World Happiness Report

**Analysis of trend & influential factors
for next travel country recommendation**

Yash Nema, Yanming Liu, Simran Bhatia

Agenda for today

- **What is the World Happiness Report?**
- **What is its significance?**
- **Breakdown of analysis**
- **Outcome of analysis**

1

Glimpse into the data
How was the World Happiness Report created and what are its parameters?

About the data

General stats

Records	Range	Countries	Happiness Score
4351x9	**2015-19**	**145**	**2.85-7.77**

World Happiness Report Data

Country **Region** **Happiness Rank** **Happiness Score** **GDP per Capita** **Family Score** **Life Expectancy**

Freedom **Generosity** **Trust/ Government Corruption**

Country	Region	Happiness Rank	Happiness Score	Economy (GDP per Capita)	Family	Health (Life Expectancy)	Freedom	Generosity	Trust (Government Corruption)
Finland	Western Europe	1	7.769	1.34	1.587	0.986	0.596	0.153	0.393
Denmark	Western Europe	2	7.6	1.383	1.573	0.996	0.592	0.252	0.41
Norway	Western Europe	3	7.554	1.488	1.582	1.028	0.603	0.271	0.341
Iceland	Western Europe	4	7.494	1.38	1.624	1.026	0.591	0.354	0.118
Netherland	Western Europe	5	7.488	1.396	1.522	0.999	0.557	0.322	0.298
Switzerland	Western Europe	6	7.48	1.452	1.526	1.052	0.572	0.263	0.343
Sweden	Western Europe	7	7.343	1.387	1.487	1.009	0.574	0.267	0.373
New Zealand	Australia and New Zealand	8	7.307	1.303	1.557	1.026	0.585	0.33	0.38
Canada	North America	9	7.278	1.365	1.505	1.039	0.584	0.285	0.308
Austria	Western Europe	10	7.246	1.376	1.475	1.016	0.532	0.244	0.226
Australia	Australia and New Zealand	11	7.228	1.372	1.548	1.036	0.557	0.332	0.29
Costa Rica	Latin America and Caribbean	12	7.167	1.034	1.441	0.963	0.558	0.144	0.093
Israel	Middle East and Northern Africa	13	7.139	1.276	1.455	1.029	0.371	0.261	0.082
Luxembourg	Western Europe	14	7.09	1.609	1.479	1.012	0.526	0.194	0.316
United King	Western Europe	15	7.054	1.333	1.538	0.996	0.45	0.348	0.278
Ireland	Western Europe	16	7.021	1.499	1.553	0.999	0.516	0.298	0.31
Germany	Western Europe	17	6.985	1.373	1.454	0.987	0.495	0.261	0.265
Belgium	Western Europe	18	6.923	1.356	1.504	0.986	0.473	0.16	0.21
United Stat	North America	19	6.892	1.433	1.457	0.874	0.454	0.28	0.128
Czech Repu	Central and Eastern Europe	20	6.852	1.269	1.487	0.92	0.457	0.046	0.036
United Arab	Middle East and Northern Africa	21	6.825	1.503	1.31	0.825	0.598	0.262	0.182
Malta	Western Europe	22	6.726	1.3	1.52	0.999	0.564	0.375	0.151
Mexico	Latin America and Caribbean	23	6.595	1.07	1.323	0.861	0.433	0.074	0.073

On to the analysis

2

Overall Trends

How has "Mental Health" Topic Search Intent varied with Happiness Score?

Strong correlation can be seen between "Mental Health" Topic Search Intent and the Happiness Score

Are we talking about mental health and happiness enough?

Google Search Intent "Mental Health" Topic vs. Happiness Score

Search Intent vs Happiness Score

Happiness Score
Mental Health
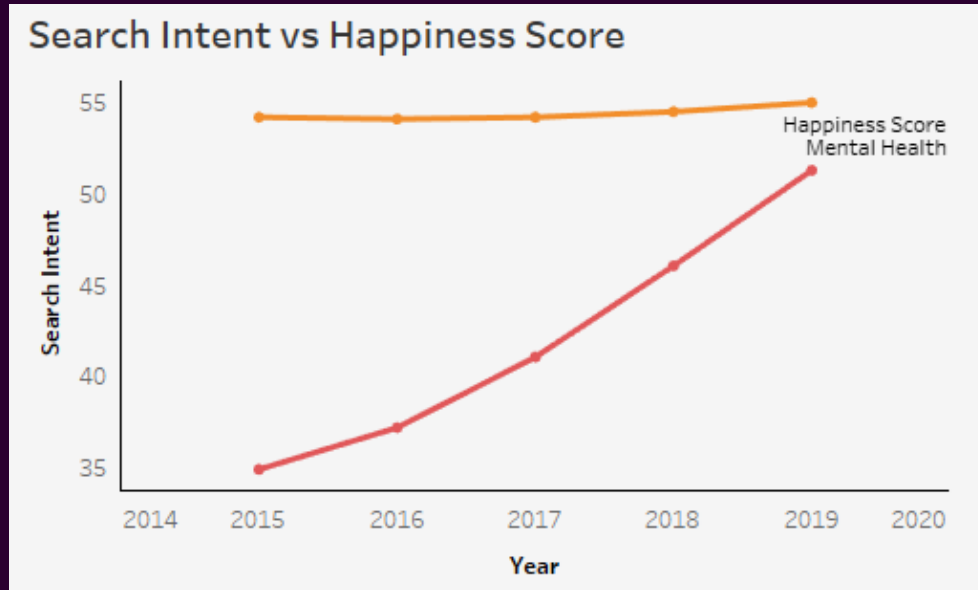
A frustrating fact

Search intent of mental health is increasing significantly and overall happiness score is sees a steady but slow growth. Efforts are being taken but progress is slow

3

Overall Trends
Is Happiness Score changing over the years?

Is Happiness Score changing over the years?

1. Developed regions like Europe, North Americas and Australia have higher average Happiness Scores than developing regions like Asia and Africa.
2. Only European region, and Eastern Asia sees a rise in YoY Happiness score.

Overall YoY Happiness Score Spread by Sub Region
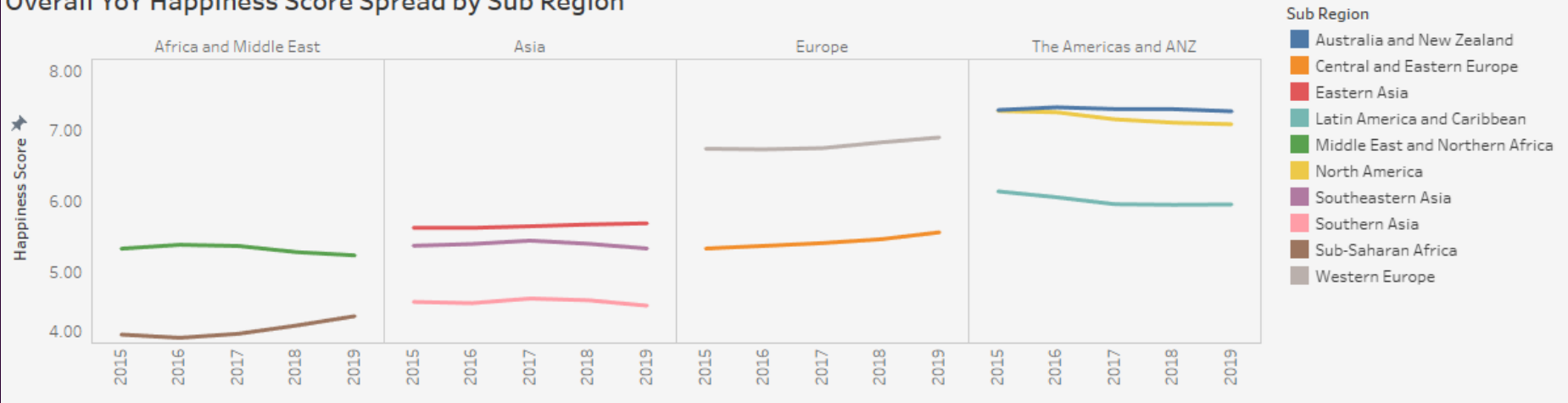
4

Overall Trends

How have countries performed on the Happiness Score card and what factors impacted their scores?

Which countries are most and least happy?

Top 5 Happiest Countries

Least 5 Happiest Countries

- Switzerland ranks #1 on the average happiness score from 2015 to 2019.

- Burundi is the least happiest country all over the world.
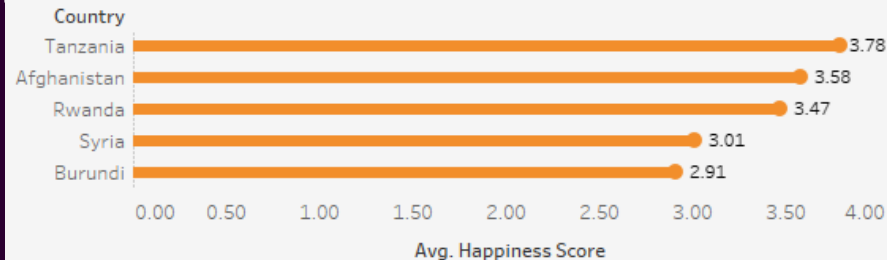
Example: Burundi
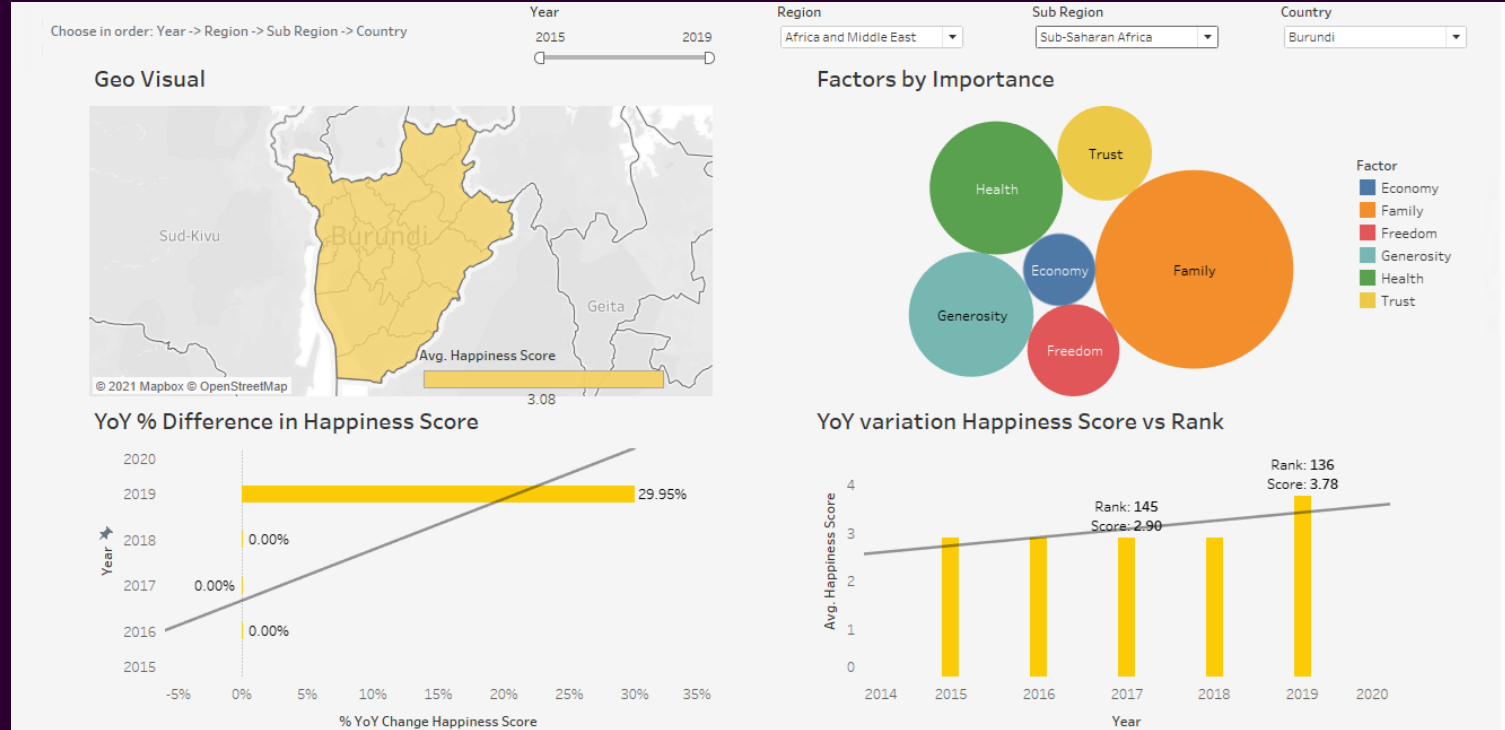
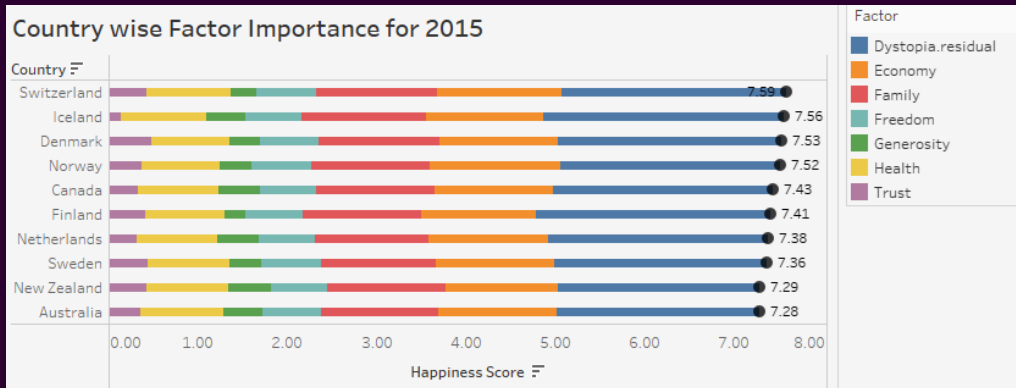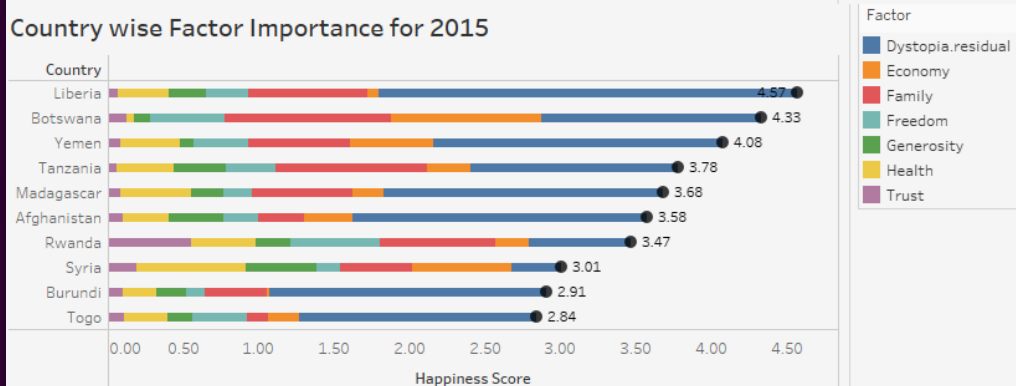# What factors contribute to happiness?

Country wise Factor Importance for 2015

Top 10

Country	Happiness Score
Switzerland	7.59
Iceland	7.56
Denmark	7.53
Norway	7.52
Canada	7.43
Finland	7.41
Netherlands	7.38
Sweden	7.36
New Zealand	7.29
Australia	7.28

Factor
- Dystopia.residual
- Economy
- Family
- Freedom
- Generosity
- Health
- Trust

Country wise Factor Importance for 2015

Bottom 10

Country	Happiness Score
Liberia	4.57
Botswana	4.33
Yemen	4.08
Tanzania	3.78
Madagascar	3.68
Afghanistan	3.58
Rwanda	3.47
Syria	3.01
Burundi	2.91
Togo	2.84

Factor
- Dystopia.residual
- Economy
- Family
- Freedom
- Generosity
- Health
- Trust

Most developed countries show higher contribution of economy while developing countries show higher contribution from Family and Health factors

Data Source: World Happiness Report

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5

Deep Dive
How are the 6 Factors impacting
Happiness score related?

How much do these factors correlate?

- Correlation between Factors remains similar across years.

- Health is highly correlated with economy. This means, wealthy countries are more likely to be physically healthier.

- Family is strongly correlated with health too.

- Generosity doesn't show correlation with economy, however, in a free and trusted environment people tend to be more generous.

- Mental health matters more than material goods for generosity.

Data Source: World Happiness Report

Correlation Between Factors

Correlations Between Factors

Data Source: World Happiness Report

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Next Travel Country Recommender
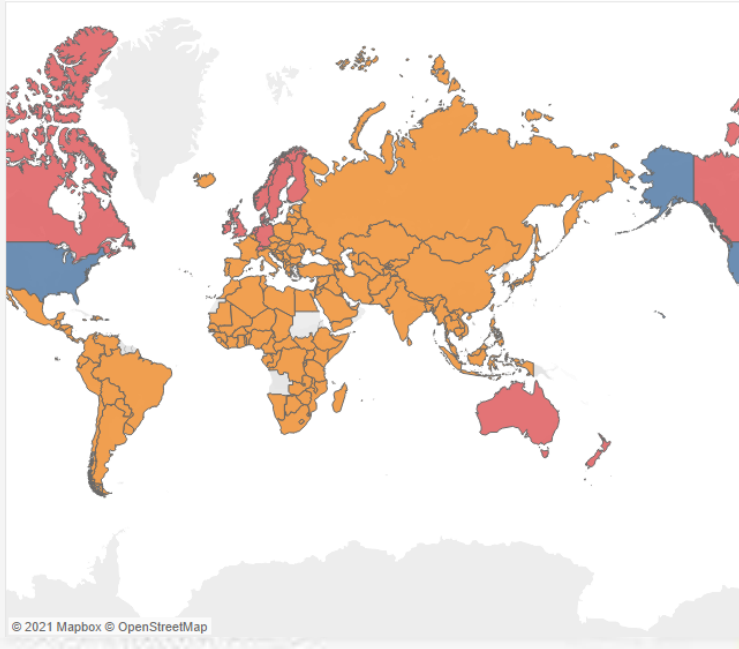
How can we use the custom parameters to recommend which countries to visit?

Planning your next trip? Let us help you!

What countries we recommend

What countries are not recommended?

Data Source: World Happiness Report

7

Summary and Conclusion
What are the Key takeaways?

Summary

- Mental health awareness is growing but happiness score is growing slowly. Progress is slow but steady.

- Developing countries need to foster economy but developed countries should shift their attention to social and family support.

- With more freedom comes more trust.

- Health is closely related to material goods and wealth.

- Generosity follows suit in countries with high freedom and trust scores.

- Using parameters like GDP, trust, happiness scores, choose your next country to travel to.

The Happiness Score's sweet spot is that we can successfully measure a countries growth not just by its GDP but also by factors like Family Relationships, Trust, Freedom, Health and Generosity that better represent the overall progress of the country

References

- https://worldhappiness.report/ed/2021/

- https://www.kaggle.com/unsdsn/world-happiness

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Dashboard Snapshot

World Happiness Report

Analysis to see the trends and performance of countries in the World Happiness Report from 2015 to 2019 and to recommend ideal next countries to travel

IE6600 - SEC 5 - PROJECT 2

-YASH NEMA, YANMING LIU, SIMRAN BHATIA

AGENDA

1. Google Search Intent vs Happiness Score
2. Overview - YoY Happiness Score Trend
3. Country wise Happiness Report Card
4. Deep Dive - Factors Contributing to Happiness Score
5. Deep Dive - Relation between Factors
6. Recommendations - Travel Next Planner
7. Summary
8. Conclusion
9. Glossary

1. Google Search Intent vs Happiness Score
What search intent have people shown towards Hapiness, Mental Health and Saddness searches with respect to Happiness Score?

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Search Intent vs Happiness Score

Saddness
Happiness Score
Happiness
Mental Health

Year
To 2018

Metrics
- Happiness
- Happiness Score
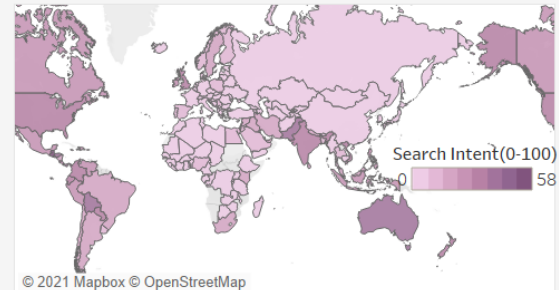- Mental Health
- Saddness
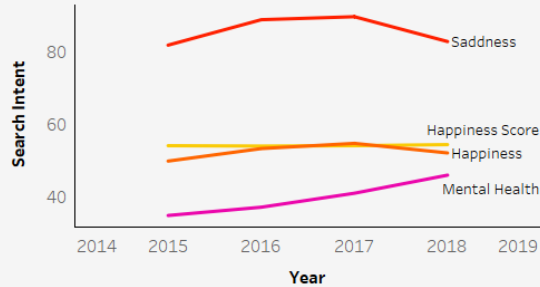
Key Takeaways:

1. **Mental Health** search intent sees a rapid growth in search intent globally from 2015 to 2019, showing increasing awareness and how Mental well being is becoming important to Happiness scores.
2. **Happiness Score** sees a steady growth in Yearly Global Happiness scores showing efforts are being taken to improve the score by most countries

Yearly variation in Happiness Scores

Happiness Score
2.84   7.59

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Year
2015

Search Metric Filter
- Happiness
- Mental Health
- Sadness
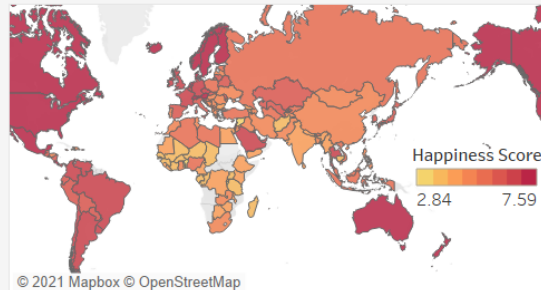
Yearly variation in Search Intent

Search Intent(0-100)
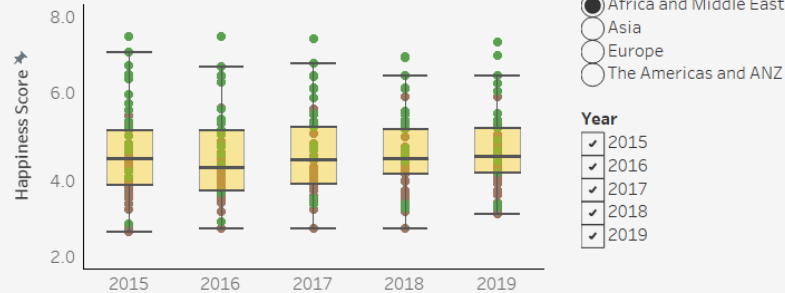0   58

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2. Overview - YoY Happiness Score Trend

How has Happiness Score varied for various Regions and Sub regions from 2015 to 2019?

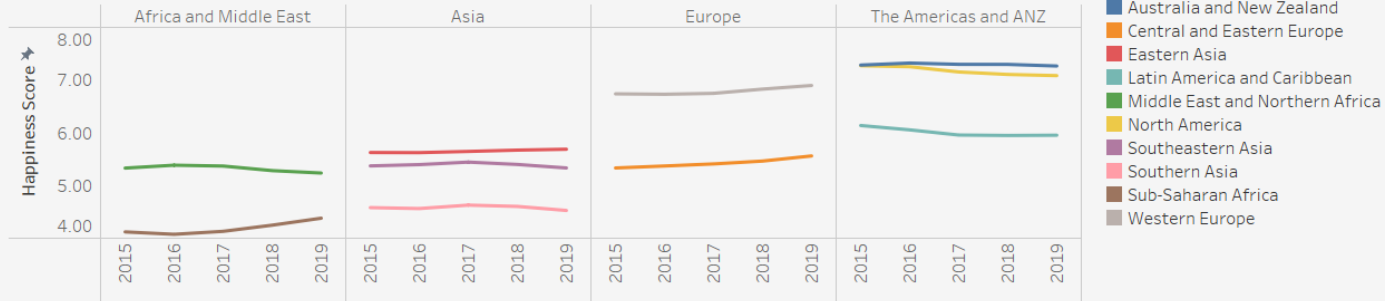## YoY Happiness Spread by Region

Region
- Africa and Middle East
- Asia
- Europe
- The Americas and ANZ

Year
- ☑ 2015
- ☑ 2016
- ☑ 2017
- ☑ 2018
- ☑ 2019

Key Takeaways:

1. We see Developed Regions like Europe, North Americas and Australia having the higher average Happiness scores than Developing Regions like Asia and Africa.

2. European Region, and Eastern Asia sees a rise in YoY Happines score

Overall YoY Happiness Score Spread by Sub Region

Sub Region
- Australia and New Zealand
- Central and Eastern Europe
- Eastern Asia
- Latin America and Caribbean
- Middle East and Northern Africa
- North America
- Southeastern Asia
- Southern Asia
- Sub-Saharan Africa
- Western Europe

3. Country wise Happiness Report Card

How well do countries perform in terms of Happiness Index Scale Score?
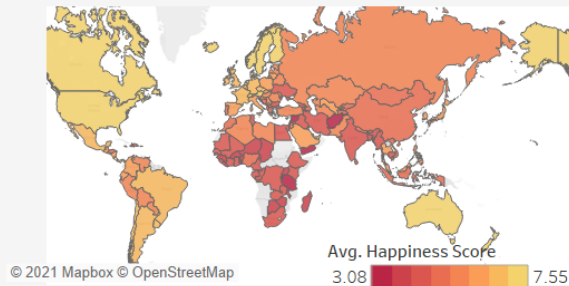
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Choose in order: Year -> Region -> Sub Region -> Country
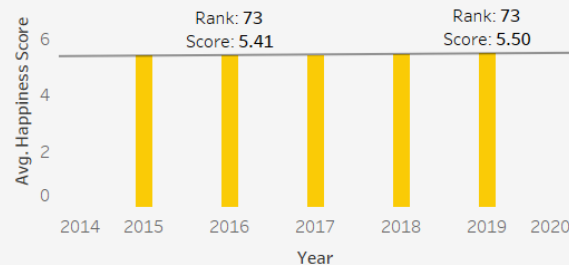
Year
2015 to 2019
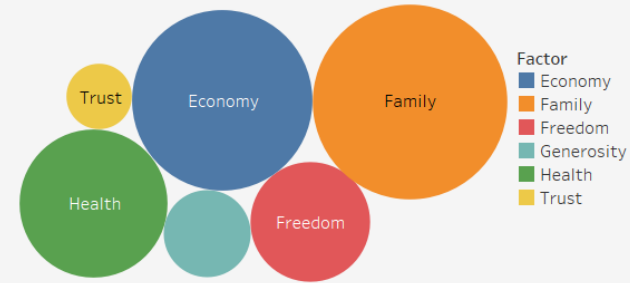and Null values

Region
All

Sub Region
All

Country
All

Geo Visual

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Avg. Happiness Score
3.08 ▭▭▭▭▭ 7.55

Factors by Importance

Trust
Economy
Family
Health
Freedom

Factor
■ Economy
■ Family
■ Freedom
■ Generosity
■ Health
■ Trust

YoY variation Happiness Score vs Rank

Rank: **73**
Score: **5.41**

Rank: **73**
Score: **5.50**

Avg. Happiness Score

2014 2015 2016 2017 2018 2019 2020

Year

YoY % Difference in Happiness Score

2020   0.82%
2018   0.57%
          0.20%
2016 -0.14%

-0.2% 0.0% 0.2% 0.4% 0.6% 0.8% 1.0%
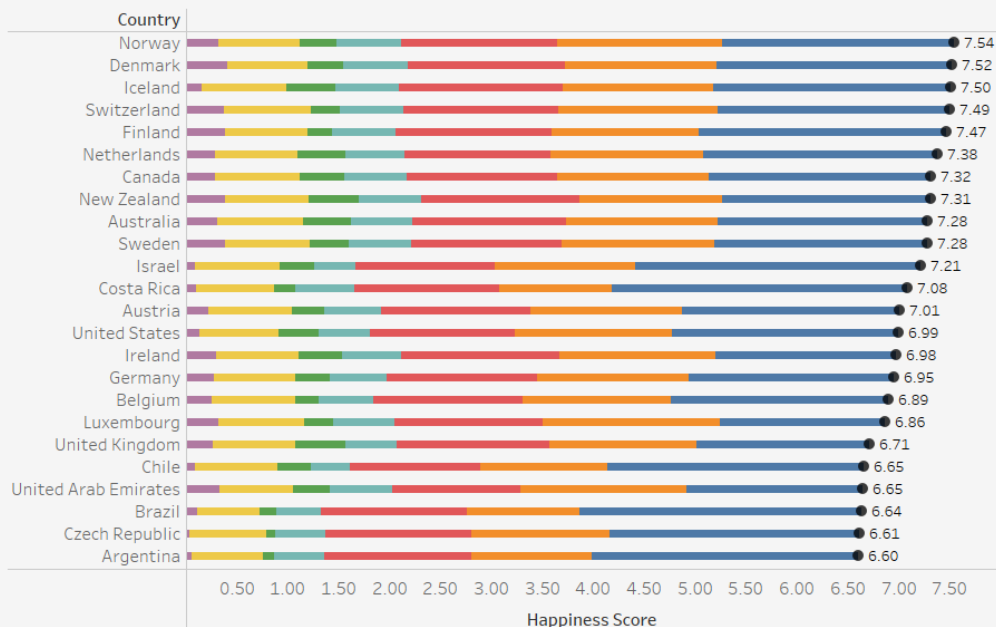
% YoY Change Happiness Score
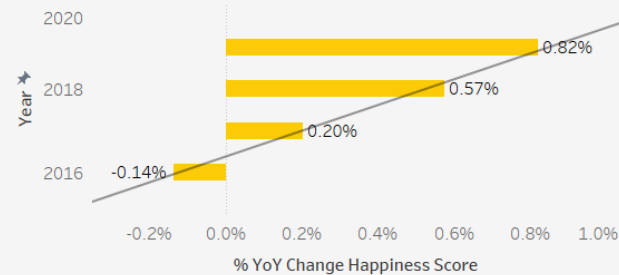
4. Deep Dive - Factors Contributing to Happiness Score

What Factors impact the Happiness Score?

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Choose Year and hover over country bars to see percentage split by Factor Importance

Country wise Factor Importance

Key Takeaway:

1. We can see the top 10 countries for each year and their respective Happiness Scores and how does each parameter contribute

2. Most Developed countries show higher contribution of **Economy** while Developing countries show higher contribution from **Family** and **Health** Factors

Year
- 2015
- 2016
- 2017
- 2018
- 2019

Factor
- Dystopia.residual
- Economy
- Family
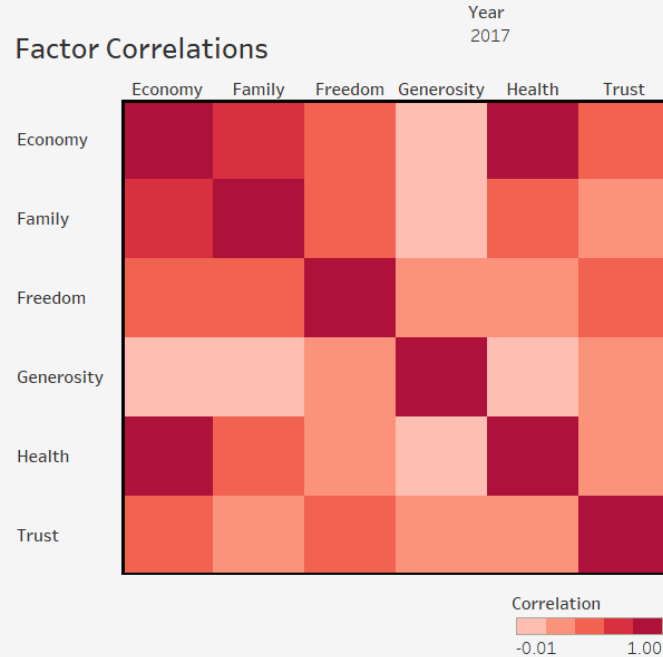- Freedom
- Generosity
- Health
- Trust

5. Deep Dive - Relation between Factors

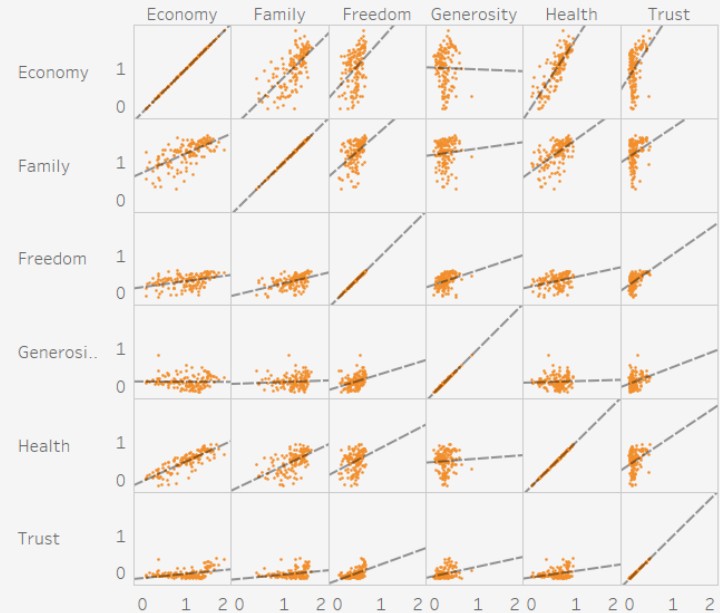How do each of the Factors relate with each other?

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Choose Year and select Factor Correlation combinations to see trend scatter plot

Year
2017

Factor Correlations

Correlation

-0.01   1.00

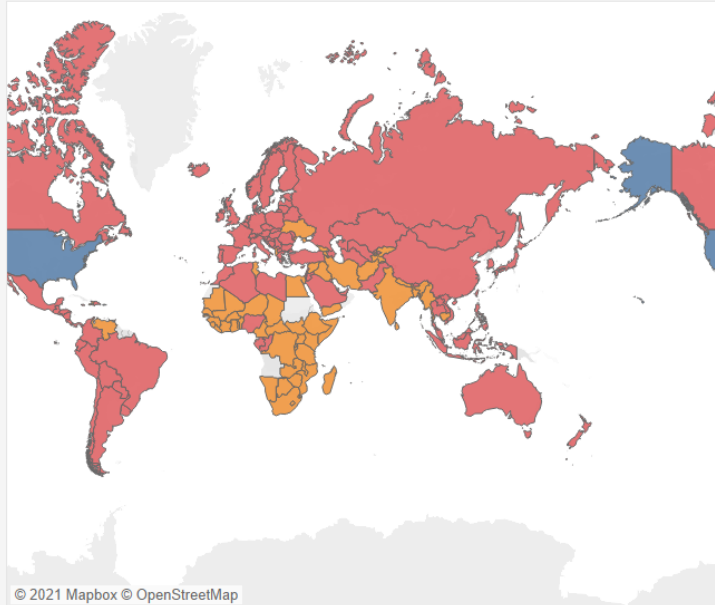## Grid Scatter Plots showing correlation trend

6. Recommendations - Travel Next Planner

What countries should a person move to based on the current country ?

Use Filters to enter your Country and then enter the criteria for recommendation by sliding the filter from Low to High

Country Recommender

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Your Country
United States
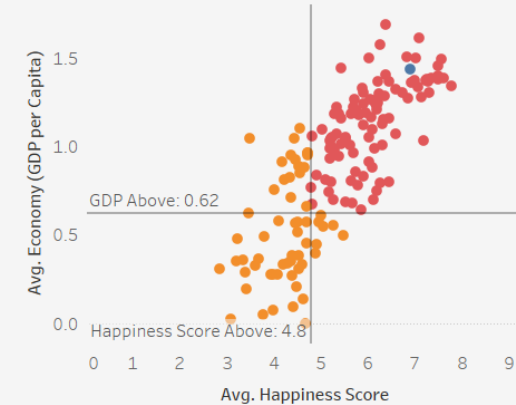
GDP Above
0.622549275

Trust Above
0

Happiness Score Above
4.79

Better Countries
■ Current Selection
■ Not Recommended
■ Recommended

N Recommendations
5

Country
■ Finland
■ Denmark
■ Norway
■ Iceland
■ Netherlands

Country Distribution

Avg. Economy (GDP per Capita)

GDP Above: 0.62

Happiness Score Above: 4.8

Avg. Happiness Score

Top N Countries

Country
Finland
Denmark
Norway
Iceland
Netherlands

Recommedation Ranking
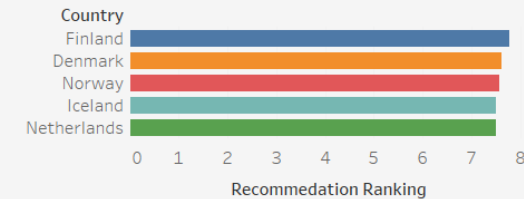
7. Summary
Important things to remember from the analysis

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Key Takeaways:

1. Mental health awareness is growing but happiness score is growing slowly. **Progress is slow but steady.**

2. Developing countries need to foster economy but developed countries should shift their attention to social and family support.

3. With **more freedom comes more trust**.

4. Health is closely **related to wealth and family support**.

5. Generosity follows suit in countries with **high freedom and trust scores**.

6. Using parameters like GDP, trust, happiness scores, choose your next country to travel to.

8. Conclusion
What do we learn from the analysis?

The Happiness Score's sweet spot is that we can successfully measure a countries growth not just by its GDP but also by factors like Family Relationships, Trust, Freedom, Health and Generosity that better represent the overall progress of the country

9. Glossary
Definitions and important things to remember

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Key Definitions:

1. Happiness Score: The happiness scores and rankings use data from the Gallup World Poll. The scores are based on answers to the main life evaluation question asked in the poll. This question, known as the Cantril ladder, asks respondents to think of a ladder with the best possible life for them being a 10 and the worst possible life being a 0 and to rate their own current lives on that scale.

2. Economy Factor: Economic Production of a country or GDP growth per capita

3. Family Factor: Social Support or strong relationships with Family, friends and sense of community

4. Health Factor: Life expectancy in the country

5. Freedom Factor: Rights of the citizens of a country

6. Trust Factor: Absence of corruption in the government and citizens feeling that the government has the best interest for them

7. Generosity Factor: Interaction of people and helping when in need

8. Dystopia: Dystopia is an imaginary country that has the world's least-happy people. The purpose in establishing Dystopia is to have a benchmark against which all countries can be favorably compared (no country performs more poorly than Dystopia) in terms of each of the six key variables, thus allowing each sub-bar to be of positive width. The lowest scores observed for the six key variables, therefore, characterize Dystopia

9. Residual: The residuals, or unexplained components, differ for each country, reflecting the extent to which the six variables either over- or under-explain average 2014-2016 life evaluations. These residuals have an average value of approximately zero over the whole set of countries.

10. Dystopia Residual: The Dystopia Residual metric actually is the Dystopia Happiness Score(1.85) + the Residual value or the unexplained value for each country as stated in the previous answer.

11A: Data Source: Google Search Intent Geo and Search Volume data was taken from Google Trends website for Years 2015 to 2019 for Topics "Happiness", "Mental Health" and "Saddness". https://trends.google.com/

11B: Data Source: All other data points are from the World Happiness Report at a yearly level at Kaggle https://www.kaggle.com/unsdsn/world-happiness