

Population Dynamics in Greenland (PDG) Abstract (Project period 4/22/14 – 4/21/17):

This award supports research on the social, cultural, environmental and physiological dynamics of pregnancy in an indigenous Arctic population. The project is a 3-year collaborative study focusing on Greenlandic ways of perceiving, understanding and experiencing pregnancy. Greenlanders believe that future generations of Greenlanders and Greenlandic culture and practices are in jeopardy due to a variety of demographic factors including out-migration and low fertility rates (compared to many other indigenous circumpolar populations). This project will examine the individual, social, cultural, environmental and physiological factors that appear to have the greatest influence on Greenlandic women's and men's reproduction. The research will be implemented in Kullorsuaq in northwestern Greenland and the target population for the study is Greenlandic women and men, ages 15 to 49 years. The project is an interdisciplinary international, collaborative community based participatory research (CBPR) study involving the University of Greenland, local health and community partners in Greenland, Indiana University and Montana State University.

The research hypotheses to be investigated are, in brief:

Hypothesis 1 posits that individual characteristics (age, gender, physical and mental health, spirituality, and beliefs about sex, pregnancy, adoption and abortion) influence reproductive decision making.

Hypothesis 2 posits that the interpersonal dynamics in sexual relationships influence reproductive decision-making among men and women.

Hypothesis 3 posits that there is an unmet need for contraception.

Hypothesis 4 posits mismatches between contraception methods and cultural perceptions and/or behavioral norms that hamper correct and consistent use of some methods.

Hypothesis 5 posits that some hormonal contraceptives may be biologically ill-matched to some clients.

Hypothesis 6 posits that cultural constructs regarding kinship, familial obligations and personhood influence pregnancy outcomes.

Hypothesis 7 posits that individuals' and communities' relationships with the area's natural and built environment influence reproductive decisions.

The main activities of the research project are: 1) Examine how the individual level characteristics including age, gender, physical and mental health, spirituality, and beliefs about sex, pregnancy, adoption and abortion influence reproductive decision making in Kullorsuaq; 2) Examine how the interpersonal dynamics in sexual relationships influence reproductive decision-making among men and women in Kullorsuaq; 3) Examine the foundational cultural constructs regarding kinship, familial obligations and personhood that influence pregnancy outcomes in Kullorsuaq; 4) Examine how natural and built environmental characteristics such as one's own and one's family's connection to place, the climate changes occurring in the environment and its influence on hunting influence pregnancy outcomes in Kullorsuaq; 5) Examine perceptions of, use of, and satisfaction with contraceptive methods in order to ascertain the availability of culturally and behaviorally suitable methods for achieving

reproductive goals; and 6) Examine, through measurements of endogenous hormones and interviews, whether hormonal contraceptives may be biologically ill-matched to some clients in Kullorsuaq. The project will be implemented using a CBPR framework. Of particular interest is the combination of the CBPR approach with ethnographic (cultural, natural and biological) and public health methods. Overall the project will contribute to our understanding of the complexity of the factors that may be influencing the potential for population decline in Greenland (population is currently stable but predicted to decline in coming decades). In addition the project includes social science, public health, and natural science research areas and highlights interdisciplinary research in the Arctic of interest to the United States and Greenland.

The research team involved in PDG includes: 1) Gitte Trondheim (Principal Investigator) and Kristine Lyng-Pedersen (Project Coordinator) from University of Greenland; 2) Virginia Vitzthum (Principal Investigator), and Stephanie Sanders (Co-Investigator) from Indiana University; and 3) Elizabeth Rink (Principal Investigator) and Elizabeth Bird (Project Coordinator) from Montana State University. The team also includes students and post-doctoral fellows.