

# Is there a link between a country's life expectancy and the overall performance of its professional soccer players?

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## 1. INTRODUCTION

Generally, wealthier countries have a higher average life expectancy than poorer countries, which can be argued to be achieved through higher standards of living, more effective health systems (International Journal for Equity in Health, 2020). These advantages might also foster environments that support professional talent, including athletic performance. We might expect from countries with higher life expectancy to produce professional soccer players in FIFA 21 with superior overall statistics.

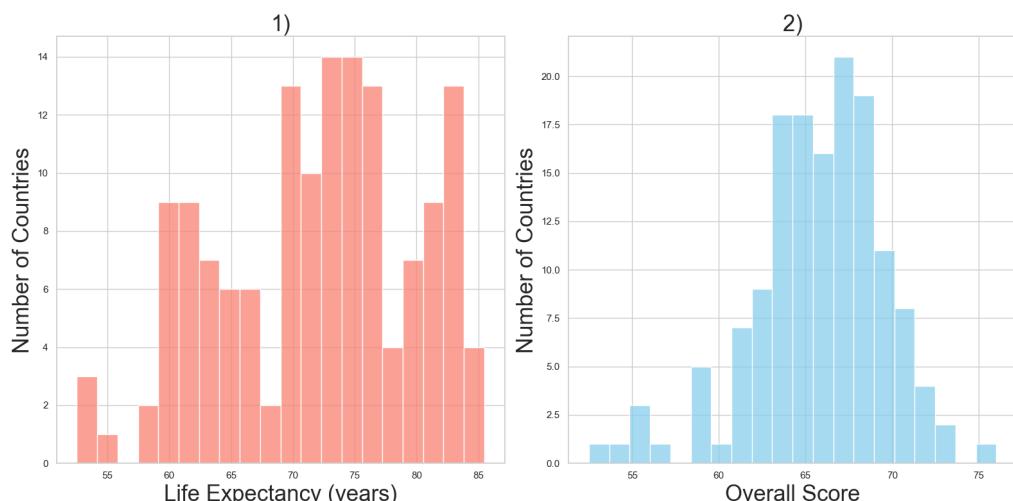
**Do countries with higher life expectancy tend to produce professional soccer players on FIFA 21 with better overall statistics?**



- **Prediction:** Countries with higher life expectancy tend to produce players with stronger overall statistics

## 1. DATA

The **FIFA 21 dataset** originates from the popular video game FIFA 21, offering an extensive analysis of player attributes, market values, and performance statistics. This dataset allows for in-depth exploration of football analytics, including player comparisons and insights into team dynamics (Figure 1.1) (Source: [here](#)) (N = 18979). In contrast, the **country-level dataset** provides a detailed aggregation of death rates across all age groups for various countries between 1950 and 2021 (N = 195). The life expectancy data in this dataset is sourced from Riley, reflecting the average lifespan of a hypothetical cohort assuming they experienced the same age-specific mortality rates as observed in a given year (Figure 1.2) (Source: [here](#))

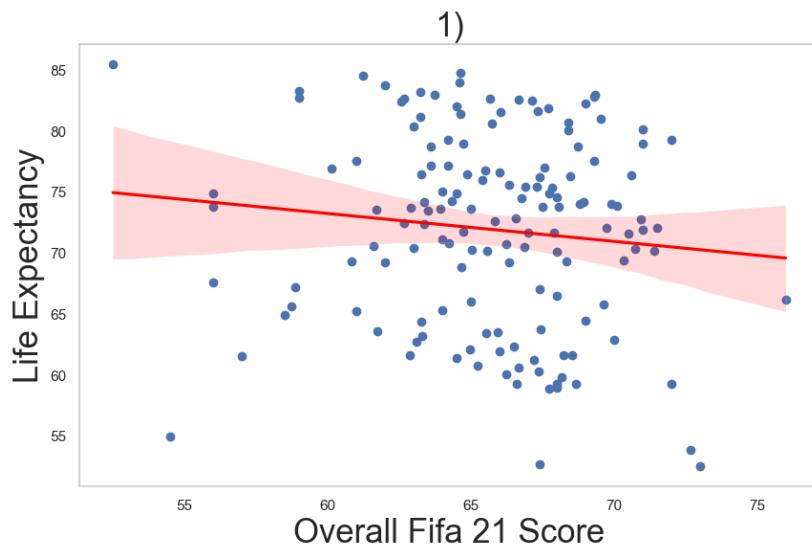


**Figure 1** – Monovariate descriptions of the two datasets: 1) Overall Fifa21 score, 2) Life Expectancy

## 2. METHODS

First, we represented the level of players in relation to the life expectancy of the associated countries. To test the prediction, we used linear regression to analyze the relationship between the level of players and the life expectancy of the countries they are associated with

## 3. RESULTS



**Figure 2** – Bivariate description of the Life Expectancy as a function of the Overall skill level of soccer player.

Countries with higher life expectancy produce slightly lower-skilled soccer players ( $R^2 = 0.012$ ,  $t = -1.35$ ,  $p = 0.180$ , see Figure 2). This weak and non-significant relationship suggests no clear link between life expectancy and player skill levels.

## 4. CONCLUSION

Our prediction that there might be a relationship between the Overall skill level of soccer players and life expectancy is **not supported** by the data. The data does not show a statistically significant correlation, and any apparent trend in the graph is likely due to random variation rather than a meaningful relationship.

## 5. REFERENCES

Freeman, T., Gesesew, H.A., Bambra, C. *et al.* Why do some countries do better or worse in life expectancy relative to income? An analysis of Brazil, Ethiopia, and the United States of America. *Int J Equity Health* **19**, 202 (2020).