

# Linking Health, Demography, and Socio-economic Status



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## Three Examples from 18th-19th Century London

### Introduction

This research examines morbidity and mortality at three cemeteries from the greater London area dating to the industrial period. They represent samples of individuals from different socioeconomic backgrounds, including one cemetery comprised of individuals of low socioeconomic status. The goal of this study is to compare trends in demography and infection to see if socioeconomic factors may have impacted the lives of these individuals.

#### 18th-19th Century London: Industrial London

A review of the literature identified several aspects of life during the industrial period in London related to socioeconomic status that may have impacted health and disease.

#### Living Conditions (Newman and Gowland 2017)

- Overcrowded, unsanitary living conditions, poor working conditions, and extreme social stratification characterized industrial London.
- City's infrastructure could not handle the influx of people coming into the city for industrial jobs
- Overcrowding exacerbated the lack of ventilation, air pollution, and plumbing deficiencies.

#### 1834 Poor Laws (Wilford and Gowland 2019)

- Resulted from a shift in how poverty was viewed
- Paupers went from being sympathetic figures to social pariahs who caused their own poorness.

#### Workhouses (Wilford and Gowland 2019)

- Became punishments
- Diets were nutritionally lacking.
- Aid outside of the workhouse was extremely stigmatized and was only intended for the truly destitute

### Background

Three Cemeteries: St. Pancras Old Church, Chelsea Old Church, Cross Bones Cemetery

#### Cross Bones Cemetery

- South London, 17th to mid 18th century (WORD database, 2021)
- Single women's (prostitutes') cemetery in 17th century (WORD database, 2021)
- Later became a paupers' cemetery: low socioeconomic status (WORD database, 2021)

#### St. Pancras (Cemetery)

- Borough of Camden, London, 1689-1854 (Emery and Wooldridge, 2011)
- Mixed socio-economic population (Emery and Wooldridge, 2011)
- Includes refugees from French Revolution (Emery and Wooldridge, 2011)

#### Chelsea Old Church (Cemetery)

- London, 18th-19th century (WORD database, 2021)
- Outskirts of London (WORD database, 2021)
- Mostly affluent population reported by WORD database (accessed 2021)
- Some report mixed socio-economic population (Cowie et al., 2008)



Photograph from WORD database, Museum of London (accessed 2021)

Figure 1: Individual with lesions on the cranium due to syphilis from Cross Bones cemetery.

### Materials and Methods

Data was collected from published sources, includes information about age, sex and disease status.

- **Chelsea Old Church and Cross Bones Cemeteries**
  - Data collected from the WORD database, Museum of London (accessed 02/04/2021)
- **St. Pancras**
  - Data collected from *St. Pancras Burial Ground: Excavations for St. Pancras International, the London Terminus of High Speed 1, 2002-3.* (Emery and Wooldridge, 2011).

#### Number of Individuals

- **Chelsea Old Church Cemetery** (WORD database, 2021)
  - Total individuals: 198
- **Cross Bones Cemetery** (WORD database, 2021)
  - Total individuals: 147
- **St. Pancras Cemetery** (Emery and Wooldridge, 2011).
  - Total individuals: 715

#### Methods

- Age at death reported as percentage of sample in each age category
- Sex estimated for adults only, reported as percent of the adult sample
- Prevalence of syphilis reported as percent of the total sample observed
- Study used age range categories following St. Pancras definitions (see Emery and Wooldridge, 2011).

### Discussion

Results of this research demonstrate differences in patterns of disease and demography likely related to socio-economic status and associated living conditions.

#### Cross Bones

- Higher frequency of females, infants
- Smaller proportion of individuals over the age of 46
- Consistent with reports of burial ground for single women
- High prevalence of syphilis also consistent with reported burial population, low socio-economic status

#### Chelsea Old Church and St. Pancras

- Very similar to each other
- Both very different from Cross Bones
- Equal distribution of males and females
- Lower prevalence of syphilis
- Consistent with reports of mainly higher or mixed socio-economic status

### Conclusions

Investigation of three industrial period cemeteries from London containing individuals of varying socio-economic conditions revealed patterns.

- Low status and single women's cemetery (Cross Bones) had high proportion of infants, females and high prevalence of syphilis.
- High or mixed socio-economic status cemeteries (Chelsea Old Church and St. Pancras) had lower proportion of infants, higher proportion of older adult individuals and lower prevalence of syphilis.
- Patterns may reflect differing living conditions experienced by these individuals related to socio-economic status and inequality.
- Future studies examining other markers of stress may contribute to this research.

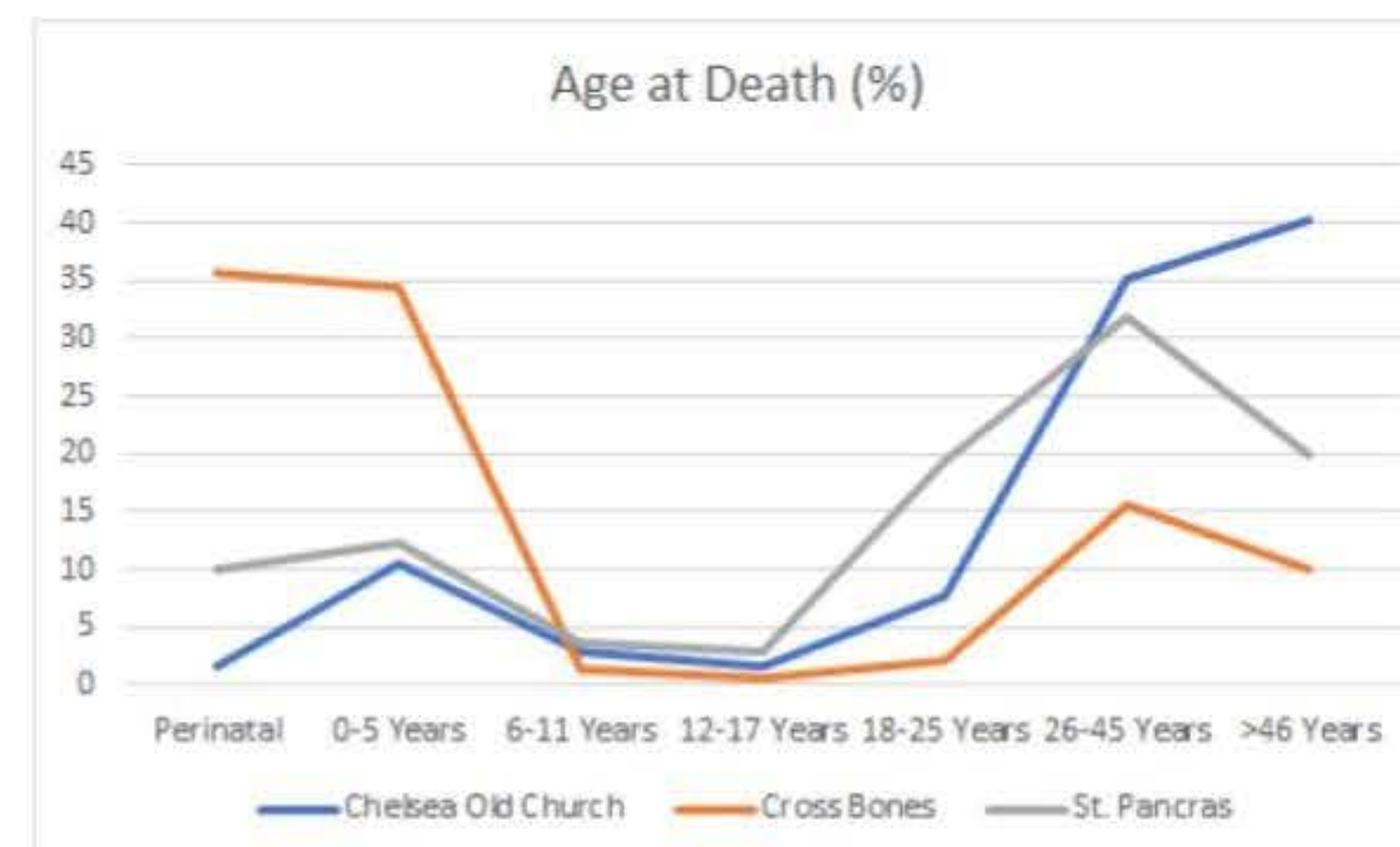


Figure 2: Age-at-death by cemetery

### Results

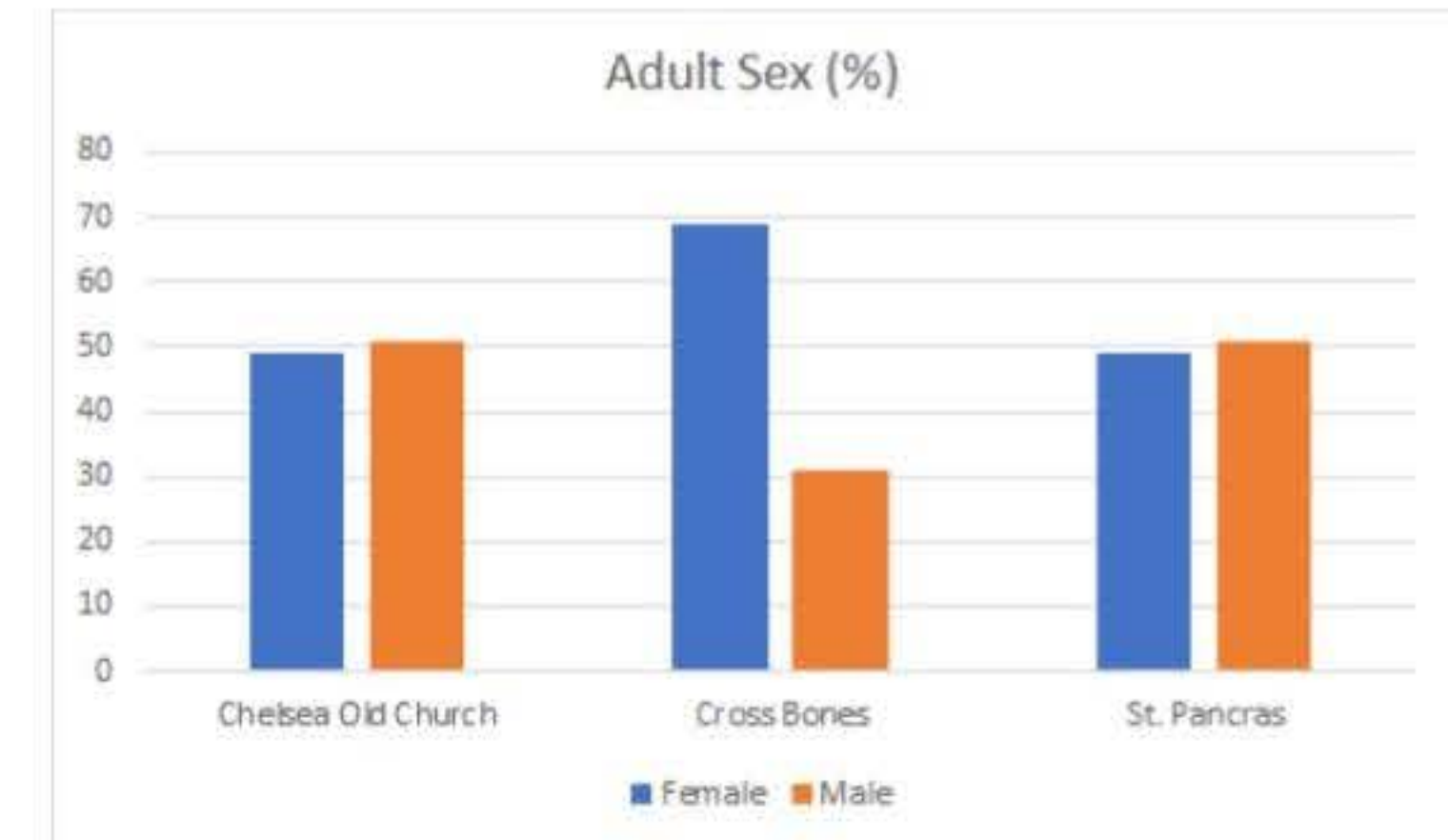


Figure 3: Sex distribution by cemetery

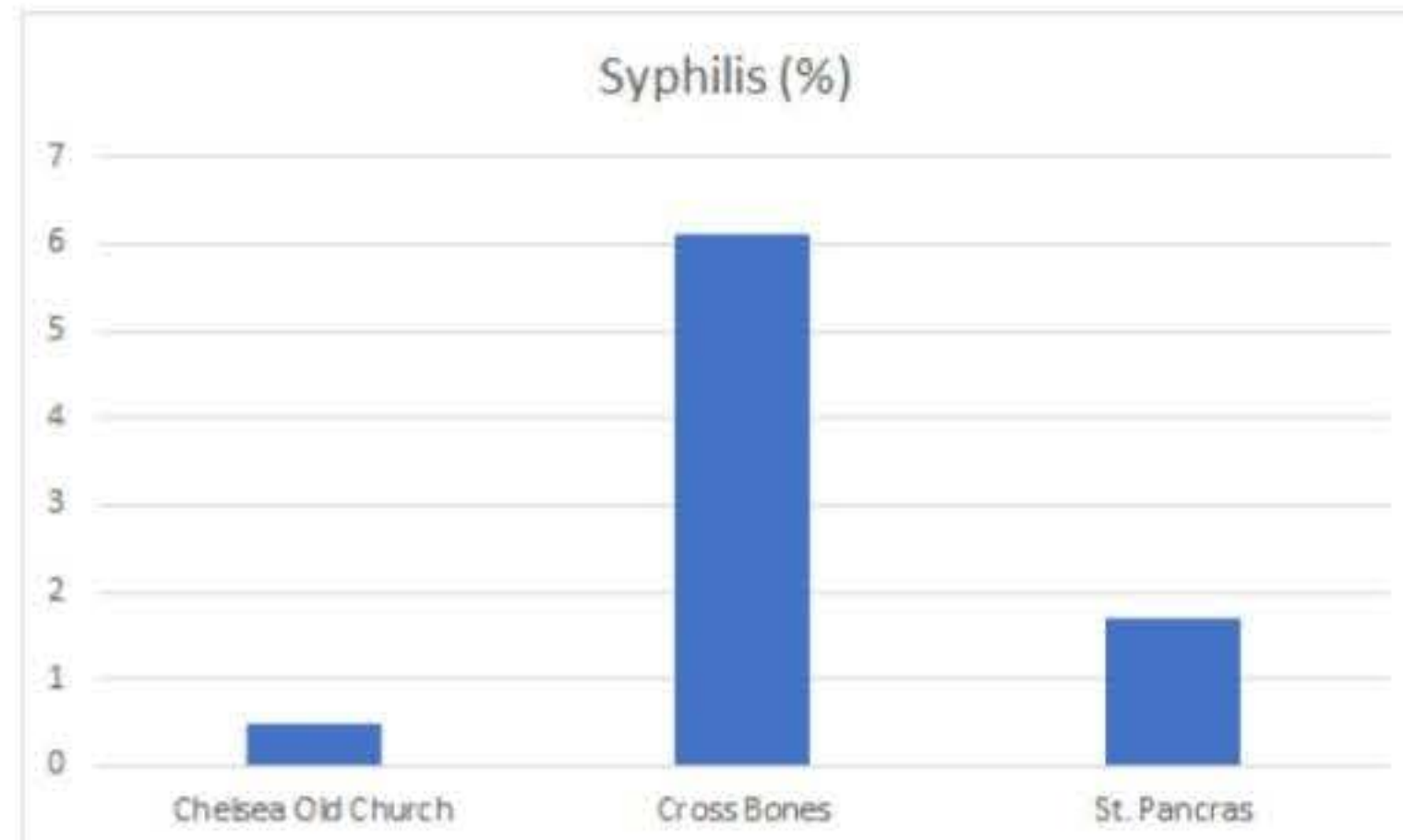


Figure 4: Percent of sample with syphilis by cemetery

### Acknowledgements

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