

Do Europe and Asia experience similar trends in Life Expectancy and Life Satisfaction?

Often imitated, never duplicated - TingTing Wu, Yilin Zhang, James Gray

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1 Executive Summary

This report investigates trends in life expectancy and life satisfaction in Europe and Asia from 2011 to 2023. Europe consistently outperformed Asia in the two indicators, and the differences among countries were smaller. However, there have been significant fluctuations and differences in Asian countries. Some countries lag behind in both indicators, while in others, although life expectancy has risen, the happiness index of life lags behind. The research results emphasize the importance of the all-round development that balances longevity and overall health.

2 Introduction

With advancements in global medicine, public health, and living standards, life expectancy has continued to reach new heights. It is often regarded as a key indicator of people's well-being. However, the relationship between life expectancy and life satisfaction may vary across countries and regions, influenced by differences in cultural values, economic development, and societal expectations. This report explores the question: Do Europe and Asia experience similar trends in life expectancy and life satisfaction? To address this question, we analyze publicly available data from [Our World in Data](#), which includes standardized country-level measures of life expectancy and self-reported life satisfaction. Our analysis focuses on Europe and Asia. By cleaning and analyzing data, we discuss the visualization results and key findings.

3 Methodology

Our data was sourced from the online data repository, Our World in Data (OWID). Specifically, we used the [Life satisfaction vs. life expectancy](#) dataset. This dataset tracks two main variables for countries and geographic regions, those being life expectancy (measured in years) and life satisfaction (measured on a 1-10 scale using the Cantril Ladder score). These variables are tracked on a yearly basis, alongside population statistics where appropriate.

This dataset suffers from a degree of sparsity, particularly regarding the Cantril Ladder score, as several observations for many countries were missing. The data was filtered such that only observations containing both metrics were present. From there, Europe and Asia stood out as regions of interest for further analysis. Further filtering the dataset for observations containing only the Europe or Asia region variable resulted in the final dataset used for analysis. An example of which can be seen in [Figure 1](#).

Entity	Code	Year	Cantril ladder score	Life expectancy (years)
Afghanistan	AFG	2011	4.258	61.250
Afghanistan	AFG	2012	4.040	61.735
Afghanistan	AFG	2014	3.575	62.260
Afghanistan	AFG	2015	3.360	62.270
Afghanistan	AFG	2016	3.794	62.646
Afghanistan	AFG	2017	3.632	62.406

Figure 1: Europe and Asia filtered dataset

Initial inspection of the data was performed using a distribution curve and a density map of both variables in 2023. [Figure 2](#) displays an immediate disparity between Europe and Asia for both life satisfaction and life expectancy. For both variables, Europe displays more countries with preferable results

when compared to Asia. This is not to say that Asia does not contain comparable countries Figure 3 shows that while European nations are clustered closer together in a region of high life satisfaction and life expectancy, there are Asian countries present in *the same region*. The density map merely shows that while there are comparable Asian countries, the tighter clustering of European countries in this region is indicative of greater consistency between nations.

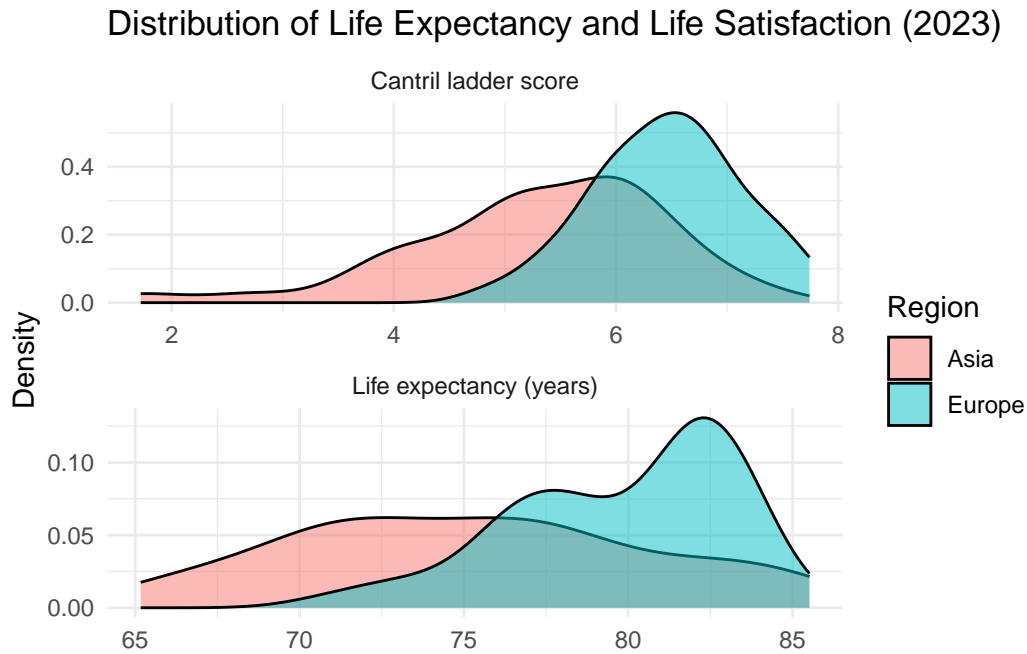


Figure 2: Country-Level Distribution Curves of Life Satisfaction and Life Expectancy in Asia and Europe (2023)

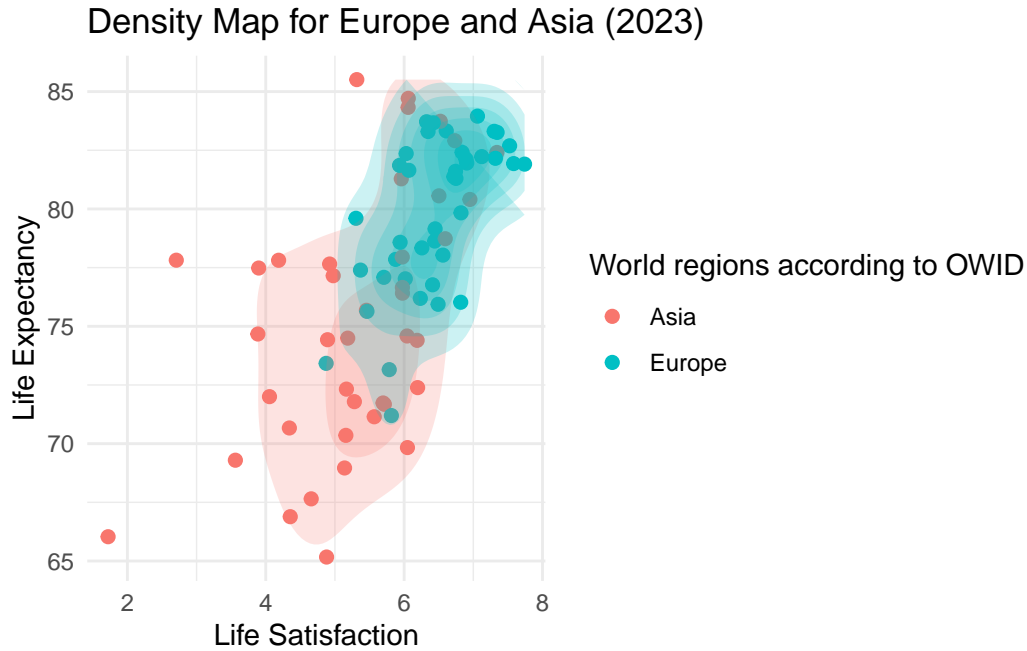


Figure 3: Country-Level Density Map of Life Satisfaction and Life Expectancy in Asia and Europe (2023)

4 Results

Figure 4 illustrates the trajectory of population-weighted yearly averages for life satisfaction and life expectancy in Asia and Europe from 2011 to 2023. The use of population-weighted averages provides a clearer understanding of how the average individual in each region experiences changes in these key indicators, ensuring that larger populations contribute more significantly to regional trends.

Throughout this period, Europe consistently reported higher average values for both life satisfaction and life expectancy. In contrast, Asia displayed more volatility, with a notable turning point in 2019, where both indicators shifted significantly. A closer examination of life satisfaction trends reveals an almost inverse relationship between the two regions prior to 2019. In Asia, life satisfaction exhibited an upward trend until 2012, followed by a decline until 2019, before rising sharply from 2019 to 2023. Conversely, Europe experienced a decline, but steadily improved thereafter, achieving a relatively stable level by 2023.

Regarding life expectancy, both regions shared similar patterns, characterized by a steady upward trajectory until 2019, a decline between 2020 and 2021, and reaching their highest levels by 2023.

1. Calculate population-weighted regional averages

2. Plot trends and label final-year positions

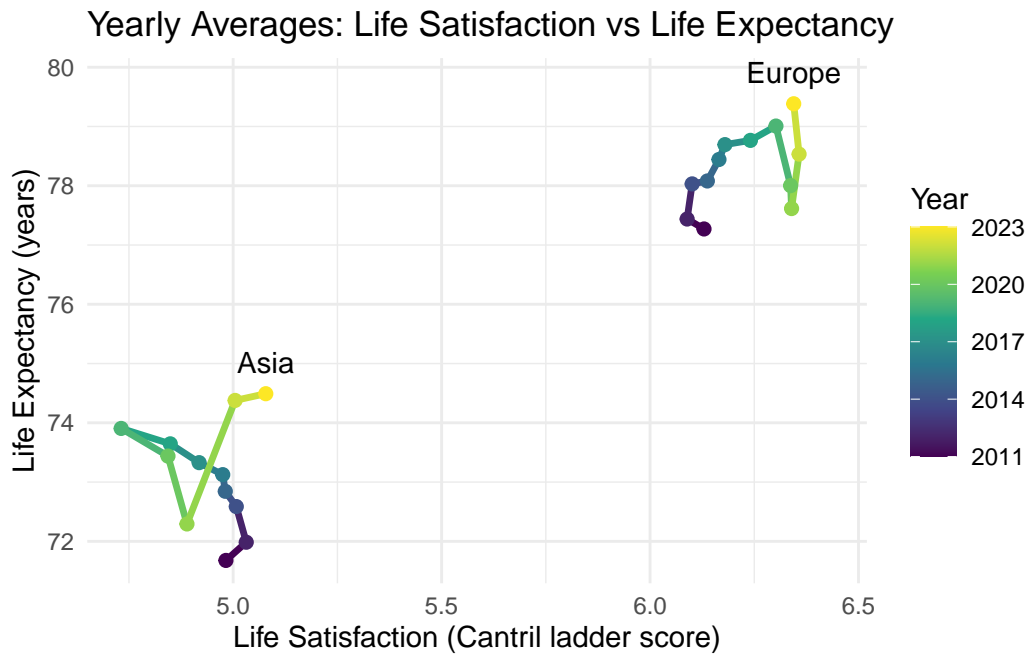


Figure 4: Trajectory of Population-Weighted Life Satisfaction and Life Expectancy in Asia and Europe (2011–2023)

5 Discussion, Conclusion and Recommendations

The central question in this report is whether there are similar trends in life expectancy and life satisfaction between Europe and Asia. By analyzing the population-weighted data from 2011 to 2023, we found that the overall quality of life in both regions has improved over time. However, Europe countries have made consistent progress in terms of health and subjective well-being. They are closely clustered together, indicating relatively uniform regional development. In contrast, Asian countries showed greater differences and extreme values observed. Some of these countries performed well in both indicators, while others lagged significantly behind. These phenomena indicate that the differences in medical insurance policies, economic conditions and social support systems behind different regions may affect well-being outcomes. There are mostly high-welfare countries in Europe, which ensures its relatively stable life expectancy and high level of satisfaction. However, in Asia, the levels in various aspects vary greatly and there is certain room for improvement.

Recommendations:

- Some governments in Asian countries should consider using the people's happiness index as an indicator for policy decisions to ensure that life expectancy and quality of life can be further improved.
- Future research can expand its scope to include other regions around the world and introduce more differences to explore causal relationships.
- consider adding other variables such as occupational inequality, income inequality and educational level to help further explain the differences and propose more specific improvement measures.

6 References

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