A Comprehensive Analysis of Worldwide Population Dynamic Trends

Kimberly Cardinale (2548934) and Carl Yu (2550364)

Introduction

In this project, we examine the relationships between key indicators of public health and population dynamics across countries using data from the World Bank's World Development Indicators (WDI) database. Our goal is to understand how certain demographic, health, and fertility-related measures are related, and what patterns emerge across different regions or income levels over time.

Data Description

To guide our analysis, we grouped six indicators into three pairs:

1. Adolescent fertility rate (births per 1,000 women ages 15–19) and population growth (annual %) to explore how youth fertility might contribute to overall population change.

   - Adolescent fertility rate serves as an indicator of reproductive health and education access.
   - Population growth reflects demographic shifts and may be influenced by fertility trends.

2. Age dependency ratio (% of working-age population) and life expectancy at birth (years) to understand how population age structure relates to general health and longevity.

   - Age dependency ratio measures the economic burden on the working population.
   - Life expectancy is a common proxy for overall population health.

3. Births attended by skilled health staff (% of total) and infant mortality rate (per 1,000 live births) to assess how healthcare access during childbirth impacts early-life survival.