

# WORLD HAPPINESS REPORT

## 2015 - 2023

### General

The World Happiness Report is an annual publication that ranks countries based on levels of happiness and well-being. It combines objective data and subjective surveys to assess factors like income, social support, life expectancy, and freedom. Released by the Sustainable Development Solutions Network, the report aims to guide policy decisions by highlighting the factors that contribute to people's happiness and life satisfaction, fostering a better understanding of global well-being trends.

By analyzing diverse aspects of well-being, such as economic conditions, social connections, and individual freedoms, the World Happiness Report offers a comprehensive snapshot of each country's overall happiness. This ranking encourages governments and policymakers to focus on enhancing the quality of life for their citizens, based on a deeper understanding of the elements that contribute to happiness on both individual and societal levels.

### Source

The data for this project was taken directly from the World Happiness Report website ([link](#)).

The WHR compiles data from a mix of objective statistics and subjective surveys sourced globally. A primary contributor is the Gallup World Poll, conducting annual surveys across countries to gauge well-being, encompassing income, social support, and personal experiences. The World Values Survey adds insights into values and attitudes, while the World Bank's Development Indicators offer data on economics, education, healthcare, and more. United Nations databases and other surveys contribute, creating a comprehensive view of happiness, including life expectancy, education, income inequality, governance, civil liberties, and environment. This amalgamation provides a nuanced understanding of global trends in well-being.

## Collection

The WHR collects relevant data through a combination of methods, primarily relying on established international surveys and databases. The process involves:

1. **Gallup World Poll:** The WHR extensively utilizes the Gallup World Poll, which conducts annual surveys in numerous countries. These surveys involve face-to-face, telephone, or online interviews with a representative sample of individuals. Respondents are asked about various aspects of their lives, including well-being, life satisfaction, income, social support, and more.
2. **World Values Survey:** This survey contributes subjective data on values, beliefs, and attitudes across different countries. It helps capture cultural and societal influences on well-being, such as trust in institutions and social norms.
3. **World Bank's World Development Indicators:** Objective data related to economics, education, healthcare, and other relevant factors are sourced from the World Development Indicators database, maintained by the World Bank.
4. **United Nations Databases:** Data from various United Nations databases provide information on indicators such as life expectancy, education, income inequality, and environmental quality.
5. **Other National and International Surveys:** The WHR may also incorporate data from additional surveys conducted by governments, research institutions, and international organizations, covering a wide range of factors that contribute to well-being.
6. **Expert Input:** In some cases, experts in the fields of economics, psychology, and public policy contribute insights and analysis to complement the survey data.

By collating data from these diverse sources, the WHR aims to provide a comprehensive and multi-dimensional understanding of happiness and well-being across different countries, enabling policymakers and researchers to identify trends, correlations, and potential areas for improvement in societal well-being.

The institutions and methods of data collection used for the WHR are generally considered to be reliable and well-regarded in the field of social science research. The report collaborates with reputable organizations and relies on established international surveys and databases to gather data.

## Contents

The data for this project is drawn from the reports covering the years 2015 to 2023. While these reports include a variety of data, my analysis is focused on the key factors directly linked to a nation's "happiness score." These factors include:

1. **Economic Status**
2. **Social Support**
3. **Life Expectancy**
4. **Freedom**
5. **Generosity**
6. **Government Trust**

## Limitations

The World Happiness Report, while a valuable tool for assessing global well-being, does have several limitations that should be considered when interpreting its findings:

1. **Subjective Nature:** The report relies on subjective survey data, such as self-reported life satisfaction and happiness, which can be influenced by cultural norms, personal biases, and temporary emotions. These subjective measures may not fully capture more complex aspects of well-being.
2. **Data Availability and Quality:** Data availability varies across countries, and some nations might lack comprehensive and up-to-date information. Additionally, the quality and accuracy of data collection methods can differ, affecting the reliability of cross-country comparisons.
3. **Socio-Cultural Diversity:** Cultural differences impact how people perceive and define happiness. The report's standardized measurements might not fully account for these cultural variations, potentially leading to skewed results.

4. **Limited Scope of Variables:** While the report includes a range of factors, it cannot encompass all dimensions of well-being. Important aspects such as environmental sustainability, cultural heritage, and work-life balance may not receive equal attention.
5. **Omission of Mental Health:** The WHR primarily focuses on objective and economic indicators, often overlooking important mental health factors that contribute significantly to overall well-being.
6. **Short-Term Focus:** The report provides a snapshot of well-being at a specific point in time, potentially missing long-term trends and changes.
7. **Causation vs. Correlation:** While the report identifies correlations between variables and happiness, it doesn't always establish causation. Factors like GDP per capita might correlate with happiness but may not directly cause it.
8. **Non-Inclusion of Vulnerable Populations:** Vulnerable or marginalized populations, such as refugees or those living in conflict zones, might be underrepresented or not adequately accounted for in the report.
9. **Changing Societal Dynamics:** The report might not capture rapid societal changes or emerging trends that could impact well-being in the future.
10. **Limited Policy Prescriptions:** The report's recommendations might not provide comprehensive policy guidance as they are often generalized and not tailored to specific national contexts.

Understanding these limitations helps provide a more nuanced perspective on the World Happiness Report's insights and encourages a cautious interpretation of its rankings and findings.

## Relevance

The data presented by the World Happiness Report holds significant relevance in understanding and addressing global well-being and societal progress. While the report has its limitations, the data it provides offers valuable insights and benefits:

1. **Holistic Well-being Assessment:** The WHR goes beyond purely economic indicators by considering a broad range of factors, including social support, life expectancy, freedom, and generosity. This provides a more comprehensive view of well-being, which is essential for policy-making that aims to improve citizens' quality of life.
2. **Global Comparisons:** The report enables cross-country comparisons of well-being, allowing policymakers and researchers to identify trends, best practices, and areas for improvement across nations. It offers a platform for countries to learn from one another's successes and challenges.
3. **Policy Guidance:** The WHR's findings can inform evidence-based policy decisions by highlighting the factors that contribute to happiness and well-being. Governments and institutions can use this information to prioritize policies that enhance the overall quality of life for their citizens.
4. **Public Awareness:** The report raises public awareness about the importance of well-being beyond economic measures. It encourages individuals, communities, and governments to consider factors that contribute to happiness and work toward improving them.
5. **Academic and Research Impact:** The WHR contributes to academic research by providing a rich dataset that researchers can use to explore the relationships between well-being, socio-economic factors, and policies. This fosters a deeper understanding of human flourishing and informs ongoing studies in various fields.
6. **Global Development Goals:** The WHR aligns with the United Nations' Sustainable Development Goals (SDGs) by addressing dimensions of well-being that are essential for achieving a sustainable and equitable future.
7. **Public Discourse:** The report stimulates public discourse on the factors influencing well-being and happiness. It encourages conversations about societal values, priorities, and the role of policies in shaping people's lives.

8. **Shift in Policy Focus:** The WHR's emphasis on well-being encourages a shift in policy focus from solely economic growth to the broader goal of improving people's lives and overall happiness.

While the data presented by the WHR should be interpreted with an understanding of its limitations, its relevance in fostering a more holistic understanding of global well-being and guiding positive societal change should not be underestimated.

### Variables & Data Types

Variable	Description	Qualitative/Quantitative	Structured/Unstructured	Time Variance	Data Type
country	The name of the country being assessed for its level of happiness and well-being	Qualitative	Unstructured	Invariant	Nominal
year	The specific year in which the happiness data was collected and reported	Qualitative	Unstructured	Invariant	Ordinal
happiness_rank	The numerical rank of the country based on its happiness score relative to other countries in the report	Quantitative	Structured	Variant	Discrete
happiness_score	A numerical measure of overall happiness and well-being in a country	Quantitative	Structured	Variant	Continuous
economic_status	A measure of a country's economic performance and prosperity, typically represented by the Gross Domestic Product (GDP) per capita	Quantitative	Structured	Variant	Continuous
social_support	The extent to which social networks, family, and friends provide a support system for individuals in a country	Quantitative	Structured	Variant	Continuous
life_expectancy	The average number of years a person can expect to live in good health, often used as an indicator of overall well-being and healthcare quality	Quantitative	Structured	Variant	Continuous
freedom	The degree of personal and political freedom and autonomy individuals have within a country	Quantitative	Structured	Variant	Continuous
generosity	The willingness of individuals in a country to help others and contribute to social causes	Quantitative	Structured	Variant	Continuous
govt_trust	The level of trust or lack of trust in a country's government institutions, and perceptions of corruption within those institutions	Quantitative	Structured	Variant	Continuous

## **Data Wrangling**

### **Unnecessary Variables**

Most of the 9 data sets contained columns filled with data that I did not require for my analysis, so I dropped anything I did not need for my analysis.

### **Inconsistent Variable Names**

After dropping unneeded columns, what remained were variables that were shared across all 9 data sets. The problem was that although the variables were the same, the names of those variables were not. I ensured that variables were named consistently across all data sets prior to concatenation.

### **Inconsistent Numeral Separators**

The 2022 data set alone utilized commas as numeral separators rather than decimal points. I changed all commas to decimal points to ensure that data across all 9 data sets were identically formatted.

### **Inconsistent Data Types**

Some of the variables that were shared across all 9 data sets did not share the same data type. I went through all 9 data sets and ensured that all variables had the same data type, and also chose smaller versions of those data types in order to lower RAM usage.

### **Concatenating Data Sets**

Once I had removed all unneeded columns, ensured that all shared variables were identically named and formatted, I concatenated all 9 data sets. In the process I also modified the column order.

### **Missing Values**

I checked the concatenated data set for missing values, and found 2. Given the patterns in the surrounding data I was able to use imputation to replace the NaN values. In some cases, values were misplaced because certain country names were formatted or spelled in multiple ways, and in other cases because a country was referred to by multiple names. In each of these cases I determined the issue and gathered each country's data together under a single name.



**Questions to Explore**

- I. How do variables such as GDP per Capita, Social Support, Life Expectancy, Freedom, Generosity, and Government Trust correlate with happiness scores?
- II. Which of the factors emphasized in the WHR have the strongest impact on a country's happiness score?
- III. Are there changes in the importance of different factors over the years?
- IV. To what degree does a country's economic model impact happiness scores?
- V. Do democratic countries tend to score higher in terms of "perceptions of government corruption"?
- VI. Are there any notable events (e.g., political, economic, health-related) that correlate with changes in happiness scores or ranks for specific countries?
- VII. Are there any countries that have made significant increases or decreases in happiness rank over the years? What might explain these changes?