**Exploring Historical and Social Determinants of Health at the Neighborhood Level**

Author

Lesley Rennis, City University of New York-Borough of Manhattan Community College

**Learning Objectives:**

1. Formulate research questions that incorporate primary survey data and secondary data from Census and ACS.
2. Collect, analyze, and visualize data to explore relationships between demographic and health variables.
3. Relate findings to historical and contemporary public health challenges.
4. Learn how to construct, read, and interpret bivariate tables displaying frequencies and percentages.

**Context for Use**

This assignment is used in a public health class for undergraduate students with little background in quantitative data analysis. The assignment integrates the use of primary survey data, U.S. Census data, and the American Community Survey to examine the impact of income on public health issues at the neighborhood level. Student also explore how historical and social determinants of health shape current health behaviors and outcomes.

**Description and Teaching Materials:**

**1. Develop a Research Question:**

* Create a question combining income and one other variable, e.g., “How does income level correlate with access to healthcare services in [specific neighborhood]?”
* The research question should focus on a specific zip code.
* Include variables from:
  + Class survey (e.g., health beliefs or behaviors).
  + Census/ACS data (e.g., income, housing, population demographics).

**2. Data Collection:**

* **Survey:**
  + Develop and distribute a class-wide survey using Google Forms focusing on health beliefs, behaviors, and demographic data.
  + Students should ask friends and family members from their neighborhood to complete the survey.
  + Each student should collect responses from a minimum of 3-5 adults (age 18+).
* **Census/ACS Data:**
  + Use Census/ACS data to extract information about the chosen neighborhood's socioeconomic, housing, and population characteristics.

**3. Historical Context:**

* Research historical factors influencing the selected neighborhood, such as redlining, urban renewal, or industrial changes​​.
* Link these factors to modern health disparities using secondary sources (e.g., Census historical records, academic studies).

**4. Data Analysis:**

* **Survey Analysis:**
  + Summarize survey responses using descriptive statistics (e.g., means, percentages).
  + Use Google Sheets to generate bivariate tables and graphs.
* **Census:**
  + Use Census data to obtain additional descriptive data about the neighborhood (i.e., age, income, health statistics).
  + Compare class survey findings with Census variables (e.g., map income data against survey-reported income and health behaviors).
* **ACS Analysis:**
  + Choose the ACS2022 data collection.
  + Select the Earn data set.
  + Compare the U.S. data with survey and Census zip code data.
  + Visualize data using bivariate tables and graphs.

**5. Final Report and Presentation:**

* **Report (4–5 pages):**
  + **Introduction:** Provide an overview of the neighborhood and research question.
  + **Methods:** Explain survey distribution, Census/ACS data sourcing, and analysis methods.
  + **Results:** Present survey and Census/ACS data through visual aids (e.g., tables, graphs).
  + **Discussion:** Connect findings to historical contexts and discuss implications for public health.
  + **Recommendations:** Propose interventions to address health disparities.
* **Presentation (6–8 slides):**
  + Highlight key findings and visualizations, ensuring clarity and relevance to public health goals.

**Relevance:**

This project combines practical data skills with public health concepts, teaching students to think critically about how multiple factors influence health outcomes. Students will:

* Strengthen their ability to use statistical tools and public datasets.
* Gain insights into the interplay of historical and current public health challenges.
* Improve collaboration and communication skills through group work and presentations.