Global Health and Economic Development: Cervical Cancer Deaths vs GDP per Capita (2020)

Data Analysis Report

2025-08-29

Contents

Executive Summary

This report analyzes the relationship between two key global indicators in 2020: 1. **Cervical Cancer Deaths per 100,000 Women** - A critical health indicator 2. **GDP per Capita** - A fundamental economic development indicator

The analysis reveals the complex interplay between economic development and women's health outcomes, providing insights into global health disparities and the impact of economic resources on healthcare access and outcomes.

Data Overview

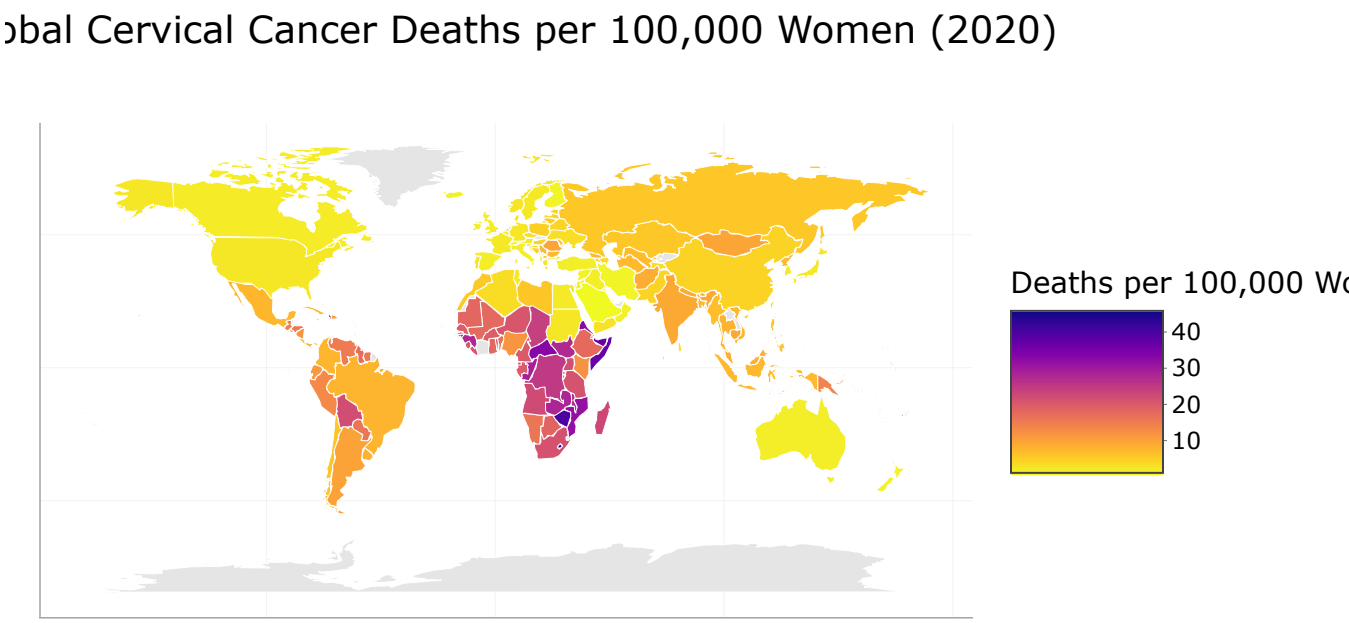
Dataset Summary

Summary Statistics for 2020 Data

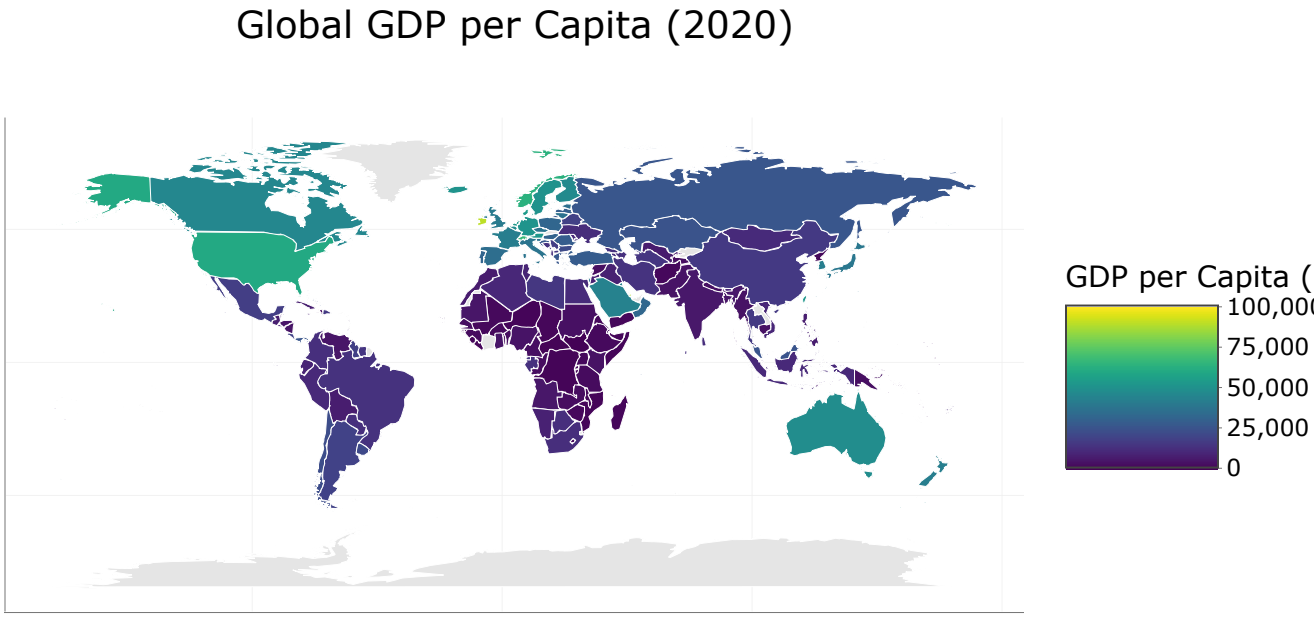
Metric	Value
Number of countries analyzed	194
Average cervical cancer deaths (per 100,000 women)	11.43
Median cervical cancer deaths (per 100,000 women)	8.31
Average GDP per capita (USD)	20117
Median GDP per capita (USD)	12600

World Map Visualizations

1. Cervical Cancer Deaths per 100,000 Women (2020)

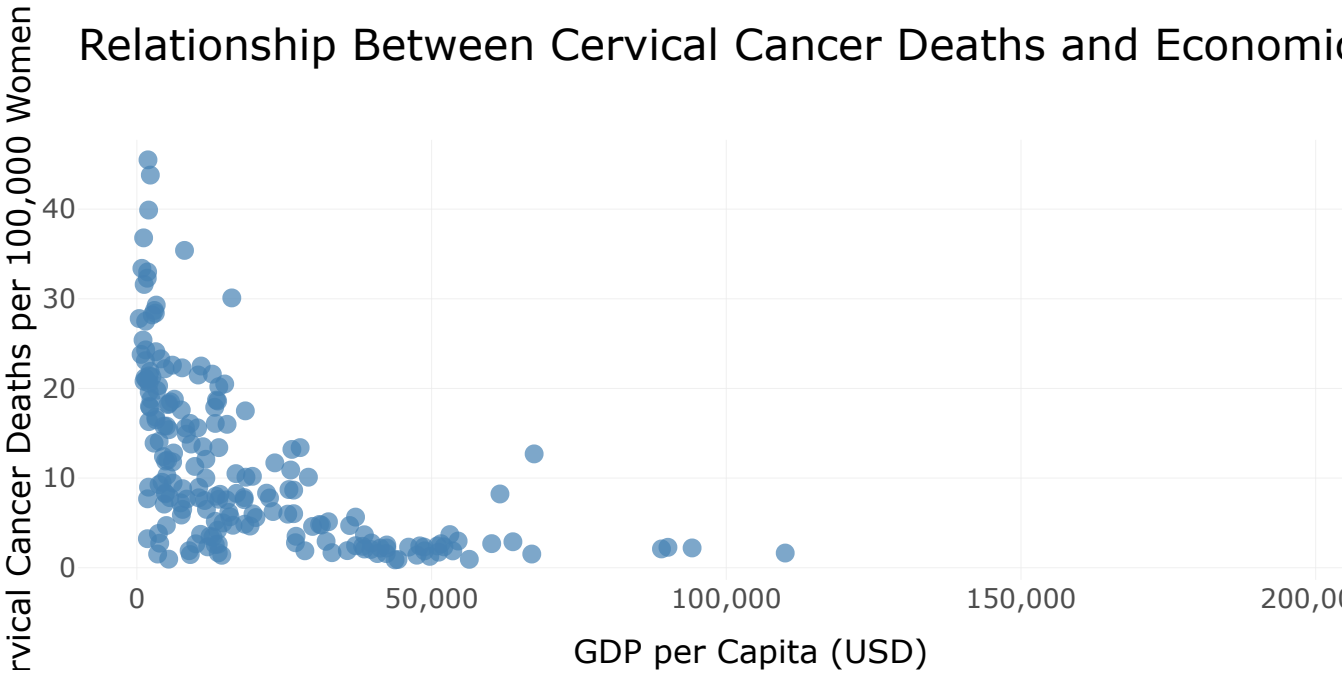


2. GDP per Capita (2020)



Relationship Analysis

Scatterplot: Cervical Cancer Deaths vs GDP per Capita (2020)



Correlation Analysis

Correlation Analysis Results

Metric	Value
Correlation Coefficient	-0.501
P-value	0
Sample Size	194

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Key Findings and Interpretation

1. Inverse Relationship

The scatterplot reveals a **strong negative correlation** between GDP per capita and cervical cancer death rates. This suggests that countries with higher economic development tend to have lower cervical cancer mortality rates.

2. Economic Development and Healthcare Access

Higher GDP per capita typically correlates with: - Better healthcare infrastructure - Increased access to screening programs - More advanced medical treatments - Higher vaccination rates (HPV vaccine) - Better public health education

3. Global Health Disparities

The world maps clearly show: - **High-income countries** (North America, Europe, Australia) have low cervical cancer death rates - **Low-income countries** (Sub-Saharan Africa, parts of Asia) have high cervical cancer death rates - **Middle-income countries** show mixed patterns

4. Policy Implications

This relationship suggests that: - Economic development is a key driver of women's health outcomes - International aid and development programs can significantly impact health outcomes - Investment in healthcare infrastructure is crucial for reducing preventable deaths - Global health initiatives should target economic development alongside health interventions

Conclusion

The analysis demonstrates a clear and significant relationship between economic development and cervical cancer outcomes. While correlation does not imply causation, the strong negative relationship suggests that economic resources play a crucial role in women's health outcomes globally.

Addressing global health disparities requires a multi-faceted approach that includes: 1. **Economic development** to provide resources for healthcare 2. **Healthcare infrastructure** development 3. **Preventive care programs** including screening and vaccination 4. **International cooperation** to support low-income countries

This analysis provides a foundation for understanding global health inequities and the importance of economic development in achieving better health outcomes worldwide.

This report was generated using R and Rmarkdown. Data sources include global health databases and economic indicators.