.587000
## 138    0.8556300             4.786000
## 139    0.8597400             5.976000
## 140    0.8604000             4.033000
## 141    0.8621600             5.303000
## 142    0.8633300             4.073000
## 143    0.8644900             4.514000
## 144    0.8646692             4.460000
## 145    0.8675800             6.739000
## 146    0.8683515             4.805000
## 147    0.8690800             4.436000
## 148    0.8702100             5.458000
## 149    0.8707010             4.550000
## 150    0.8711400             6.573000
## 151    0.8711900             6.324000
## 152    0.8721179             3.533000
## 153    0.8736647             4.120000
## 154    0.8762500             5.314000
## 155    0.8771700             5.389000
## 156    0.8775800             6.239000
## 157    0.8787700             5.279000
## 158    0.8796400             6.375000
## 159    0.8802500             6.005000
## 160    0.8858800             5.124000
## 161    0.8876700             4.252000
## 162    0.8918600             3.974000
## 163    0.8931800             5.689000
## 164    0.8952100             5.992000
## 165    0.9043200             5.268000
## 166    0.9047800             4.180000
## 167    0.9052800             3.896000
## 168    0.9055700             5.192000
## 169    0.9058700             6.705000
## 170    0.9083600             5.196000
## 171    0.9098100             3.739000
## 172    0.9122600             5.360000
## 173    0.9130204             3.644000
## 174    0.9145100             7.187000
## 175    0.9161200             5.129000
## 176    0.9191600             4.949000
## 177    0.9254200             4.217000
## 178    0.9255800             4.715000
## 179    0.9262400             6.379000
## 180    0.9293300             4.857000
## 181    0.9316400             5.145000
## 182    0.9353822             3.593000
## 183    0.9379300             5.212000
## 184    0.9436700             5.123000
## 185    0.9439700             6.218000
## 186    0.9457070             3.471000
## 187    0.9460182             4.695000
## 188    0.9463200             5.332000
```

```
## 189    0.9467500             5.140000
## 190    0.9502500             5.560000
## 191    0.9507600             5.615000
## 192    0.9515200             5.057000
## 193    0.9534800             4.788000
## 194    0.9538559             3.936000
## 195    0.9543400             5.185000
## 196    0.9554400             5.919000
## 197    0.9557100             4.507000
## 198    0.9577400             5.984000
## 199    0.9605300             4.459000
## 200    0.9637200             5.510000
## 201    0.9679830             5.293000
## 202    0.9720000             6.269000
## 203    0.9745900             5.824000
## 204    0.9761900             3.904000
## 205    0.9784100             5.890000
## 206    0.9786132             4.497000
## 207    0.9841360             4.709000
## 208    0.9852100             5.477000
## 209    0.9856900             6.168000
## 210    0.9891200             6.701000
## 211    0.9930250             4.028000
## 212    0.9949600             5.155000
## 213    0.9953700             7.267000
## 214    0.9974714             4.735000
## 215    0.9987600             4.419000
## 216    0.9990300             5.975000
## 217    1.0012000             4.517000
## 218    1.0023200             5.007000
## 219    1.0026800             3.781000
## 220    1.0031873             4.514000
## 221    1.0050800             6.478000
## 222    1.0062383             4.168000
## 223    1.0074837             4.376000
## 224    1.0079300             6.596000
## 225    1.0096400             5.123000
## 226    1.0140400             4.550000
## 227    1.0141300             4.324000
## 228    1.0152800             5.889000
## 229    1.0190500             4.271000
## 230    1.0200000             6.798000
## 231    1.0215200             7.087000
## 232    1.0216900             6.481000
## 233    1.0250700             6.130000
## 234    1.0262600             4.971000
## 235    1.0291200             7.339000
## 236    1.0314300             6.545000
## 237    1.0327600             4.610000
## 238    1.0330200             6.084000
## 239    1.0351600             5.073000
## 240    1.0352600             3.995000
## 241    1.0381700             5.658000
## 242    1.0393800             6.952000
```

```
## 243    1.0399900             6.871000
## 244    1.0410300             4.898000
## 245    1.0416700             5.977000
## 246    1.0419898             3.349000
## 247    1.0432800             4.032000
## 248    1.0435600             6.123000
## 249    1.0447700             6.474000
## 250    1.0468500             5.835000
## 251    1.0478200             7.104000
## 252    1.0499300             5.802000
## 253    1.0516300             5.517000
## 254    1.0524900             6.929000
## 255    1.0526100             5.856000
## 256    1.0539200             5.192000
## 257    1.0561300             5.768000
## 258    1.0581800             5.474000
## 259    1.0605400             5.921000
## 260    1.0641100             5.813000
## 261    1.0661200             6.650000
## 262    1.0679507             4.553000
## 263    1.0693359             5.182000
## 264    1.0700800             5.695000
## 265    1.0702300             5.770000
## 266    1.0728400             4.867000
## 267    1.0761700             6.298000
## 268    1.0777200             5.605000
## 269    1.0786000             6.611000
## 270    1.0811300             7.039000
## 271    1.0814178             5.956000
## 272    1.0818200             6.853000
## 273    1.0826800             6.078000
## 274    1.0830959             3.875000
## 275    1.0838300             7.119000
## 276    1.0839300             6.411000
## 277    1.0867200             6.725000
## 278    1.0870800             5.399000
## 279    1.0876400             7.291000
## 280    1.0898300             4.907000
## 281    1.0956200             5.098000
## 282    1.0961000             7.404000
## 283    1.0977400             6.994000
## 284    1.0984708             4.574000
## 285    1.0987900             6.488000
## 286    1.1039500             5.253000
## 287    1.1044120             3.795000
## 288    1.1046400             4.332000
## 289    1.1047600             7.313000
## 290    1.1061400             4.218000
## 291    1.1111100             5.538000
## 292    1.1186200             5.754000
## 293    1.1224100             5.855000
## 294    1.1232359             4.545000
## 295    1.1244700             6.670000
## 296    1.1257500             6.901000
```

```
## 297    1.1269000             7.498000
## 298    1.1282744             5.838000
## 299    1.1294500             6.361000
## 300    1.1296242             5.225000
## 301    1.1298277             4.081000
## 302    1.1313633             5.621000
## 303    1.1329900             3.931000
## 304    1.1346400             7.413000
## 305    1.1378535             5.279000
## 306    1.1393500             5.102000
## 307    1.1418400             5.828000
## 308    1.1439450             5.181000
## 309    1.1452400             7.509000
## 310    1.1462175             5.872000
## 311    1.1500913             5.825000
## 312    1.1510200             5.709000
## 313    1.1511500             5.286000
## 314    1.1524003             5.234000
## 315    1.1556202             4.465000
## 316    1.1556472             4.775000
## 317    1.1608374             5.273000
## 318    1.1615700             6.907000
## 319    1.1637400             7.526000
## 320    1.1659400             6.295000
## 321    1.1681000             5.987000
## 322    1.1720200             4.885000
## 323    1.1727800             7.334000
## 324    1.1792833             4.962000
## 325    1.1796919             4.535000
## 326    1.1821251             6.003000
## 327    1.1832600             7.501000
## 328    1.1835400             6.168000
## 329    1.1846800             4.642000
## 330    1.1863034             5.810000
## 331    1.1900952             3.808000
## 332    1.1977700             5.948000
## 333    1.1985000             6.786000
## 334    1.2021500             4.800000
## 335    1.2027800             4.681000
## 336    1.2064300             6.505000
## 337    1.2078930             5.175000
## 338    1.2089000             6.485000
## 339    1.2095610             5.629000
## 340    1.2108622             6.578000
## 341    1.2140086             4.139000
## 342    1.2157705             5.074000
## 343    1.2162400             5.960000
## 344    1.2187704             5.715000
## 345    1.2196300             6.946000
## 346    1.2215550             3.766000
## 347    1.2239300             7.278000
## 348    1.2266800             5.548000
## 349    1.2276191             5.823000
## 350    1.2279100             5.429000
```

```
## 351    1.2290235             4.280000
## 352    1.2328700             6.983000
## 353    1.2328900             5.813000
## 354    1.2361700             5.716000
## 355    1.2378800             7.226000
## 356    1.2383765             5.237000
## 357    1.2390889             5.336000
## 358    1.2394146             5.227000
## 359    1.2401800             6.477000
## 360    1.2471100             7.119000
## 361    1.2482300             6.574000
## 362    1.2518256             5.838000
## 363    1.2539176             5.430000
## 364    1.2555852             6.454000
## 365    1.2559600             6.810000
## 366    1.2571200             5.987000
## 367    1.2574500             5.833000
## 368    1.2581898             5.395000
## 369    1.2596987             6.105000
## 370    1.2599764             4.440000
## 371    1.2603800             6.575000
## 372    1.2627909             5.472000
## 373    1.2650400             6.455000
## 374    1.2664102             6.648000
## 375    1.2699900             5.995000
## 376    1.2714633             5.041000
## 377    1.2720308             4.292000
## 378    1.2738500             5.848000
## 379    1.2742969             6.375000
## 380    1.2744447             5.262000
## 381    1.2774913             5.074000
## 382    1.2794800             5.791000
## 383    1.2801700             7.378000
## 384    1.2814734             4.190000
## 385    1.2840250             6.652000
## 386    1.2846460             6.084000
## 387    1.2854800             6.867000
## 388    1.2856600             6.937000
## 389    1.2861688             6.008000
## 390    1.2866776             6.344000
## 391    1.2872157             6.071000
## 392    1.2890700             7.364000
## 393    1.2970400             7.200000
## 394    1.2993700             6.750000
## 395    1.3006000             4.874000
## 396    1.3020300             6.302000
## 397    1.3047700             5.878000
## 398    1.3092300             7.284000
## 399    1.3137900             6.329000
## 400    1.3182600             7.406000
## 401    1.3196700             7.286000
## 402    1.3226100             7.427000
## 403    1.3231105             6.087000
## 404    1.3309500             7.522000
```

```
## 405    1.3377532             5.500000
## 406    1.3401265             5.011000
## 407    1.3404300             6.003000
## 408    1.3431331             5.324000
## 409    1.3495100             7.587000
## 410    1.3538144             6.572000
## 411    1.3575643             5.525000
## 412    1.3605800             7.527000
## 413    1.3670430             5.195000
## 414    1.3682181             5.311000
## 415    1.3694800             6.940000
## 416    1.3731925             6.452000
## 417    1.3762900             7.213000
## 418    1.3802285             6.168000
## 419    1.3843690             5.819000
## 420    1.3845654             6.422000
## 421    1.3847886             4.829000
## 422    1.3877769             6.442000
## 423    1.3942386             5.004000
## 424    1.3945376             4.096000
## 425    1.4021829             6.357000
## 426    1.4022300             7.561000
## 427    1.4024167             5.230000
## 428    1.4047149             5.850000
## 429    1.4122279             6.454000
## 430    1.4164037             7.079000
## 431    1.4199206             6.993000
## 432    1.4257925             6.424000
## 433    1.4289392             7.377000
## 434    1.4313060             6.635000
## 435    1.4313376             5.250000
## 436    1.4338852             6.609000
## 437    1.4343795             4.714000
## 438    1.4363378             5.920000
## 439    1.4404511             6.599000
## 440    1.4449233             5.964000
## 441    1.4449452             5.569000
## 442    1.4457120             5.973000
## 443    1.4525188             5.758000
## 444    1.4575837             6.863000
## 445    1.4599450             7.006000
## 446    1.4623127             6.891000
## 447    1.4692824             5.963000
## 448    1.4725204             6.951000
## 449    1.4735161             5.902000
## 450    1.4766711             5.611000
## 451    1.4781622             7.284000
## 452    1.4813490             7.316000
## 453    1.4884117             6.527000
## 454    1.4930112             4.955000
## 455    1.4931492             5.822000
## 456    1.4964601             6.714000
## 457    1.5050592             6.098000
## 458    1.5072849             5.493000
```

```
## 459    1.5100420              7.284000
## 460    1.5169117              7.494000
## 461    1.5320909              6.403000
## 462    1.5335236              7.537000
## 463    1.5402467              7.469000
## 464    1.5481951              7.314000
## 465    1.5489691              5.971000
## 466    1.5511216              7.522000
## 467    1.5582311              6.977000
## 468    1.6105740              7.504000
```

```
aggregate(Total$`Happiness_Score` ~ Total$Family, FUN = median)
```

```
##     Total$Family Total$Happiness_Score
## 1      0.0000000                  3.303
## 2      0.1041900                  3.484
## 3      0.1103700                  3.360
## 4      0.1399500                  2.839
## 5      0.1470000                  4.156
## 6      0.1486600                  3.069
## 7      0.1851900                  3.832
## 8      0.1924900                  4.252
## 9      0.2344200                  2.905
## 10     0.2474900                  4.643
## 11     0.2613500                  5.132
## 12     0.2924700                  4.404
## 13     0.2956100                  4.028
## 14     0.3028500                  3.575
## 15     0.3109000                  3.607
## 16     0.3361300                  5.440
## 17     0.3538600                  3.340
## 18     0.3793200                  4.508
## 19     0.3817400                  4.565
## 20     0.3856200                  4.297
## 21     0.3859500                  5.151
## 22     0.3885700                  4.813
## 23     0.3961026                  3.462
## 24     0.4113400                  4.292
## 25     0.4141100                  5.194
## 26     0.4158700                  2.905
## 27     0.4310600                  4.694
## 28     0.4316500                  5.045
## 29     0.4318825                  3.495
## 30     0.4352998                  3.657
## 31     0.4611500                  3.695
## 32     0.4647500                  3.656
## 33     0.4748900                  3.006
## 34     0.4749300                  3.724
## 35     0.4779900                  4.236
## 36     0.4935300                  4.276
## 37     0.4981300                  4.362
## 38     0.5016300                  4.655
## 39     0.5035300                  3.622
## 40     0.5125688                  3.970
```

```
## 41     0.5375000              3.907
## 42     0.5444700              4.686
## 43     0.5497000              4.876
## 44     0.5706149              4.286
## 45     0.5757600              3.916
## 46     0.5815433              3.794
## 47     0.5920500              4.575
## 48     0.5920700              4.369
## 49     0.6013231              3.591
## 50     0.6032300              3.956
## 51     0.6040600              4.512
## 52     0.6042900              4.739
## 53     0.6053000              3.856
## 54     0.6080900              5.488
## 55     0.6158600              3.515
## 56     0.6247700              4.360
## 57     0.6254200              4.513
## 58     0.6273600              3.819
## 59     0.6280000              4.635
## 60     0.6297936              2.905
## 61     0.6305400              3.739
## 62     0.6317800              3.763
## 63     0.6376000              4.795
## 64     0.6404498              3.603
## 65     0.6409500              5.013
## 66     0.6418400              5.129
## 67     0.6436700              5.163
## 68     0.6449800              4.875
## 69     0.6606200              5.401
## 70     0.6629000              3.989
## 71     0.6636600              3.866
## 72     0.6680100              3.681
## 73     0.6726907              5.269
## 74     0.6795400              4.633
## 75     0.6809300              4.077
## 76     0.6865500              5.956
## 77     0.6969900              4.793
## 78     0.6998100              4.395
## 79     0.7036200              4.574
## 80     0.7069700              5.546
## 81     0.7090500              4.307
## 82     0.7115512              4.692
## 83     0.7146000              6.778
## 84     0.7147800              4.193
## 85     0.7162900              4.754
## 86     0.7211514              5.151
## 87     0.7219400              5.835
## 88     0.7236800              4.121
## 89     0.7280300              5.528
## 90     0.7351317              4.608
## 91     0.7380300              4.876
## 92     0.7417300              5.161
## 93     0.7430200              4.518
## 94     0.7470000              4.194
```

```
## 95     0.7543726              4.315
## 96     0.7547300              5.033
## 97     0.7559600              4.871
## 98     0.7560200              4.996
## 99     0.7569500              5.648
## 100    0.7586200              5.057
## 101    0.7604200              5.291
## 102    0.7606200              3.667
## 103    0.7624000              4.356
## 104    0.7711500              3.655
## 105    0.7726500              3.845
## 106    0.7737000              3.465
## 107    0.7741600              4.219
## 108    0.7748644              5.235
## 109    0.7762300              3.666
## 110    0.7771100              4.350
## 111    0.7786600              6.269
## 112    0.7823600              5.121
## 113    0.7896800              4.571
## 114    0.7911700              5.061
## 115    0.7912447              3.507
## 116    0.7927300              3.956
## 117    0.7938100              5.245
## 118    0.7962400              5.759
## 119    0.8000100              4.839
## 120    0.8036852              4.644
## 121    0.8043400              4.959
## 122    0.8067600              4.272
## 123    0.8097500              6.068
## 124    0.8119800              5.589
## 125    0.8125500              5.743
## 126    0.8132900              5.177
## 127    0.8182600              5.771
## 128    0.8188900              4.677
## 129    0.8192800              4.139
## 130    0.8313200              5.897
## 131    0.8320444              4.291
## 132    0.8330900              6.355
## 133    0.8377900              5.822
## 134    0.8414200              4.201
## 135    0.8478300              4.415
## 136    0.8482900              6.379
## 137    0.8518800              3.587
## 138    0.8556300              4.786
## 139    0.8597400              5.976
## 140    0.8604000              4.033
## 141    0.8621600              5.303
## 142    0.8633300              4.073
## 143    0.8644900              4.514
## 144    0.8646692              4.460
## 145    0.8675800              6.739
## 146    0.8683515              4.805
## 147    0.8690800              4.436
## 148    0.8702100              5.458
```

```
## 149    0.8707010              4.550
## 150    0.8711400              6.573
## 151    0.8711900              6.324
## 152    0.8721179              3.533
## 153    0.8736647              4.120
## 154    0.8762500              5.314
## 155    0.8771700              5.389
## 156    0.8775800              6.239
## 157    0.8787700              5.279
## 158    0.8796400              6.375
## 159    0.8802500              6.005
## 160    0.8858800              5.124
## 161    0.8876700              4.252
## 162    0.8918600              3.974
## 163    0.8931800              5.689
## 164    0.8952100              5.992
## 165    0.9043200              5.268
## 166    0.9047800              4.180
## 167    0.9052800              3.896
## 168    0.9055700              5.192
## 169    0.9058700              6.705
## 170    0.9083600              5.196
## 171    0.9098100              3.739
## 172    0.9122600              5.360
## 173    0.9130204              3.644
## 174    0.9145100              7.187
## 175    0.9161200              5.129
## 176    0.9191600              4.949
## 177    0.9254200              4.217
## 178    0.9255800              4.715
## 179    0.9262400              6.379
## 180    0.9293300              4.857
## 181    0.9316400              5.145
## 182    0.9353822              3.593
## 183    0.9379300              5.212
## 184    0.9436700              5.123
## 185    0.9439700              6.218
## 186    0.9457070              3.471
## 187    0.9460182              4.695
## 188    0.9463200              5.332
## 189    0.9467500              5.140
## 190    0.9502500              5.560
## 191    0.9507600              5.615
## 192    0.9515200              5.057
## 193    0.9534800              4.788
## 194    0.9538559              3.936
## 195    0.9543400              5.185
## 196    0.9554400              5.919
## 197    0.9557100              4.507
## 198    0.9577400              5.984
## 199    0.9605300              4.459
## 200    0.9637200              5.510
## 201    0.9679830              5.293
## 202    0.9720000              6.269
```

```
## 203    0.9745900              5.824
## 204    0.9761900              3.904
## 205    0.9784100              5.890
## 206    0.9786132              4.497
## 207    0.9841360              4.709
## 208    0.9852100              5.477
## 209    0.9856900              6.168
## 210    0.9891200              6.701
## 211    0.9930250              4.028
## 212    0.9949600              5.155
## 213    0.9953700              7.267
## 214    0.9974714              4.735
## 215    0.9987600              4.419
## 216    0.9990300              5.975
## 217    1.0012000              4.517
## 218    1.0023200              5.007
## 219    1.0026800              3.781
## 220    1.0031873              4.514
## 221    1.0050800              6.478
## 222    1.0062383              4.168
## 223    1.0074837              4.376
## 224    1.0079300              6.596
## 225    1.0096400              5.123
## 226    1.0140400              4.550
## 227    1.0141300              4.324
## 228    1.0152800              5.889
## 229    1.0190500              4.271
## 230    1.0200000              6.798
## 231    1.0215200              7.087
## 232    1.0216900              6.481
## 233    1.0250700              6.130
## 234    1.0262600              4.971
## 235    1.0291200              7.339
## 236    1.0314300              6.545
## 237    1.0327600              4.610
## 238    1.0330200              6.084
## 239    1.0351600              5.073
## 240    1.0352600              3.995
## 241    1.0381700              5.658
## 242    1.0393800              6.952
## 243    1.0399900              6.871
## 244    1.0410300              4.898
## 245    1.0416700              5.977
## 246    1.0419898              3.349
## 247    1.0432800              4.032
## 248    1.0435600              6.123
## 249    1.0447700              6.474
## 250    1.0468500              5.835
## 251    1.0478200              7.104
## 252    1.0499300              5.802
## 253    1.0516300              5.517
## 254    1.0524900              6.929
## 255    1.0526100              5.856
## 256    1.0539200              5.192
```

```
## 257    1.0561300              5.768
## 258    1.0581800              5.474
## 259    1.0605400              5.921
## 260    1.0641100              5.813
## 261    1.0661200              6.650
## 262    1.0679507              4.553
## 263    1.0693359              5.182
## 264    1.0700800              5.695
## 265    1.0702300              5.770
## 266    1.0728400              4.867
## 267    1.0761700              6.298
## 268    1.0777200              5.605
## 269    1.0786000              6.611
## 270    1.0811300              7.039
## 271    1.0814178              5.956
## 272    1.0818200              6.853
## 273    1.0826800              6.078
## 274    1.0830959              3.875
## 275    1.0838300              7.119
## 276    1.0839300              6.411
## 277    1.0867200              6.725
## 278    1.0870800              5.399
## 279    1.0876400              7.291
## 280    1.0898300              4.907
## 281    1.0956200              5.098
## 282    1.0961000              7.404
## 283    1.0977400              6.994
## 284    1.0984708              4.574
## 285    1.0987900              6.488
## 286    1.1039500              5.253
## 287    1.1044120              3.795
## 288    1.1046400              4.332
## 289    1.1047600              7.313
## 290    1.1061400              4.218
## 291    1.1111100              5.538
## 292    1.1186200              5.754
## 293    1.1224100              5.855
## 294    1.1232359              4.545
## 295    1.1244700              6.670
## 296    1.1257500              6.901
## 297    1.1269000              7.498
## 298    1.1282744              5.838
## 299    1.1294500              6.361
## 300    1.1296242              5.225
## 301    1.1298277              4.081
## 302    1.1313633              5.621
## 303    1.1329900              3.931
## 304    1.1346400              7.413
## 305    1.1378535              5.279
## 306    1.1393500              5.102
## 307    1.1418400              5.828
## 308    1.1439450              5.181
## 309    1.1452400              7.509
## 310    1.1462175              5.872
```

```
## 311    1.1500913              5.825
## 312    1.1510200              5.709
## 313    1.1511500              5.286
## 314    1.1524003              5.234
## 315    1.1556202              4.465
## 316    1.1556472              4.775
## 317    1.1608374              5.273
## 318    1.1615700              6.907
## 319    1.1637400              7.526
## 320    1.1659400              6.295
## 321    1.1681000              5.987
## 322    1.1720200              4.885
## 323    1.1727800              7.334
## 324    1.1792833              4.962
## 325    1.1796919              4.535
## 326    1.1821251              6.003
## 327    1.1832600              7.501
## 328    1.1835400              6.168
## 329    1.1846800              4.642
## 330    1.1863034              5.810
## 331    1.1900952              3.808
## 332    1.1977700              5.948
## 333    1.1985000              6.786
## 334    1.2021500              4.800
## 335    1.2027800              4.681
## 336    1.2064300              6.505
## 337    1.2078930              5.175
## 338    1.2089000              6.485
## 339    1.2095610              5.629
## 340    1.2108622              6.578
## 341    1.2140086              4.139
## 342    1.2157705              5.074
## 343    1.2162400              5.960
## 344    1.2187704              5.715
## 345    1.2196300              6.946
## 346    1.2215550              3.766
## 347    1.2239300              7.278
## 348    1.2266800              5.548
## 349    1.2276191              5.823
## 350    1.2279100              5.429
## 351    1.2290235              4.280
## 352    1.2328700              6.983
## 353    1.2328900              5.813
## 354    1.2361700              5.716
## 355    1.2378800              7.226
## 356    1.2383765              5.237
## 357    1.2390889              5.336
## 358    1.2394146              5.227
## 359    1.2401800              6.477
## 360    1.2471100              7.119
## 361    1.2482300              6.574
## 362    1.2518256              5.838
## 363    1.2539176              5.430
## 364    1.2555852              6.454
```

```
## 365    1.2559600              6.810
## 366    1.2571200              5.987
## 367    1.2574500              5.833
## 368    1.2581898              5.395
## 369    1.2596987              6.105
## 370    1.2599764              4.440
## 371    1.2603800              6.575
## 372    1.2627909              5.472
## 373    1.2650400              6.455
## 374    1.2664102              6.648
## 375    1.2699900              5.995
## 376    1.2714633              5.041
## 377    1.2720308              4.292
## 378    1.2738500              5.848
## 379    1.2742969              6.375
## 380    1.2744447              5.262
## 381    1.2774913              5.074
## 382    1.2794800              5.791
## 383    1.2801700              7.378
## 384    1.2814734              4.190
## 385    1.2840250              6.652
## 386    1.2846460              6.084
## 387    1.2854800              6.867
## 388    1.2856600              6.937
## 389    1.2861688              6.008
## 390    1.2866776              6.344
## 391    1.2872157              6.071
## 392    1.2890700              7.364
## 393    1.2970400              7.200
## 394    1.2993700              6.750
## 395    1.3006000              4.874
## 396    1.3020300              6.302
## 397    1.3047700              5.878
## 398    1.3092300              7.284
## 399    1.3137900              6.329
## 400    1.3182600              7.406
## 401    1.3196700              7.286
## 402    1.3226100              7.427
## 403    1.3231105              6.087
## 404    1.3309500              7.522
## 405    1.3377532              5.500
## 406    1.3401265              5.011
## 407    1.3404300              6.003
## 408    1.3431331              5.324
## 409    1.3495100              7.587
## 410    1.3538144              6.572
## 411    1.3575643              5.525
## 412    1.3605800              7.527
## 413    1.3670430              5.195
## 414    1.3682181              5.311
## 415    1.3694800              6.940
## 416    1.3731925              6.452
## 417    1.3762900              7.213
## 418    1.3802285              6.168
```

```
## 419    1.3843690                5.819
## 420    1.3845654                6.422
## 421    1.3847886                4.829
## 422    1.3877769                6.442
## 423    1.3942386                5.004
## 424    1.3945376                4.096
## 425    1.4021829                6.357
## 426    1.4022300                7.561
## 427    1.4024167                5.230
## 428    1.4047149                5.850
## 429    1.4122279                6.454
## 430    1.4164037                7.079
## 431    1.4199206                6.993
## 432    1.4257925                6.424
## 433    1.4289392                7.377
## 434    1.4313060                6.635
## 435    1.4313376                5.250
## 436    1.4338852                6.609
## 437    1.4343795                4.714
## 438    1.4363378                5.920
## 439    1.4404511                6.599
## 440    1.4449233                5.964
## 441    1.4449452                5.569
## 442    1.4457120                5.973
## 443    1.4525188                5.758
## 444    1.4575837                6.863
## 445    1.4599450                7.006
## 446    1.4623127                6.891
## 447    1.4692824                5.963
## 448    1.4725204                6.951
## 449    1.4735161                5.902
## 450    1.4766711                5.611
## 451    1.4781622                7.284
## 452    1.4813490                7.316
## 453    1.4884117                6.527
## 454    1.4930112                4.955
## 455    1.4931492                5.822
## 456    1.4964601                6.714
## 457    1.5050592                6.098
## 458    1.5072849                5.493
## 459    1.5100420                7.284
## 460    1.5169117                7.494
## 461    1.5320909                6.403
## 462    1.5335236                7.537
## 463    1.5402467                7.469
## 464    1.5481951                7.314
## 465    1.5489691                5.971
## 466    1.5511216                7.522
## 467    1.5582311                6.977
## 468    1.6105740                7.504
```

```
aggregate(Total$`Happiness_Score` ~ Total$Family, FUN = max)
```

```
##     Total$Family Total$Happiness_Score
```

```
## 1      0.0000000              3.678
## 2      0.1041900              3.484
## 3      0.1103700              3.360
## 4      0.1399500              2.839
## 5      0.1470000              4.156
## 6      0.1486600              3.069
## 7      0.1851900              3.832
## 8      0.1924900              4.252
## 9      0.2344200              2.905
## 10     0.2474900              4.643
## 11     0.2613500              5.132
## 12     0.2924700              4.404
## 13     0.2956100              4.028
## 14     0.3028500              3.575
## 15     0.3109000              3.607
## 16     0.3361300              5.440
## 17     0.3538600              3.340
## 18     0.3793200              4.508
## 19     0.3817400              4.565
## 20     0.3856200              4.297
## 21     0.3859500              5.151
## 22     0.3885700              4.813
## 23     0.3961026              3.462
## 24     0.4113400              4.292
## 25     0.4141100              5.194
## 26     0.4158700              2.905
## 27     0.4310600              4.694
## 28     0.4316500              5.045
## 29     0.4318825              3.495
## 30     0.4352998              3.657
## 31     0.4611500              3.695
## 32     0.4647500              3.656
## 33     0.4748900              3.006
## 34     0.4749300              3.724
## 35     0.4779900              4.236
## 36     0.4935300              4.276
## 37     0.4981300              4.362
## 38     0.5016300              4.655
## 39     0.5035300              3.622
## 40     0.5125688              3.970
## 41     0.5375000              3.907
## 42     0.5444700              4.686
## 43     0.5497000              4.876
## 44     0.5706149              4.286
## 45     0.5757600              3.916
## 46     0.5815433              3.794
## 47     0.5920500              4.575
## 48     0.5920700              4.369
## 49     0.6013231              3.591
## 50     0.6032300              3.956
## 51     0.6040600              4.512
## 52     0.6042900              4.739
## 53     0.6053000              3.856
## 54     0.6080900              5.488
```

```
## 55     0.6158600              3.515
## 56     0.6247700              4.360
## 57     0.6254200              4.513
## 58     0.6273600              3.819
## 59     0.6280000              4.635
## 60     0.6297936              2.905
## 61     0.6305400              3.739
## 62     0.6317800              3.763
## 63     0.6376000              4.795
## 64     0.6404498              3.603
## 65     0.6409500              5.013
## 66     0.6418400              5.129
## 67     0.6436700              5.163
## 68     0.6449800              4.875
## 69     0.6606200              5.401
## 70     0.6629000              3.989
## 71     0.6636600              3.866
## 72     0.6680100              3.681
## 73     0.6726907              5.269
## 74     0.6795400              4.633
## 75     0.6809300              4.077
## 76     0.6865500              5.956
## 77     0.6969900              4.793
## 78     0.6998100              4.395
## 79     0.7036200              4.574
## 80     0.7069700              5.546
## 81     0.7090500              4.307
## 82     0.7115512              4.692
## 83     0.7146000              6.778
## 84     0.7147800              4.193
## 85     0.7162900              4.754
## 86     0.7211514              5.151
## 87     0.7219400              5.835
## 88     0.7236800              4.121
## 89     0.7280300              5.528
## 90     0.7351317              4.608
## 91     0.7380300              4.876
## 92     0.7417300              5.161
## 93     0.7430200              4.518
## 94     0.7470000              4.194
## 95     0.7543726              4.315
## 96     0.7547300              5.033
## 97     0.7559600              4.871
## 98     0.7560200              4.996
## 99     0.7569500              5.648
## 100    0.7586200              5.057
## 101    0.7604200              5.291
## 102    0.7606200              3.667
## 103    0.7624000              4.356
## 104    0.7711500              3.655
## 105    0.7726500              3.845
## 106    0.7737000              3.465
## 107    0.7741600              4.219
## 108    0.7748644              5.235
```

```
## 109    0.7762300              3.666
## 110    0.7771100              4.350
## 111    0.7786600              6.269
## 112    0.7823600              5.121
## 113    0.7896800              4.571
## 114    0.7911700              5.061
## 115    0.7912447              3.507
## 116    0.7927300              3.956
## 117    0.7938100              5.245
## 118    0.7962400              5.759
## 119    0.8000100              4.839
## 120    0.8036852              4.644
## 121    0.8043400              4.959
## 122    0.8067600              4.272
## 123    0.8097500              6.068
## 124    0.8119800              5.589
## 125    0.8125500              5.743
## 126    0.8132900              5.177
## 127    0.8182600              5.771
## 128    0.8188900              4.677
## 129    0.8192800              4.139
## 130    0.8313200              5.897
## 131    0.8320444              4.291
## 132    0.8330900              6.355
## 133    0.8377900              5.822
## 134    0.8414200              4.201
## 135    0.8478300              4.415
## 136    0.8482900              6.379
## 137    0.8518800              3.587
## 138    0.8556300              4.786
## 139    0.8597400              5.976
## 140    0.8604000              4.033
## 141    0.8621600              5.303
## 142    0.8633300              4.073
## 143    0.8644900              4.514
## 144    0.8646692              4.460
## 145    0.8675800              6.739
## 146    0.8683515              4.805
## 147    0.8690800              4.436
## 148    0.8702100              5.458
## 149    0.8707010              4.550
## 150    0.8711400              6.573
## 151    0.8711900              6.324
## 152    0.8721179              3.533
## 153    0.8736647              4.120
## 154    0.8762500              5.314
## 155    0.8771700              5.389
## 156    0.8775800              6.239
## 157    0.8787700              5.279
## 158    0.8796400              6.375
## 159    0.8802500              6.005
## 160    0.8858800              5.124
## 161    0.8876700              4.252
## 162    0.8918600              3.974
```

```
## 163    0.8931800              5.689
## 164    0.8952100              5.992
## 165    0.9043200              5.268
## 166    0.9047800              4.180
## 167    0.9052800              3.896
## 168    0.9055700              5.192
## 169    0.9058700              6.705
## 170    0.9083600              5.196
## 171    0.9098100              3.739
## 172    0.9122600              5.360
## 173    0.9130204              3.644
## 174    0.9145100              7.187
## 175    0.9161200              5.129
## 176    0.9191600              4.949
## 177    0.9254200              4.217
## 178    0.9255800              4.715
## 179    0.9262400              6.379
## 180    0.9293300              4.857
## 181    0.9316400              5.145
## 182    0.9353822              3.593
## 183    0.9379300              5.212
## 184    0.9436700              5.123
## 185    0.9439700              6.218
## 186    0.9457070              3.471
## 187    0.9460182              4.695
## 188    0.9463200              5.332
## 189    0.9467500              5.140
## 190    0.9502500              5.560
## 191    0.9507600              5.615
## 192    0.9515200              5.057
## 193    0.9534800              4.788
## 194    0.9538559              3.936
## 195    0.9543400              5.185
## 196    0.9554400              5.919
## 197    0.9557100              4.507
## 198    0.9577400              5.984
## 199    0.9605300              4.459
## 200    0.9637200              5.510
## 201    0.9679830              5.293
## 202    0.9720000              6.269
## 203    0.9745900              5.824
## 204    0.9761900              3.904
## 205    0.9784100              5.890
## 206    0.9786132              4.497
## 207    0.9841360              4.709
## 208    0.9852100              5.477
## 209    0.9856900              6.168
## 210    0.9891200              6.701
## 211    0.9930250              4.028
## 212    0.9949600              5.155
## 213    0.9953700              7.267
## 214    0.9974714              4.735
## 215    0.9987600              4.419
## 216    0.9990300              5.975
```

```
## 217    1.0012000              4.517
## 218    1.0023200              5.007
## 219    1.0026800              3.781
## 220    1.0031873              4.514
## 221    1.0050800              6.478
## 222    1.0062383              4.168
## 223    1.0074837              4.376
## 224    1.0079300              6.596
## 225    1.0096400              5.123
## 226    1.0140400              4.550
## 227    1.0141300              4.324
## 228    1.0152800              5.889
## 229    1.0190500              4.271
## 230    1.0200000              6.798
## 231    1.0215200              7.087
## 232    1.0216900              6.481
## 233    1.0250700              6.130
## 234    1.0262600              4.971
## 235    1.0291200              7.339
## 236    1.0314300              6.545
## 237    1.0327600              4.610
## 238    1.0330200              6.084
## 239    1.0351600              5.073
## 240    1.0352600              3.995
## 241    1.0381700              5.658
## 242    1.0393800              6.952
## 243    1.0399900              6.871
## 244    1.0410300              4.898
## 245    1.0416700              5.977
## 246    1.0419898              3.349
## 247    1.0432800              4.032
## 248    1.0435600              6.123
## 249    1.0447700              6.474
## 250    1.0468500              5.835
## 251    1.0478200              7.104
## 252    1.0499300              5.802
## 253    1.0516300              5.517
## 254    1.0524900              6.929
## 255    1.0526100              5.856
## 256    1.0539200              5.192
## 257    1.0561300              5.768
## 258    1.0581800              5.474
## 259    1.0605400              5.921
## 260    1.0641100              5.813
## 261    1.0661200              6.650
## 262    1.0679507              4.553
## 263    1.0693359              5.182
## 264    1.0700800              5.695
## 265    1.0702300              5.770
## 266    1.0728400              4.867
## 267    1.0761700              6.298
## 268    1.0777200              5.605
## 269    1.0786000              6.611
## 270    1.0811300              7.039
```

```
## 271    1.0814178              5.956
## 272    1.0818200              6.853
## 273    1.0826800              6.078
## 274    1.0830959              3.875
## 275    1.0838300              7.119
## 276    1.0839300              6.411
## 277    1.0867200              6.725
## 278    1.0870800              5.399
## 279    1.0876400              7.291
## 280    1.0898300              4.907
## 281    1.0956200              5.098
## 282    1.0961000              7.404
## 283    1.0977400              6.994
## 284    1.0984708              4.574
## 285    1.0987900              6.488
## 286    1.1039500              5.253
## 287    1.1044120              3.795
## 288    1.1046400              4.332
## 289    1.1047600              7.313
## 290    1.1061400              4.218
## 291    1.1111100              5.538
## 292    1.1186200              5.754
## 293    1.1224100              5.855
## 294    1.1232359              4.545
## 295    1.1244700              6.670
## 296    1.1257500              6.901
## 297    1.1269000              7.498
## 298    1.1282744              5.838
## 299    1.1294500              6.361
## 300    1.1296242              5.225
## 301    1.1298277              4.081
## 302    1.1313633              5.621
## 303    1.1329900              3.931
## 304    1.1346400              7.413
## 305    1.1378535              5.279
## 306    1.1393500              5.102
## 307    1.1418400              5.828
## 308    1.1439450              5.181
## 309    1.1452400              7.509
## 310    1.1462175              5.872
## 311    1.1500913              5.825
## 312    1.1510200              5.709
## 313    1.1511500              5.286
## 314    1.1524003              5.234
## 315    1.1556202              4.465
## 316    1.1556472              4.775
## 317    1.1608374              5.273
## 318    1.1615700              6.907
## 319    1.1637400              7.526
## 320    1.1659400              6.295
## 321    1.1681000              5.987
## 322    1.1720200              4.885
## 323    1.1727800              7.334
## 324    1.1792833              4.962
```

```
## 325    1.1796919              4.535
## 326    1.1821251              6.003
## 327    1.1832600              7.501
## 328    1.1835400              6.168
## 329    1.1846800              4.642
## 330    1.1863034              5.810
## 331    1.1900952              3.808
## 332    1.1977700              5.948
## 333    1.1985000              6.786
## 334    1.2021500              4.800
## 335    1.2027800              4.681
## 336    1.2064300              6.505
## 337    1.2078930              5.175
## 338    1.2089000              6.485
## 339    1.2095610              5.629
## 340    1.2108622              6.578
## 341    1.2140086              4.139
## 342    1.2157705              5.074
## 343    1.2162400              5.960
## 344    1.2187704              5.715
## 345    1.2196300              6.946
## 346    1.2215550              3.766
## 347    1.2239300              7.278
## 348    1.2266800              5.548
## 349    1.2276191              5.823
## 350    1.2279100              5.429
## 351    1.2290235              4.280
## 352    1.2328700              6.983
## 353    1.2328900              5.813
## 354    1.2361700              5.716
## 355    1.2378800              7.226
## 356    1.2383765              5.237
## 357    1.2390889              5.336
## 358    1.2394146              5.227
## 359    1.2401800              6.477
## 360    1.2471100              7.119
## 361    1.2482300              6.574
## 362    1.2518256              5.838
## 363    1.2539176              5.430
## 364    1.2555852              6.454
## 365    1.2559600              6.810
## 366    1.2571200              5.987
## 367    1.2574500              5.833
## 368    1.2581898              5.395
## 369    1.2596987              6.105
## 370    1.2599764              4.440
## 371    1.2603800              6.575
## 372    1.2627909              5.472
## 373    1.2650400              6.455
## 374    1.2664102              6.648
## 375    1.2699900              5.995
## 376    1.2714633              5.041
## 377    1.2720308              4.292
## 378    1.2738500              5.848
```

```
## 379    1.2742969              6.375
## 380    1.2744447              5.262
## 381    1.2774913              5.074
## 382    1.2794800              5.791
## 383    1.2801700              7.378
## 384    1.2814734              4.190
## 385    1.2840250              6.652
## 386    1.2846460              6.084
## 387    1.2854800              6.867
## 388    1.2856600              6.937
## 389    1.2861688              6.008
## 390    1.2866776              6.344
## 391    1.2872157              6.071
## 392    1.2890700              7.364
## 393    1.2970400              7.200
## 394    1.2993700              6.750
## 395    1.3006000              4.874
## 396    1.3020300              6.302
## 397    1.3047700              5.878
## 398    1.3092300              7.284
## 399    1.3137900              6.329
## 400    1.3182600              7.406
## 401    1.3196700              7.286
## 402    1.3226100              7.427
## 403    1.3231105              6.087
## 404    1.3309500              7.522
## 405    1.3377532              5.500
## 406    1.3401265              5.011
## 407    1.3404300              6.003
## 408    1.3431331              5.324
## 409    1.3495100              7.587
## 410    1.3538144              6.572
## 411    1.3575643              5.525
## 412    1.3605800              7.527
## 413    1.3670430              5.195
## 414    1.3682181              5.311
## 415    1.3694800              6.940
## 416    1.3731925              6.452
## 417    1.3762900              7.213
## 418    1.3802285              6.168
## 419    1.3843690              5.819
## 420    1.3845654              6.422
## 421    1.3847886              4.829
## 422    1.3877769              6.442
## 423    1.3942386              5.004
## 424    1.3945376              4.096
## 425    1.4021829              6.357
## 426    1.4022300              7.561
## 427    1.4024167              5.230
## 428    1.4047149              5.850
## 429    1.4122279              6.454
## 430    1.4164037              7.079
## 431    1.4199206              6.993
## 432    1.4257925              6.424
```

```
## 433    1.4289392                7.377
## 434    1.4313060                6.635
## 435    1.4313376                5.250
## 436    1.4338852                6.609
## 437    1.4343795                4.714
## 438    1.4363378                5.920
## 439    1.4404511                6.599
## 440    1.4449233                5.964
## 441    1.4449452                5.569
## 442    1.4457120                5.973
## 443    1.4525188                5.758
## 444    1.4575837                6.863
## 445    1.4599450                7.006
## 446    1.4623127                6.891
## 447    1.4692824                5.963
## 448    1.4725204                6.951
## 449    1.4735161                5.902
## 450    1.4766711                5.611
## 451    1.4781622                7.284
## 452    1.4813490                7.316
## 453    1.4884117                6.527
## 454    1.4930112                4.955
## 455    1.4931492                5.822
## 456    1.4964601                6.714
## 457    1.5050592                6.098
## 458    1.5072849                5.493
## 459    1.5100420                7.284
## 460    1.5169117                7.494
## 461    1.5320909                6.403
## 462    1.5335236                7.537
## 463    1.5402467                7.469
## 464    1.5481951                7.314
## 465    1.5489691                5.971
## 466    1.5511216                7.522
## 467    1.5582311                6.977
## 468    1.6105740                7.504
```

```
aggregate(Total$`Happiness_Score` ~ Total$Family, FUN = min)
```

```
##     Total$Family Total$Happiness_Score
## 1      0.0000000                2.693
## 2      0.1041900                3.484
## 3      0.1103700                3.360
## 4      0.1399500                2.839
## 5      0.1470000                4.156
## 6      0.1486600                3.069
## 7      0.1851900                3.832
## 8      0.1924900                4.252
## 9      0.2344200                2.905
## 10     0.2474900                4.643
## 11     0.2613500                5.132
## 12     0.2924700                4.404
## 13     0.2956100                4.028
## 14     0.3028500                3.575
```

```
## 15     0.3109000               3.607
## 16     0.3361300               5.440
## 17     0.3538600               3.340
## 18     0.3793200               4.508
## 19     0.3817400               4.565
## 20     0.3856200               4.297
## 21     0.3859500               5.151
## 22     0.3885700               4.813
## 23     0.3961026               3.462
## 24     0.4113400               4.292
## 25     0.4141100               5.194
## 26     0.4158700               2.905
## 27     0.4310600               4.694
## 28     0.4316500               5.045
## 29     0.4318825               3.495
## 30     0.4352998               3.657
## 31     0.4611500               3.695
## 32     0.4647500               3.656
## 33     0.4748900               3.006
## 34     0.4749300               3.724
## 35     0.4779900               4.236
## 36     0.4935300               4.276
## 37     0.4981300               4.362
## 38     0.5016300               4.655
## 39     0.5035300               3.622
## 40     0.5125688               3.970
## 41     0.5375000               3.907
## 42     0.5444700               4.686
## 43     0.5497000               4.876
## 44     0.5706149               4.286
## 45     0.5757600               3.916
## 46     0.5815433               3.794
## 47     0.5920500               4.575
## 48     0.5920700               4.369
## 49     0.6013231               3.591
## 50     0.6032300               3.956
## 51     0.6040600               4.512
## 52     0.6042900               4.739
## 53     0.6053000               3.856
## 54     0.6080900               5.488
## 55     0.6158600               3.515
## 56     0.6247700               4.360
## 57     0.6254200               4.513
## 58     0.6273600               3.819
## 59     0.6280000               4.635
## 60     0.6297936               2.905
## 61     0.6305400               3.739
## 62     0.6317800               3.763
## 63     0.6376000               4.795
## 64     0.6404498               3.603
## 65     0.6409500               5.013
## 66     0.6418400               5.129
## 67     0.6436700               5.163
## 68     0.6449800               4.875
```

```
## 69     0.6606200               5.401
## 70     0.6629000               3.989
## 71     0.6636600               3.866
## 72     0.6680100               3.681
## 73     0.6726907               5.269
## 74     0.6795400               4.633
## 75     0.6809300               4.077
## 76     0.6865500               5.956
## 77     0.6969900               4.793
## 78     0.6998100               4.395
## 79     0.7036200               4.574
## 80     0.7069700               5.546
## 81     0.7090500               4.307
## 82     0.7115512               4.692
## 83     0.7146000               6.778
## 84     0.7147800               4.193
## 85     0.7162900               4.754
## 86     0.7211514               5.151
## 87     0.7219400               5.835
## 88     0.7236800               4.121
## 89     0.7280300               5.528
## 90     0.7351317               4.608
## 91     0.7380300               4.876
## 92     0.7417300               5.161
## 93     0.7430200               4.518
## 94     0.7470000               4.194
## 95     0.7543726               4.315
## 96     0.7547300               5.033
## 97     0.7559600               4.871
## 98     0.7560200               4.996
## 99     0.7569500               5.648
## 100    0.7586200               5.057
## 101    0.7604200               5.291
## 102    0.7606200               3.667
## 103    0.7624000               4.356
## 104    0.7711500               3.655
## 105    0.7726500               3.845
## 106    0.7737000               3.465
## 107    0.7741600               4.219
## 108    0.7748644               5.235
## 109    0.7762300               3.666
## 110    0.7771100               4.350
## 111    0.7786600               6.269
## 112    0.7823600               5.121
## 113    0.7896800               4.571
## 114    0.7911700               5.061
## 115    0.7912447               3.507
## 116    0.7927300               3.956
## 117    0.7938100               5.245
## 118    0.7962400               5.759
## 119    0.8000100               4.839
## 120    0.8036852               4.644
## 121    0.8043400               4.959
## 122    0.8067600               4.272
```

```
## 123    0.8097500              6.068
## 124    0.8119800              5.589
## 125    0.8125500              5.743
## 126    0.8132900              5.177
## 127    0.8182600              5.771
## 128    0.8188900              4.677
## 129    0.8192800              4.139
## 130    0.8313200              5.897
## 131    0.8320444              4.291
## 132    0.8330900              6.355
## 133    0.8377900              5.822
## 134    0.8414200              4.201
## 135    0.8478300              4.415
## 136    0.8482900              6.379
## 137    0.8518800              3.587
## 138    0.8556300              4.786
## 139    0.8597400              5.976
## 140    0.8604000              4.033
## 141    0.8621600              5.303
## 142    0.8633300              4.073
## 143    0.8644900              4.514
## 144    0.8646692              4.460
## 145    0.8675800              6.739
## 146    0.8683515              4.805
## 147    0.8690800              4.436
## 148    0.8702100              5.458
## 149    0.8707010              4.550
## 150    0.8711400              6.573
## 151    0.8711900              6.324
## 152    0.8721179              3.533
## 153    0.8736647              4.120
## 154    0.8762500              5.314
## 155    0.8771700              5.389
## 156    0.8775800              6.239
## 157    0.8787700              5.279
## 158    0.8796400              6.375
## 159    0.8802500              6.005
## 160    0.8858800              5.124
## 161    0.8876700              4.252
## 162    0.8918600              3.974
## 163    0.8931800              5.689
## 164    0.8952100              5.992
## 165    0.9043200              5.268
## 166    0.9047800              4.180
## 167    0.9052800              3.896
## 168    0.9055700              5.192
## 169    0.9058700              6.705
## 170    0.9083600              5.196
## 171    0.9098100              3.739
## 172    0.9122600              5.360
## 173    0.9130204              3.644
## 174    0.9145100              7.187
## 175    0.9161200              5.129
## 176    0.9191600              4.949
```

```
## 177    0.9254200              4.217
## 178    0.9255800              4.715
## 179    0.9262400              6.379
## 180    0.9293300              4.857
## 181    0.9316400              5.145
## 182    0.9353822              3.593
## 183    0.9379300              5.212
## 184    0.9436700              5.123
## 185    0.9439700              6.218
## 186    0.9457070              3.471
## 187    0.9460182              4.695
## 188    0.9463200              5.332
## 189    0.9467500              5.140
## 190    0.9502500              5.560
## 191    0.9507600              5.615
## 192    0.9515200              5.057
## 193    0.9534800              4.788
## 194    0.9538559              3.936
## 195    0.9543400              5.185
## 196    0.9554400              5.919
## 197    0.9557100              4.507
## 198    0.9577400              5.984
## 199    0.9605300              4.459
## 200    0.9637200              5.510
## 201    0.9679830              5.293
## 202    0.9720000              6.269
## 203    0.9745900              5.824
## 204    0.9761900              3.904
## 205    0.9784100              5.890
## 206    0.9786132              4.497
## 207    0.9841360              4.709
## 208    0.9852100              5.477
## 209    0.9856900              6.168
## 210    0.9891200              6.701
## 211    0.9930250              4.028
## 212    0.9949600              5.155
## 213    0.9953700              7.267
## 214    0.9974714              4.735
## 215    0.9987600              4.419
## 216    0.9990300              5.975
## 217    1.0012000              4.517
## 218    1.0023200              5.007
## 219    1.0026800              3.781
## 220    1.0031873              4.514
## 221    1.0050800              6.478
## 222    1.0062383              4.168
## 223    1.0074837              4.376
## 224    1.0079300              6.596
## 225    1.0096400              5.123
## 226    1.0140400              4.550
## 227    1.0141300              4.324
## 228    1.0152800              5.889
## 229    1.0190500              4.271
## 230    1.0200000              6.798
```

```
## 231    1.0215200              7.087
## 232    1.0216900              6.481
## 233    1.0250700              6.130
## 234    1.0262600              4.971
## 235    1.0291200              7.339
## 236    1.0314300              6.545
## 237    1.0327600              4.610
## 238    1.0330200              6.084
## 239    1.0351600              5.073
## 240    1.0352600              3.995
## 241    1.0381700              5.658
## 242    1.0393800              6.952
## 243    1.0399900              6.871
## 244    1.0410300              4.898
## 245    1.0416700              5.977
## 246    1.0419898              3.349
## 247    1.0432800              4.032
## 248    1.0435600              6.123
## 249    1.0447700              6.474
## 250    1.0468500              5.835
## 251    1.0478200              7.104
## 252    1.0499300              5.802
## 253    1.0516300              5.517
## 254    1.0524900              6.929
## 255    1.0526100              5.856
## 256    1.0539200              5.192
## 257    1.0561300              5.768
## 258    1.0581800              5.474
## 259    1.0605400              5.921
## 260    1.0641100              5.813
## 261    1.0661200              6.650
## 262    1.0679507              4.553
## 263    1.0693359              5.182
## 264    1.0700800              5.695
## 265    1.0702300              5.770
## 266    1.0728400              4.867
## 267    1.0761700              6.298
## 268    1.0777200              5.605
## 269    1.0786000              6.611
## 270    1.0811300              7.039
## 271    1.0814178              5.956
## 272    1.0818200              6.853
## 273    1.0826800              6.078
## 274    1.0830959              3.875
## 275    1.0838300              7.119
## 276    1.0839300              6.411
## 277    1.0867200              6.725
## 278    1.0870800              5.399
## 279    1.0876400              7.291
## 280    1.0898300              4.907
## 281    1.0956200              5.098
## 282    1.0961000              7.404
## 283    1.0977400              6.994
## 284    1.0984708              4.574
```

```
## 285    1.0987900              6.488
## 286    1.1039500              5.253
## 287    1.1044120              3.795
## 288    1.1046400              4.332
## 289    1.1047600              7.313
## 290    1.1061400              4.218
## 291    1.1111100              5.538
## 292    1.1186200              5.754
## 293    1.1224100              5.855
## 294    1.1232359              4.545
## 295    1.1244700              6.670
## 296    1.1257500              6.901
## 297    1.1269000              7.498
## 298    1.1282744              5.838
## 299    1.1294500              6.361
## 300    1.1296242              5.225
## 301    1.1298277              4.081
## 302    1.1313633              5.621
## 303    1.1329900              3.931
## 304    1.1346400              7.413
## 305    1.1378535              5.279
## 306    1.1393500              5.102
## 307    1.1418400              5.828
## 308    1.1439450              5.181
## 309    1.1452400              7.509
## 310    1.1462175              5.872
## 311    1.1500913              5.825
## 312    1.1510200              5.709
## 313    1.1511500              5.286
## 314    1.1524003              5.234
## 315    1.1556202              4.465
## 316    1.1556472              4.775
## 317    1.1608374              5.273
## 318    1.1615700              6.907
## 319    1.1637400              7.526
## 320    1.1659400              6.295
## 321    1.1681000              5.987
## 322    1.1720200              4.885
## 323    1.1727800              7.334
## 324    1.1792833              4.962
## 325    1.1796919              4.535
## 326    1.1821251              6.003
## 327    1.1832600              7.501
## 328    1.1835400              6.168
## 329    1.1846800              4.642
## 330    1.1863034              5.810
## 331    1.1900952              3.808
## 332    1.1977700              5.948
## 333    1.1985000              6.786
## 334    1.2021500              4.800
## 335    1.2027800              4.681
## 336    1.2064300              6.505
## 337    1.2078930              5.175
## 338    1.2089000              6.485
```

```
## 339    1.2095610              5.629
## 340    1.2108622              6.578
## 341    1.2140086              4.139
## 342    1.2157705              5.074
## 343    1.2162400              5.960
## 344    1.2187704              5.715
## 345    1.2196300              6.946
## 346    1.2215550              3.766
## 347    1.2239300              7.278
## 348    1.2266800              5.548
## 349    1.2276191              5.823
## 350    1.2279100              5.429
## 351    1.2290235              4.280
## 352    1.2328700              6.983
## 353    1.2328900              5.813
## 354    1.2361700              5.716
## 355    1.2378800              7.226
## 356    1.2383765              5.237
## 357    1.2390889              5.336
## 358    1.2394146              5.227
## 359    1.2401800              6.477
## 360    1.2471100              7.119
## 361    1.2482300              6.574
## 362    1.2518256              5.838
## 363    1.2539176              5.430
## 364    1.2555852              6.454
## 365    1.2559600              6.810
## 366    1.2571200              5.987
## 367    1.2574500              5.833
## 368    1.2581898              5.395
## 369    1.2596987              6.105
## 370    1.2599764              4.440
## 371    1.2603800              6.575
## 372    1.2627909              5.472
## 373    1.2650400              6.455
## 374    1.2664102              6.648
## 375    1.2699900              5.995
## 376    1.2714633              5.041
## 377    1.2720308              4.292
## 378    1.2738500              5.848
## 379    1.2742969              6.375
## 380    1.2744447              5.262
## 381    1.2774913              5.074
## 382    1.2794800              5.791
## 383    1.2801700              7.378
## 384    1.2814734              4.190
## 385    1.2840250              6.652
## 386    1.2846460              6.084
## 387    1.2854800              6.867
## 388    1.2856600              6.937
## 389    1.2861688              6.008
## 390    1.2866776              6.344
## 391    1.2872157              6.071
## 392    1.2890700              7.364
```

```
## 393    1.2970400              7.200
## 394    1.2993700              6.750
## 395    1.3006000              4.874
## 396    1.3020300              6.302
## 397    1.3047700              5.878
## 398    1.3092300              7.284
## 399    1.3137900              6.329
## 400    1.3182600              7.406
## 401    1.3196700              7.286
## 402    1.3226100              7.427
## 403    1.3231105              6.087
## 404    1.3309500              7.522
## 405    1.3377532              5.500
## 406    1.3401265              5.011
## 407    1.3404300              6.003
## 408    1.3431331              5.324
## 409    1.3495100              7.587
## 410    1.3538144              6.572
## 411    1.3575643              5.525
## 412    1.3605800              7.527
## 413    1.3670430              5.195
## 414    1.3682181              5.311
## 415    1.3694800              6.940
## 416    1.3731925              6.452
## 417    1.3762900              7.213
## 418    1.3802285              6.168
## 419    1.3843690              5.819
## 420    1.3845654              6.422
## 421    1.3847886              4.829
## 422    1.3877769              6.442
## 423    1.3942386              5.004
## 424    1.3945376              4.096
## 425    1.4021829              6.357
## 426    1.4022300              7.561
## 427    1.4024167              5.230
## 428    1.4047149              5.850
## 429    1.4122279              6.454
## 430    1.4164037              7.079
## 431    1.4199206              6.993
## 432    1.4257925              6.424
## 433    1.4289392              7.377
## 434    1.4313060              6.635
## 435    1.4313376              5.250
## 436    1.4338852              6.609
## 437    1.4343795              4.714
## 438    1.4363378              5.920
## 439    1.4404511              6.599
## 440    1.4449233              5.964
## 441    1.4449452              5.569
## 442    1.4457120              5.973
## 443    1.4525188              5.758
## 444    1.4575837              6.863
## 445    1.4599450              7.006
## 446    1.4623127              6.891
```

```
## 447    1.4692824                5.963
## 448    1.4725204                6.951
## 449    1.4735161                5.902
## 450    1.4766711                5.611
## 451    1.4781622                7.284
## 452    1.4813490                7.316
## 453    1.4884117                6.527
## 454    1.4930112                4.955
## 455    1.4931492                5.822
## 456    1.4964601                6.714
## 457    1.5050592                6.098
## 458    1.5072849                5.493
## 459    1.5100420                7.284
## 460    1.5169117                7.494
## 461    1.5320909                6.403
## 462    1.5335236                7.537
## 463    1.5402467                7.469
## 464    1.5481951                7.314
## 465    1.5489691                5.971
## 466    1.5511216                7.522
## 467    1.5582311                6.977
## 468    1.6105740                7.504
```

Let's aggregate the data

```
aggregate(Total$`Happiness_Score` ~ Total$Family + Total$`Economy`, FUN = mean)
```

```
##     Total$Family Total$Economy Total$Happiness_Score
## 1      0.0000000    0.00000000                 2.693
## 2      0.3361300    0.00000000                 5.440
## 3      1.0012000    0.00000000                 4.517
## 4      0.4158700    0.01530000                 2.905
## 5      0.4113400    0.01604000                 4.292
## 6      0.7211514    0.02264318                 5.151
## 7      0.8067600    0.05661000                 4.272
## 8      0.2344200    0.06831000                 2.905
## 9      0.7726500    0.06940000                 3.845
## 10     0.7896800    0.07120000                 4.571
## 11     0.0000000    0.07850000                 3.678
## 12     1.0262600    0.08308000                 4.971
## 13     0.1470000    0.08709000                 4.156
## 14     0.6297936    0.09162257                 2.905
## 15     1.2290235    0.09210235                 4.280
## 16     0.5035300    0.10706000                 3.622
## 17     0.8721179    0.11904179                 3.533
## 18     0.6053000    0.13270000                 3.856
## 19     0.9930250    0.16192533                 4.028
## 20     0.4647500    0.17417000                 3.656
## 21     0.9515200    0.18847000                 5.057
## 22     0.6040600    0.19073000                 4.512
## 23     0.6680100    0.20824000                 3.681
```

```
## 24     0.1399500    0.20868000              2.839
## 25     1.1329900    0.21102000              3.931
## 26     0.7737000    0.22208000              3.465
## 27     0.3109000    0.22415000              3.607
## 28     0.5125688    0.23344204              3.970
## 29     0.8707010    0.23430565              4.550
## 30     0.7927300    0.23906000              3.956
## 31     0.7912447    0.24454993              3.507
## 32     0.7586200    0.25558000              5.057
## 33     0.8518800    0.25812000              3.587
## 34     1.0352600    0.26074000              3.995
## 35     0.7430200    0.26673000              4.518
## 36     1.0327600    0.27100000              4.610
## 37     0.7090500    0.27108000              4.307
## 38     0.6032300    0.27509000              3.956
## 39     0.4611500    0.27954000              3.695
## 40     0.0000000    0.28123000              3.303
## 41     1.0026800    0.28520000              3.781
## 42     0.3538600    0.28665000              3.340
## 43     0.3793200    0.29283000              4.508
## 44     0.4318825    0.30544472              3.495
## 45     0.9130204    0.30580869              3.644
## 46     0.8633300    0.31292000              4.073
## 47     0.3028500    0.31982000              3.575
## 48     0.6305400    0.31995000              3.739
## 49     0.6158600    0.32846000              3.515
## 50     0.9557100    0.33024000              4.507
## 51     0.8646692    0.33923385              4.460
## 52     0.2956100    0.34097000              4.028
## 53     0.6998100    0.34112000              4.395
## 54     0.7606200    0.34193000              3.667
## 55     0.9098100    0.34719000              3.739
## 56     1.0432800    0.35022771              4.032
## 57     0.7147800    0.35041000              4.193
## 58     0.8644900    0.35997000              4.514
## 59     0.9987600    0.36471000              4.419
## 60     0.6280000    0.36485000              4.635
## 61     0.9761900    0.36498000              3.904
## 62     1.1232359    0.36711055              4.545
## 63     0.9841360    0.36842093              4.709
## 64     0.6404498    0.36861026              3.603
## 65     0.9457070    0.36874589              3.471
## 66     1.0410300    0.37545000              4.898
## 67     1.0830959    0.37584653              3.875
## 68     1.1298277    0.38143072              4.081
## 69     0.1103700    0.38227000              3.360
## 70     0.8556300    0.39047000              4.786
## 71     0.1851900    0.39394000              3.832
## 72     0.1041900    0.39499000              3.484
## 73     0.6013231    0.39724863              3.591
## 74     0.4310600    0.39753000              4.694
## 75     0.5815433    0.40147722              3.794
## 76     0.6317800    0.42214000              3.763
## 77     0.8876700    0.42250000              4.252
```

```
## 78     0.4352998    0.43108541              3.657
## 79     0.9538559    0.43801299              3.936
## 80     0.5920700    0.44025000              4.369
## 81     0.7741600    0.44314000              4.219
## 82     0.6969900    0.44626000              4.793
## 83     0.8690800    0.45407000              4.436
## 84     0.6273600    0.46038000              3.819
## 85     0.7711500    0.46534000              3.655
## 86     0.9161200    0.47038000              5.129
## 87     0.7762300    0.47155000              3.666
## 88     1.1511500    0.47428000              5.286
## 89     1.2814734    0.47618049              4.190
## 90     1.1796919    0.47930902              4.535
## 91     1.1792833    0.47982019              4.962
## 92     0.7560200    0.48835000              4.996
## 93     1.0419898    0.51113588              3.349
## 94     1.1900952    0.52102125              3.808
## 95     1.0140400    0.52107000              4.550
## 96     0.7624000    0.52267000              4.356
## 97     1.2714633    0.52471364              5.041
## 98     0.6254200    0.52497000              4.513
## 99     0.2474900    0.54177000              4.643
## 100    0.6795400    0.54558000              4.633
## 101    0.6809300    0.54649000              4.077
## 102    0.5757600    0.55507000              3.916
## 103    0.5375000    0.55604000              3.907
## 104    0.9543400    0.56044000              5.185
## 105    1.0679507    0.56047946              4.553
## 106    0.9460182    0.56430537              4.695
## 107    0.4749300    0.57939000              3.724
## 108    0.7351317    0.58668298              4.608
## 109    0.7380300    0.59066000              4.876
## 110    0.9353822    0.59168345              3.593
## 111    1.1418400    0.59325000              5.828
## 112    1.0152800    0.59448000              5.889
## 113    0.9534800    0.59532000              4.788
## 114    0.4141100    0.59543000              5.194
## 115    1.3942386    0.59622008              5.004
## 116    0.9255800    0.59867000              4.715
## 117    1.0062383    0.60176510              4.168
## 118    0.9047800    0.60304892              4.180
## 119    0.6376000    0.61202000              4.795
## 120    0.8414200    0.61391000              4.201
## 121    0.8192800    0.63069000              4.139
## 122    0.4935300    0.63107000              4.276
## 123    0.9122600    0.63216000              5.360
## 124    1.3404300    0.63244000              6.003
## 125    1.0031873    0.63640678              4.514
## 126    0.3817400    0.64499000              4.565
## 127    1.2720308    0.64845729              4.292
## 128    0.9043200    0.65435000              5.268
## 129    1.2140086    0.65951669              4.139
## 130    0.4748900    0.66320000              3.006
## 131    0.8736647    0.66722482              4.120
```

```
## 132    0.7162900    0.67024000              4.754
## 133    0.6629000    0.67866000              3.989
## 134    0.5497000    0.68042000              4.876
## 135    0.9784100    0.68133000              5.890
## 136    0.2613500    0.68816000              5.132
## 137    0.8313200    0.69177000              5.897
## 138    0.8952100    0.69384000              5.992
## 139    0.7559600    0.69429000              4.871
## 140    1.0351600    0.70532000              5.073
## 141    1.0728400    0.71206000              4.867
## 142    1.1556472    0.71624923              4.775
## 143    0.6726907    0.72688353              5.269
## 144    1.2518256    0.72887063              5.838
## 145    1.1439450    0.73057312              5.181
## 146    0.6409500    0.73479000              5.013
## 147    1.1681000    0.73591000              5.987
## 148    1.2872157    0.73729920              6.071
## 149    0.2924700    0.74036000              4.404
## 150    0.7911700    0.74037000              5.061
## 151    0.3856200    0.74190000              4.297
## 152    1.0435600    0.74553000              6.123
## 153    0.1486600    0.74719000              3.069
## 154    0.6449800    0.75216000              4.875
## 155    0.8604000    0.75778000              4.033
## 156    1.3047700    0.75985000              5.878
## 157    1.0250700    0.76454000              6.130
## 158    0.7771100    0.76821000              4.350
## 159    1.1039500    0.77042000              5.253
## 160    0.4779900    0.77109000              4.236
## 161    0.3961026    0.77715313              3.462
## 162    1.2157705    0.78375626              5.074
## 163    1.5489691    0.78644109              5.971
## 164    1.2774913    0.78854758              5.074
## 165    0.7543726    0.79222125              4.315
## 166    0.8377900    0.79422000              5.822
## 167    1.2027800    0.79907000              4.681
## 168    0.8119800    0.80148000              5.589
## 169    0.8320444    0.80896425              4.291
## 170    1.1510200    0.81038000              5.709
## 171    0.8787700    0.81217000              5.279
## 172    1.3006000    0.82819000              4.874
## 173    1.0870800    0.82827000              5.399
## 174    0.9191600    0.83223000              4.949
## 175    1.2276191    0.83375657              5.823
## 176    0.8711900    0.83454000              6.324
## 177    1.0190500    0.83524000              4.271
## 178    0.1924900    0.83792000              4.252
## 179    0.3859500    0.84058000              5.151
## 180    0.6636600    0.84731000              3.866
## 181    0.9083600    0.85270000              5.196
## 182    1.2539176    0.85769922              5.430
## 183    1.1044120    0.85842818              3.795
## 184    0.6247700    0.86086000              4.360
## 185    0.9990300    0.86402000              5.975
```

```
## 186    1.2555852    0.87200195              6.454
## 187    1.0141300    0.87287000              4.324
## 188    0.8097500    0.87370000              6.068
## 189    0.6865500    0.87616000              5.956
## 190    0.7748644    0.87811458              5.235
## 191    0.8043400    0.87867000              4.959
## 192    0.6042900    0.88113000              4.739
## 193    0.7470000    0.88180000              4.194
## 194    1.3401265    0.88541639              5.011
## 195    0.9467500    0.89012000              5.140
## 196    0.9637200    0.89333000              5.510
## 197    1.1111100    0.89373000              5.538
## 198    1.3945376    0.89465195              4.096
## 199    1.1720200    0.89537000              4.885
## 200    0.9745900    0.90019000              5.824
## 201    1.0074837    0.90059674              4.376
## 202    0.6606200    0.90145000              5.401
## 203    1.0539200    0.90198000              5.192
## 204    1.0814178    0.90797532              5.956
## 205    1.1821251    0.90978450              6.003
## 206    1.0023200    0.91851000              5.007
## 207    1.2401800    0.91861000              6.477
## 208    1.1846800    0.92049000              4.642
## 209    1.0096400    0.92053000              5.123
## 210    1.3682181    0.92557931              5.311
## 211    1.5072849    0.93253732              5.493
## 212    0.7036200    0.93287000              4.574
## 213    0.6436700    0.93383000              5.163
## 214    1.0777200    0.93929000              5.605
## 215    0.5706149    0.95061266              4.286
## 216    0.8762500    0.95104000              5.314
## 217    1.1378535    0.95148438              5.279
## 218    0.4981300    0.95395000              4.362
## 219    0.5016300    0.95530000              4.655
## 220    1.2378800    0.95578000              7.226
## 221    1.2266800    0.95847000              5.548
## 222    1.0984708    0.96443433              4.574
## 223    1.2650400    0.96690000              6.455
## 224    0.8597400    0.97306000              5.976
## 225    0.8478300    0.97318000              4.415
## 226    0.9055700    0.97438000              5.192
## 227    0.4316500    0.97724000              5.045
## 228    1.2328700    0.98124000              6.983
## 229    1.0693359    0.98240942              5.182
## 230    0.8188900    0.98549000              4.677
## 231    1.0898300    0.98853000              4.907
## 232    0.9974714    0.98970181              4.735
## 233    1.2390889    0.99101239              5.336
## 234    1.1046400    0.99355000              4.332
## 235    0.9720000    0.99534000              6.269
## 236    1.2744447    0.99553859              5.262
## 237    0.8125500    0.99602000              5.743
## 238    0.8036852    0.99619275              4.644
## 239    0.8621600    0.99673000              5.303
```

```
## 240    1.2861688    1.00082040              6.008
## 241    0.8683515    1.00726581              4.805
## 242    0.9852100    1.00761000              5.477
## 243    0.5444700    1.00880000              4.686
## 244    1.2599764    1.00985014              4.440
## 245    1.1061400    1.01216000              4.218
## 246    0.7823600    1.01930000              5.121
## 247    0.9145100    1.02054000              7.187
## 248    0.9379300    1.02389000              5.212
## 249    0.9605300    1.02416000              4.459
## 250    0.8000100    1.02564000              4.839
## 251    1.4930112    1.02723587              4.955
## 252    0.7938100    1.02780000              5.245
## 253    0.9949600    1.02787000              5.155
## 254    1.0216900    1.03032000              6.481
## 255    1.2328900    1.03192000              5.813
## 256    0.8132900    1.03437000              5.177
## 257    1.2187704    1.03522527              5.715
## 258    0.8858800    1.04345000              5.124
## 259    1.2559600    1.04424000              6.810
## 260    0.8330900    1.05266000              6.355
## 261    1.2482300    1.05351000              6.574
## 262    1.3847886    1.05469871              4.829
## 263    0.9052800    1.06024000              3.896
## 264    0.9463200    1.06098000              5.332
## 265    1.2089000    1.06166000              6.485
## 266    1.1985000    1.06353000              6.786
## 267    1.2078930    1.06457794              5.175
## 268    0.9507600    1.06688000              5.615
## 269    1.0215200    1.06879000              7.087
## 270    1.2581898    1.06931758              5.395
## 271    1.4021829    1.07062232              6.357
## 272    0.5920500    1.07474000              4.575
## 273    1.1296242    1.07498753              5.225
## 274    0.7417300    1.07838000              5.161
## 275    1.4024167    1.07937384              5.230
## 276    1.0381700    1.08017000              5.658
## 277    1.1608374    1.08116579              5.273
## 278    0.7962400    1.08254000              5.759
## 279    1.0393800    1.08754000              6.952
## 280    1.0447700    1.08930000              6.474
## 281    1.1462175    1.09186447              5.872
## 282    0.8918600    1.09426000              3.974
## 283    0.7786600    1.09686000              6.269
## 284    1.3575643    1.10180306              5.525
## 285    0.9786132    1.10271049              4.497
## 286    1.1244700    1.10715000              6.670
## 287    1.4313060    1.10735321              6.635
## 288    1.4164037    1.10970628              7.079
## 289    0.9254200    1.11306000              4.217
## 290    1.0956200    1.11312000              5.098
## 291    0.7146000    1.11508000              6.778
## 292    0.3885700    1.11758000              4.813
## 293    1.2021500    1.12094000              4.800
```

```
## 294    1.2383765    1.12112904              5.237
## 295    1.2215550    1.12209415              3.766
## 296    1.1224100    1.12254000              5.855
## 297    0.6418400    1.12268000              5.129
## 298    0.7604200    1.12373000              5.291
## 299    1.0702300    1.12486000              5.770
## 300    1.2794800    1.12555000              5.791
## 301    1.4257925    1.12786877              6.424
## 302    1.4313376    1.12843120              5.250
## 303    1.0499300    1.13062000              5.802
## 304    1.4931492    1.13077676              5.822
## 305    1.1186200    1.13145000              5.754
## 306    1.0330200    1.13367000              6.084
## 307    1.2361700    1.13764000              5.716
## 308    0.7569500    1.14372000              5.648
## 309    1.2574500    1.14723000              5.833
## 310    1.0661200    1.15137000              6.650
## 311    1.2279100    1.15174000              5.429
## 312    1.2108622    1.15318382              6.578
## 313    1.1524003    1.15360177              5.234
## 314    0.9293300    1.15406000              4.857
## 315    1.4449452    1.15655756              5.569
## 316    0.7115512    1.15687311              4.692
## 317    0.7236800    1.15851000              4.121
## 318    1.1393500    1.15991000              5.102
## 319    1.4343795    1.16145909              4.714
## 320    0.8771700    1.16492000              5.389
## 321    1.2699900    1.16891000              5.995
## 322    0.7280300    1.16970000              5.528
## 323    1.2064300    1.17898000              6.505
## 324    1.0314300    1.18157000              6.545
## 325    0.9891200    1.18306000              6.701
## 326    1.2738500    1.18498000              5.848
## 327    1.4404511    1.18529546              6.599
## 328    0.6080900    1.18649000              5.488
## 329    1.2095610    1.18939555              5.629
## 330    1.1556202    1.19821024              4.465
## 331    1.3377532    1.19827437              5.500
## 332    1.3020300    1.20740000              6.302
## 333    1.0700800    1.20806000              5.695
## 334    0.8931800    1.20813000              5.689
## 335    1.1835400    1.21183000              6.168
## 336    0.9058700    1.21670000              6.705
## 337    1.4122279    1.21755970              6.454
## 338    1.1500913    1.21768391              5.825
## 339    0.9502500    1.21788000              5.560
## 340    0.9679830    1.22255623              5.293
## 341    1.2239300    1.22857000              7.278
## 342    0.9554400    1.22943000              5.919
## 343    1.3137900    1.23011000              6.329
## 344    1.0526100    1.23228000              5.856
## 345    1.3731925    1.23374844              6.452
## 346    0.9316400    1.24142000              5.145
## 347    0.9577400    1.24461000              5.984
```

```
## 348    1.0468500    1.24585000              5.835
## 349    0.7547300    1.24886000              5.033
## 350    1.3196700    1.25018000              7.286
## 351    1.1977700    1.25114000              5.948
## 352    0.8802500    1.25142000              6.005
## 353    1.2840250    1.25278461              6.652
## 354    1.4047149    1.26074862              5.850
## 355    1.2854800    1.26637000              6.867
## 356    1.0641100    1.26920000              5.813
## 357    1.2571200    1.27074000              5.987
## 358    0.9436700    1.27607000              5.123
## 359    1.2603800    1.27778000              6.575
## 360    1.0516300    1.27964000              5.517
## 361    1.0826800    1.27973000              6.078
## 362    1.4692824    1.28177810              5.963
## 363    1.3843690    1.28455627              5.819
## 364    1.3431331    1.28601193              5.324
## 365    1.2394146    1.28948748              5.227
## 366    1.3182600    1.29025000              7.406
## 367    1.0761700    1.29098000              6.298
## 368    1.2846460    1.29121542              6.084
## 369    1.4457120    1.29178786              5.973
## 370    1.0561300    1.29947000              5.768
## 371    1.4022300    1.30232000              7.561
## 372    1.0987900    1.30782000              6.488
## 373    1.2856600    1.30782000              6.937
## 374    1.0079300    1.30915000              6.596
## 375    0.8182600    1.31141000              5.771
## 376    1.4735161    1.31458235              5.902
## 377    1.3670430    1.31517529              5.195
## 378    0.7069700    1.31857000              5.546
## 379    1.4766711    1.32087934              5.611
## 380    1.2162400    1.32376000              5.960
## 381    1.5050592    1.32539356              6.098
## 382    1.3605800    1.32548000              7.527
## 383    0.9856900    1.32572000              6.168
## 384    1.3226100    1.32629000              7.427
## 385    1.2993700    1.32792000              6.750
## 386    1.2801700    1.32944000              7.378
## 387    1.2890700    1.33171000              7.364
## 388    1.3092300    1.33358000              7.284
## 389    1.3694800    1.33596000              6.940
## 390    1.2970400    1.33723000              7.200
## 391    0.9953700    1.33766000              7.267
## 392    1.4525188    1.34120595              5.758
## 393    1.1294500    1.34253000              6.361
## 394    1.4884117    1.34327984              6.527
## 395    1.1863034    1.34691131              5.810
## 396    1.4338852    1.35268235              6.609
## 397    1.0416700    1.35495000              5.977
## 398    1.1313633    1.35593808              5.621
## 399    1.0811300    1.35943000              7.039
## 400    0.7219400    1.35948000              5.835
## 401    1.0818200    1.36011000              6.853
```

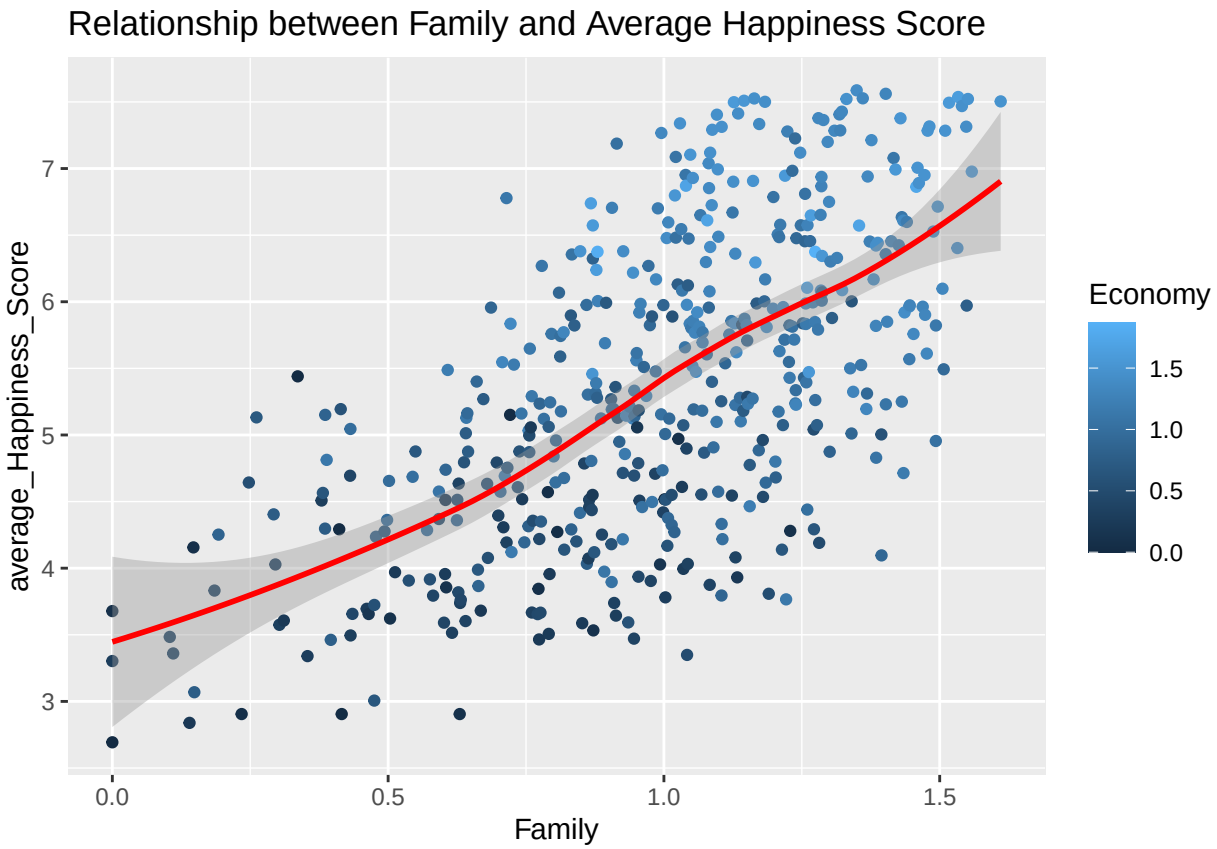
```
## 402    1.1727800    1.36066000              7.334
## 403    1.3802285    1.36135590              6.168
## 404    1.3762900    1.37538242              7.213
## 405    1.0605400    1.38007000              5.921
## 406    1.5320909    1.38439786              6.403
## 407    1.0581800    1.38604000              5.474
## 408    1.2471100    1.39451000              7.119
## 409    1.0050800    1.39488000              6.478
## 410    1.4449233    1.39506662              5.964
## 411    1.0839300    1.39541000              6.411
## 412    1.3495100    1.39651000              7.587
## 413    0.9262400    1.39729000              6.379
## 414    1.1282744    1.40167844              5.838
## 415    1.0867200    1.40283000              6.725
## 416    1.5481951    1.40570605              7.314
## 417    1.1346400    1.40598000              7.413
## 418    1.4363378    1.41691518              5.920
## 419    1.0524900    1.42539000              6.929
## 420    1.1832600    1.42666000              7.501
## 421    1.1257500    1.42727000              6.901
## 422    1.3877769    1.43092346              6.442
## 423    1.3845654    1.43362653              6.422
## 424    1.0961000    1.44015000              7.404
## 425    0.9439700    1.44024000              6.218
## 426    1.4964601    1.44163394              6.714
## 427    1.1637400    1.44178000              7.526
## 428    1.5402467    1.44357193              7.469
## 429    1.1047600    1.44443000              7.313
## 430    1.0977400    1.44787000              6.994
## 431    1.0838300    1.45038000              7.119
## 432    1.0876400    1.45181000              7.291
## 433    1.3309500    1.45900000              7.522
## 434    1.4623127    1.46378076              6.891
## 435    1.0291200    1.46468000              7.339
## 436    1.4813490    1.47920442              7.316
## 437    1.6105740    1.48063302              7.504
## 438    1.5511216    1.48238301              7.522
## 439    1.1615700    1.48341000              6.907
## 440    1.5100420    1.48441494              7.284
## 441    1.4599450    1.48709726              7.006
## 442    1.4725204    1.48792338              6.951
## 443    1.3231105    1.48841226              6.087
## 444    0.8482900    1.48953000              6.379
## 445    1.4781622    1.49438727              7.284
## 446    1.4289392    1.50394464              7.377
## 447    1.0478200    1.50796000              7.104
## 448    0.8702100    1.51070000              5.458
## 449    1.0200000    1.52186000              6.798
## 450    1.1452400    1.52733000              7.509
## 451    1.2866776    1.53062356              6.344
## 452    1.5582311    1.53570664              6.977
## 453    1.4199206    1.54625928              6.993
## 454    1.2627909    1.55167484              5.472
## 455    1.1659400    1.55422000              6.295
```

```
## 456    1.2196300    1.56391000                6.946
## 457    1.5169117    1.56497955                7.494
## 458    0.8711400    1.57352000                6.573
## 459    1.1269000    1.57744000                7.498
## 460    1.5335236    1.61646318                7.537
## 461    0.8775800    1.61714000                6.239
## 462    1.2664102    1.62634337                6.648
## 463    1.2596987    1.63295245                6.105
## 464    0.8675800    1.64555000                6.739
## 465    1.0786000    1.69042000                6.611
## 466    1.3538144    1.69227767                6.572
## 467    1.0399900    1.69752000                6.871
## 468    1.4575837    1.74194360                6.863
## 469    0.8796400    1.82427000                6.375
## 470    1.2742969    1.87076569                6.375
```

Plotting the graph

```
# Let's visualize the happiness score by Family
Total %>%
  group_by(Family,Economy) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Family,Economy)  %>% drop_na() %>%
  ggplot(aes(x = Family, y = average_Happiness_Score, fill = Economy, color = Economy)) +
  geom_point( position = "jitter") + geom_smooth(color = 'red') +
  labs(title = "Relationship between Family and Average Happiness Score")
```

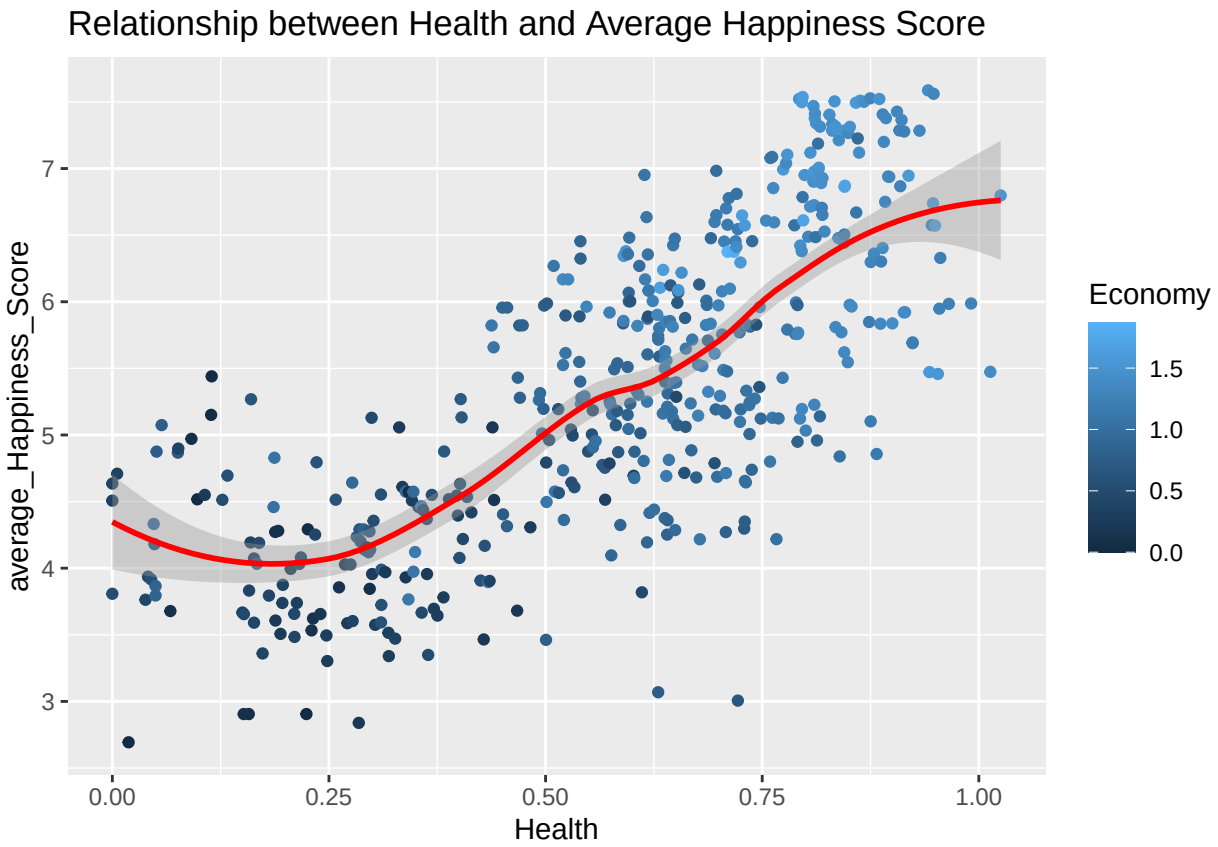
```
## `summarise()` has grouped output by 'Family'. You can override using the
## `.groups` argument.
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



There is a positive correlation exist between Family and Average Happiness Score that is filled with different economy GDP size.Having more size and more economy are more happy.

```
# Let's visualize the happiness score by Health
Total %>%
  group_by(Health,Economy) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Health,Economy)  %>% drop_na() %>%
  ggplot(aes(x = Health, y = average_Happiness_Score, fill = Economy, color = Economy)) +
  geom_point( position = "jitter") + geom_smooth(color = 'red') +
  labs(title = "Relationship between Health and Average Happiness Score")
```

```
## `summarise()` has grouped output by 'Health'. You can override using the
## `.groups` argument.
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



There is also a positive correlation between Health and Average Happiness Score that is filled with economy.Healthy individuals are more happy than others.

```
# Let's visualize the happiness score in relation to different regions
Total %>%
  group_by(Region, Happiness_Score) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Region, Happiness_Score)  %>% drop_na() %>%
  ggplot(aes(x = Region, y = average_Happiness_Score, color = Region, size = Region)) +
  geom_point(position = "jitter") +
  labs(title = "Relationship between Region and Average Happiness Score") +
  theme(text = element_text(size = 5), plot.title = element_text(hjust = 0.5))
```

```
## `summarise()` has grouped output by 'Region'. You can override using the
## `.groups` argument.
```

```
## Warning: Using size for a discrete variable is not advised.
```

We have eaisly distinguish Happiness Score of a particular Region from others.So the highest Happiness Score are of Australia, New Zealand, North America and Western Europe.

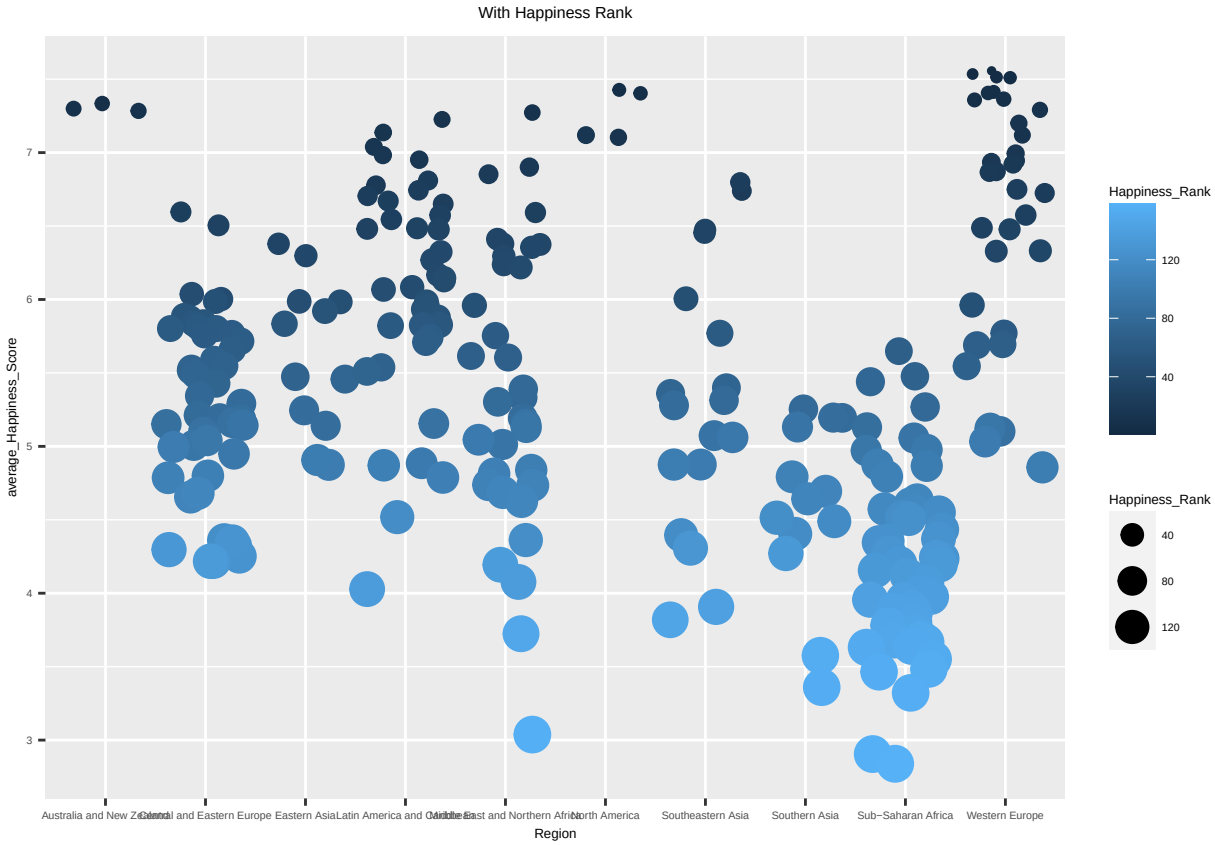
```
# Let's visualize the happiness score in relation to different regions with respect to their freedom
Total %>%
  group_by(Freedom, Region) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Freedom, Region)  %>% drop_na() %>%
  ggplot(aes(x = Region, y = average_Happiness_Score, fill = Freedom,color = Freedom, size = Freedom)) +
  geom_point(position = "jitter") +
  labs(title = "With Freedom") +
  theme(legend.position = "bottom",text = element_text(size = 5), plot.title = element_text(hjust = 0.5)
```

```
## `summarise()` has grouped output by 'Freedom'. You can override using the
## `.groups` argument.
```

Regions having more freedom scale as in Australia and New Zealand are more happy than others.

```
# Let's visualize the happiness score in relation to different regions
Total %>%
  group_by(Region, Happiness_Rank) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Region, Happiness_Rank)  %>% drop_na() %>%
  ggplot(aes(x = Region, y = average_Happiness_Score, color = Happiness_Rank, size = Happiness_Rank)) +
  geom_point(position = "jitter") +
  labs(title = "With Happiness Rank") +
  theme(text = element_text(size = 5), plot.title = element_text(hjust = 0.5))
```

```
## `summarise()` has grouped output by 'Region'. You can override using the
## `.groups` argument.
```



Lowest the Happiness Rank, more people are happy in the region as we are visualizing through plotting.

```
# Let's visualize the happiness rank in relation to different regions
Total %>%
  group_by(Region, Happiness_Rank) %>%
  summarise(average_Happiness_Rank = mean(Happiness_Rank)) %>%
  arrange(Region, Happiness_Rank)  %>% drop_na() %>%
  ggplot(aes(x = Region, y = average_Happiness_Rank, fill = Region,color = Region, size = Region)) +
  geom_point(position = "jitter") +
  labs(title = "Relationship between Region and Happiness Rank") +
  theme(legend.position = "bottom",text = element_text(size = 5), plot.title = element_text(hjust = 0.5)
```

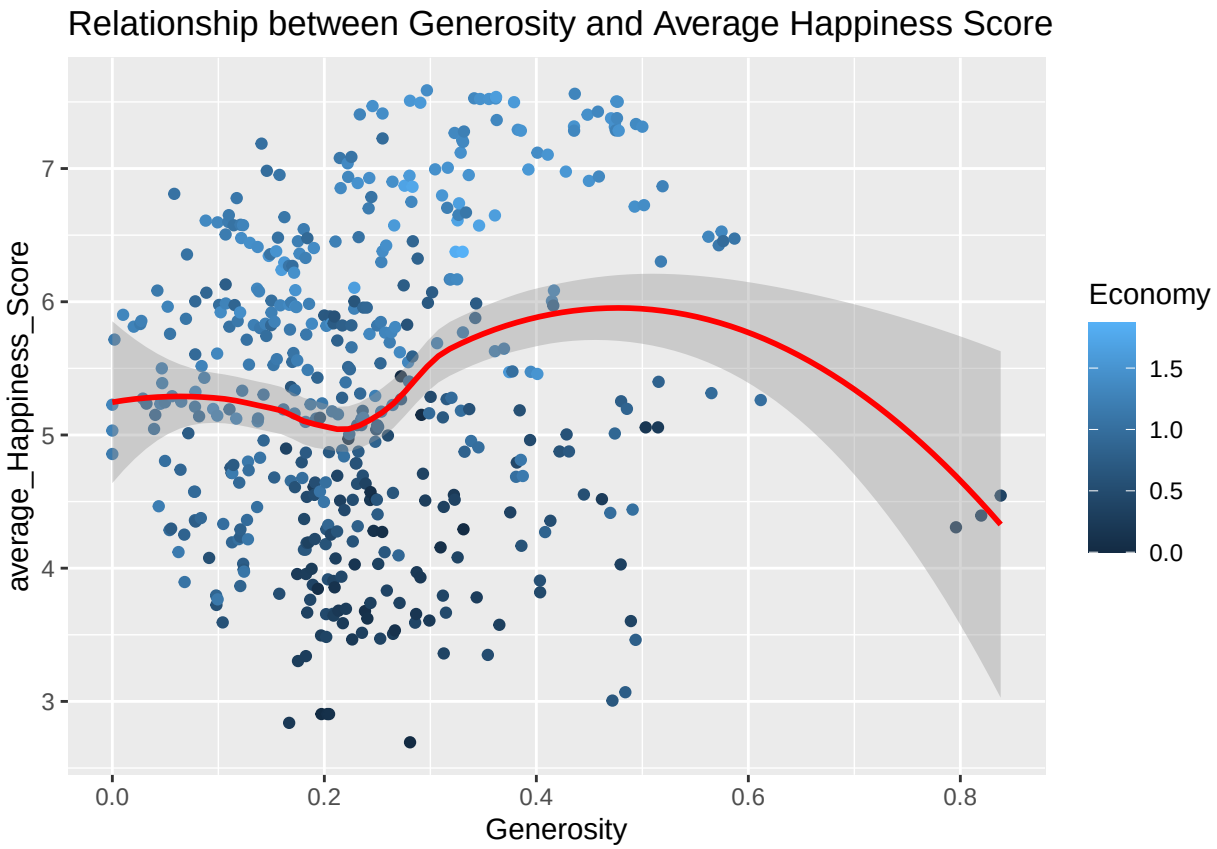
```
## `summarise()` has grouped output by 'Region'. You can override using the
## `.groups` argument.
```

```
## Warning: Using size for a discrete variable is not advised.
```

Australia, New Zealand, North America and Western Europe have lowest Rank and hence, these are the most happiest regions.

```
# Let's visualize the happiness score by Generosity
Total %>%
  group_by(Generosity,Economy) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Generosity, Economy)  %>% drop_na() %>%
  ggplot(aes(x = Generosity, y = average_Happiness_Score, fill = Economy, color = Economy)) +
  geom_point( position = "jitter") + geom_smooth(color = 'red') +
  labs(title = "Relationship between Generosity and Average Happiness Score")
```

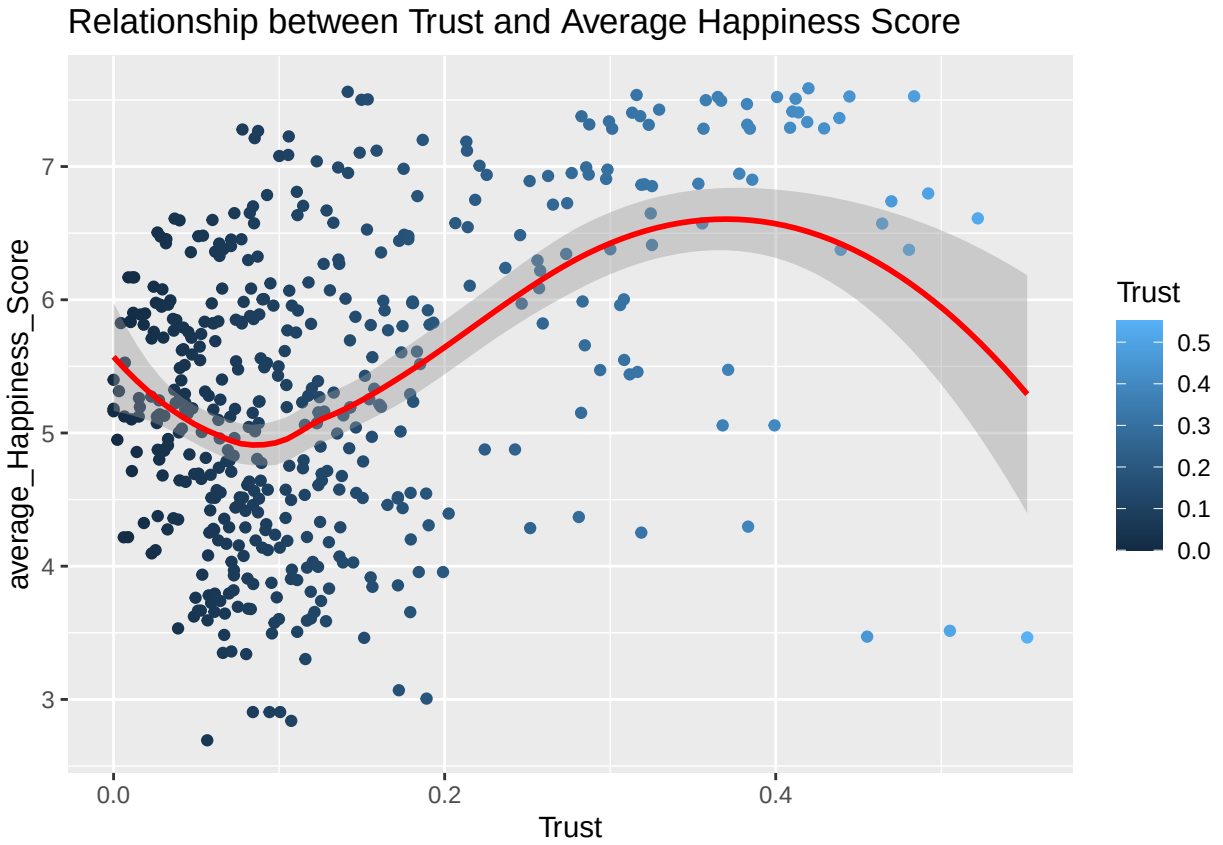
```
## `summarise()` has grouped output by 'Generosity'. You can override using the
## `.groups` argument.
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



Having generosity of range 0.4-0.6 are more happy people then there is slight decline in happiness with increasing generosity.

```
# Let's visualize the happiness score by Trust
Total %>%
  group_by(Trust, Happiness_Score) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Trust, Happiness_Score)  %>% drop_na() %>%
  ggplot(aes(x = Trust, y = average_Happiness_Score, fill = Trust, color = Trust)) +
  geom_point( position = "jitter") + geom_smooth(color = 'red') +
  labs(title = "Relationship between Trust and Average Happiness Score")
```

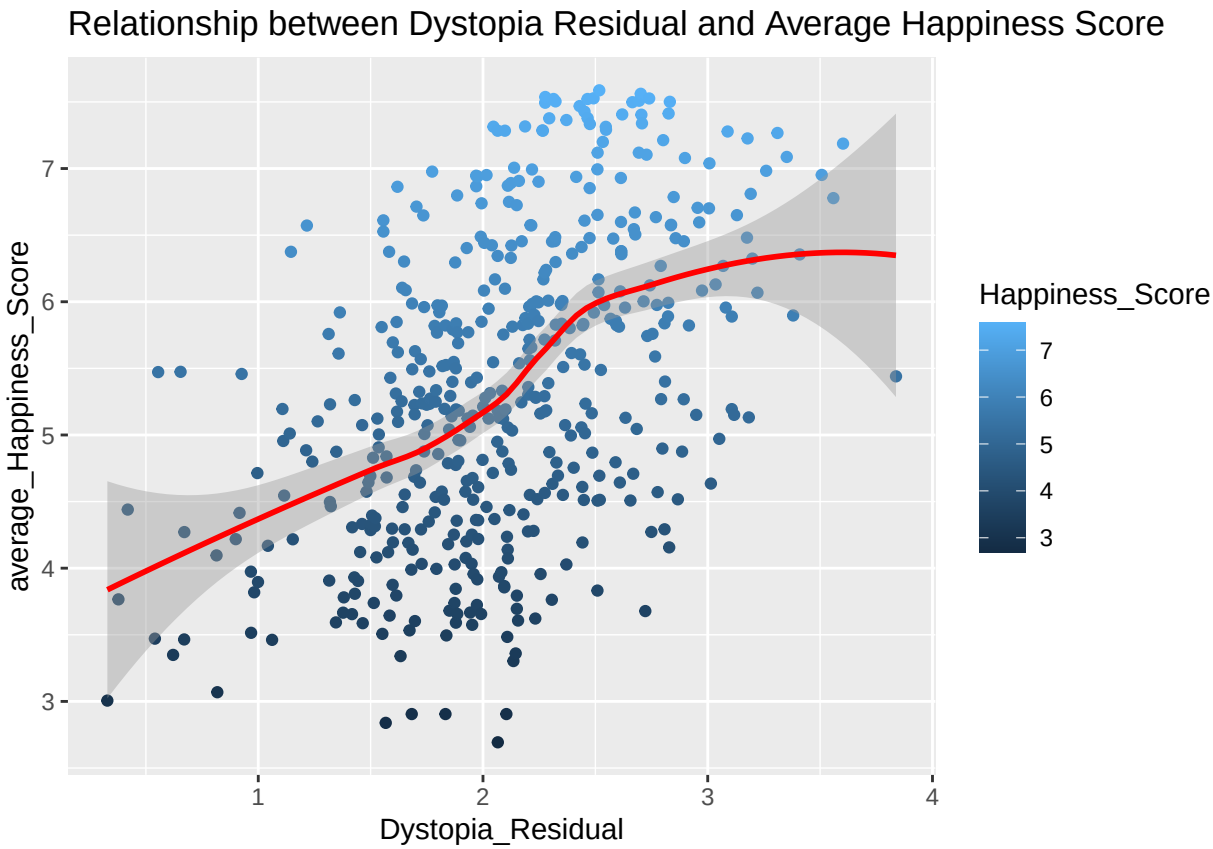
```
## `summarise()` has grouped output by 'Trust'. You can override using the
## `.groups` argument.
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



People having 0.3-0.5 scale of Trust are more happy than others.

```
# Let's visualize the happiness score by Dystopia Residual
Total %>%
  group_by(Dystopia_Residual, Happiness_Score) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Dystopia_Residual, Happiness_Score)  %>% drop_na() %>%
  ggplot(aes(x = Dystopia_Residual, y = average_Happiness_Score, fill = Happiness_Score, color = Happin
  geom_point( position = "jitter") + geom_smooth(color = 'red') +
  labs(title = "Relationship between Dystopia Residual and Average Happiness Score")
```

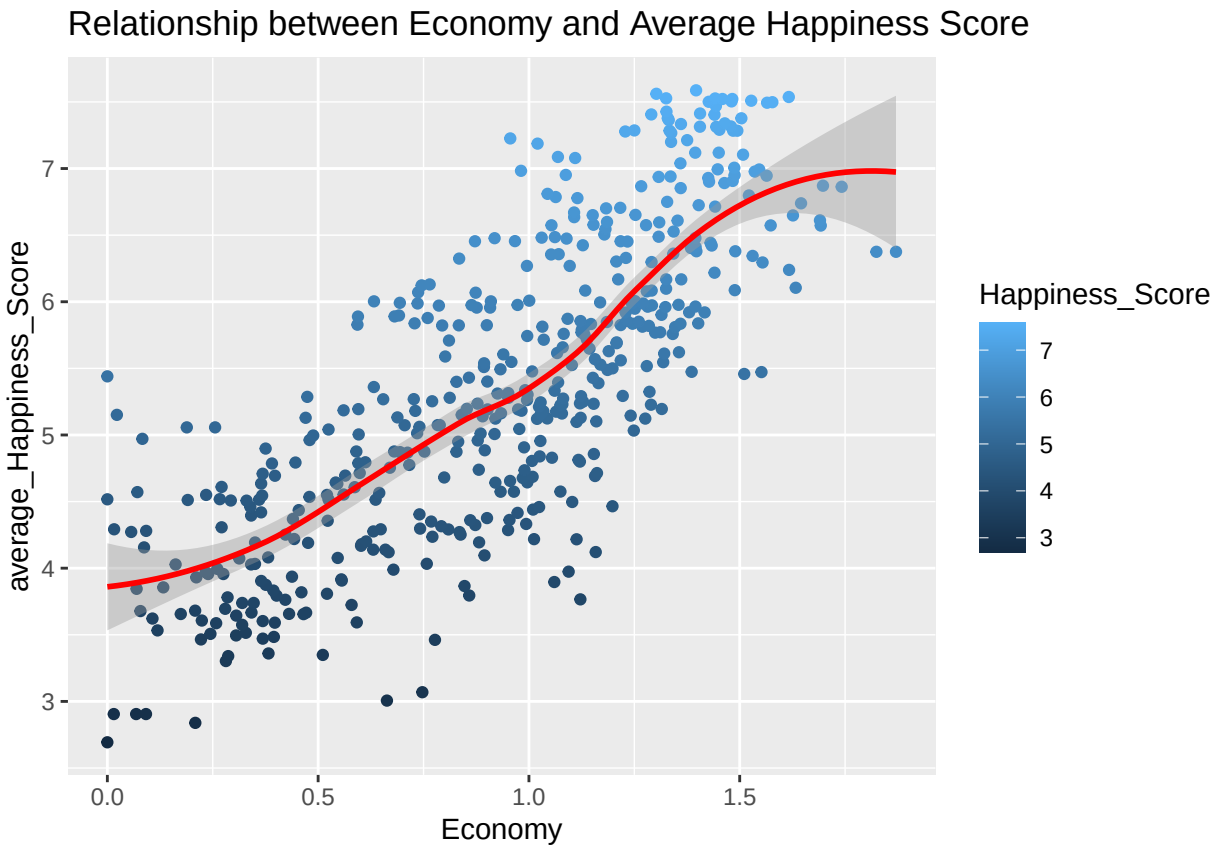
```
## `summarise()` has grouped output by 'Dystopia_Residual'. You can override using
## the `.groups` argument.
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



So, more dystopia residual means people are more happy and life would be more pleasant.

```
# Let's visualize the happiness score by Economy
Total %>%
  group_by(Happiness_Score,Economy) %>%
  summarise(average_Happiness_Score = mean(Happiness_Score)) %>%
  arrange(Happiness_Score,Economy)  %>% drop_na() %>%
  ggplot(aes(x = Economy, y = average_Happiness_Score, fill = Happiness_Score, color = Happiness_Score)
  geom_point( position = "jitter") + geom_smooth(color = 'red') +
  labs(title = "Relationship between Economy and Average Happiness Score")
```

```
## `summarise()` has grouped output by 'Happiness_Score'. You can override using
## the `.groups` argument.
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



More economy more happy the people are as it gives a positive correlation.