



## Physical Anthropology Section – 2010

### H98 The Use of Morbidity and Mortality Patterns in Transitional Justice Initiatives Towards Human Identification

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The goal of this paper is to analyze the morbidity and mortality rates within a Nigerian population through a retrospective study of coroner cases.

This presentation will impact the forensic science community by presenting data on human variation for a previously unstudied population in Nigeria. These patterns highlight current issues in human rights and human identification research.

There has been ongoing transitional justice reform in Nigeria with the improvement of the coroner laws in Lagos State. As a result medico-legal death investigations and training for forensic pathology, anthropology and science in general are underway. Understanding human variation, among diverse populations, is critical for postmortem methods of identification, such as age at death or sex estimation and is important for implementing medico-legal death investigations.

The main purpose of the study is to look at the demographic structure of coroner cases among a sample of Nigerians to better understand morbidity and mortality patterns. With the improvement of the coroner laws in Lagos State, patterns of morbidity among the population can now be evaluated. Initial investigations into this area involved a total of 2,480 cases (n=1,766 males and n=714 females) autopsied at the Office of the Chief Medical Examiner for Lagos State at the Lagos State University College of Medicine from 2006-2009. These cases represent some of the only autopsies systematically performed in Nigeria, which has a population of more than 150 million people.

This preliminary investigation illustrates the impact of morbidity due to natural disease and inflicted trauma among a relatively young population, and the implications of such for developing population specific age parameters or other methods based on biometric data for human identification. Approximately 47.18% of those included in this analysis died of natural causes, including hypertensive heart disease, asphyxia, congestive cardiac failure, and pneumonia. Disturbingly, these cases involved individuals under 30 years of age, with low average ages at death; males = 38.43 years and females = 34.89 years. The low ages of death, particularly due to natural causes rather than accidental or violent causes, speaks to possible health disparities and has implications for other transitional justice initiatives centered around human health securities.

The morbidity and mortality patterns observed in Nigeria and the implications of such on developing methods for human identification and understanding population variation are explored in this presentation through survivorship analysis and descriptive statistics. For example, among males the ages at death ranged from newborns to 85 years old, and males most affected were in their twenties and thirties. Approximately 37.60% died of natural causes, 27.52% from motor vehicle accidents, 25.82% from trauma related accidents, and 9.06% due to homicide. In comparison, the ages at death among females ranged from newborns to 75 years, and females most affected were in their twenties and thirties. Approximately 70.87% died of natural causes, 16.11% of motor vehicle accidents, 10.78% trauma related accidents, and 2.24% due to homicide. Among the female population, the natural causes of death included hypertensive heart disease, septicemia, ventricular failure, congestive cardiac failure, and eclampsia.

The overall impact of low ages at death due to natural causes speaks to basic health insecurities. This finding has relevance for a variety of human rights issues and highlights the significant role forensics can play in monitoring health disparities and human rights.

#### **Morbidity Patterns, Age Estimation, Nigeria**