



Undergraduate Research Symposium **May 17, 2019 Mary Gates Hall**

Online Proceedings

POSTER SESSION 1

Commons West, Easel 41

11:00 AM to 1:00 PM

The Mixed-Makeham Model for Estimating the Mortality Rates in Different Countries

Tanya Thien Thu Nguyen, Senior, Anthropology: Medical Anth & Global Hlth

Mentor: Darryl Holman, Anthropology

Mentor: Anwasha Pan, Anthropology

Parametric models are used in demographic research to reduce the number of parameters over those found in a life table, smooth and correct inadequate mortality data, and provide insight into the underlying processes of aging and mortality. One difficulty with many existing parametric mortality models, such as the Siler model, is that they assume that mortality risk is homogenous. We developed the mixed-Makeham model to explicitly model heterogeneity in mortality in the youngest ages. The model divides mortality risk at the youngest ages into “low-risk” and “high-risk” subgroups, as well as a parameter that specifies the fraction of newborns in each subgroup. Senescent mortality in both subgroups is a shared 2-parameter Gompertz model. We apply the model to cohort life table data from 11 European countries from 1876 to 1925 published in the Human Mortality Database. When mortality is decomposed this way, the proportion of high-risk infants declined and the mortality risk for low-risk infants declined for later cohorts, as anticipated. The mortality hazard for high-risk infants, however, increased for later cohorts. These findings suggest that, over time, medical and public health improvements shifted some fraction of infants from the high-risk category to the low risk category. The shift toward higher mortality hazard in the high-risk infants is likely explained by heterogeneous risk in the high-mortality pool, where medical and public health improvements are less effective on infants at the highest mortality risk.

Tubal Ligation in Social Media

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UW Honors Program

Mentor: Darryl Holman, Anthropology

Tubal ligation, or tubal sterilization, refers to a set of permanent female sterilization procedures that bilaterally occlude or remove the fallopian tubes, typically to prevent conception. These procedures range in invasiveness, cost, and popularity, and comprise the first or second most popular contraceptive method in the world. Current scientific literature emphasizes the methods by which tubal sterilization can be achieved, but lacks the perspective of the women receiving them. As a result, women have turned to social media to share their experiences, ask questions, and gain insight into what tubal sterilization is like. My research compiles the tubal ligation experiences of women from the United States to explain, via personal experience and surgical methodology, what women can expect from the moment that they ask for a tubal ligation to the time that they heal from their procedures. Ethnographic interviews were conducted with 13 women who had previously used social media to discuss their tubal ligation stories. These interviews suggested three main themes: firstly, that regret among electively sterilized women is incredibly low; secondly, the lack of support for women seeking tubal sterilization from medical professionals is so profound that the majority of my participants felt fortunate to simply have been listened to; and thirdly, that social media allows for women to simultaneously normalize elective sterilization, advocate for their own bodily autonomy, and support other women who seek sterilization. This research provides a glimpse of tubal ligation from the patient perspective to inform medical professionals and women alike.

POSTER SESSION 4

Commons East, Easel 2

4:00 PM to 6:00 PM