Version of 26.06.2026

XII Congress of the Latin American Population Association (ALAP)
San José, Costa Rica, 24-28 August 2026

Workshop:
Kinship Demography with an Emphasis on Bereavement Estimation

Brief description:

Kinship demography makes it possible to compute, using analytical and microsimulation models, how many living or deceased relatives an individual can expect to have over the life course under a given demographic regime. In recent years, this approach has been extended to quantify bereavement at the population level: how many people lose a family member in a given year? how many have experienced at least one loss over their lifetime? how many people are bereaved by each death? For example, a recent study estimated that 19 million Colombians, close to 40% of the population, have lost at least one relative as a result of the armed conflict in that country.[1]

This workshop offers a practical introduction to these methods, with an emphasis on their computational implementation. The first part of the program covers the foundations of kinship modeling, as well as the use of software packages to generate kinship estimates with vital rates that vary over time and by sex. The second part focuses on estimating bereavement at the population level: it introduces the key measures (annual incidence, cumulative prevalence, bereavement multipliers), the corresponding formulas, and the relevant methodological decisions, including the choice of denominator, the treatment of cause-specific mortality, and independence assumptions. The workshop combines conceptual lectures with practical exercises in R, using real data from the United Nations World Population Prospects.

Objectives

The general objective of this workshop is to introduce participants to the modeling of kinship demography and its application to the study of bereavement at the population level. By the end of the workshop, participants will be able to:

1. Understand the theoretical foundations of demographic kinship models and their implementation in R packages.
2. Estimate the expected size of kinship networks by kin type, age, sex, and year using vital rates that vary over time.
3. Calculate individual probabilities and population counts of people bereaved by the loss of at least one relative, distinguishing between annual incidence and cumulative prevalence.
4. Construct and interpret bereavement multipliers—the expected number of bereaved persons per death—as a measure of the social impact of mortality.

Instructors and affiliations:

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[1] Acosta, Enrique, Diego Alburez-Gutierrez, Maria Gargiulo, and Catalina Torres. 2026. “Weaponizing Kinship: A Demographic Analysis of Bereavement in the Colombian Conflict.” *Population and Development Review* padr.70048. doi:10.1111/padr.70048.

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Tentative program structure (blocks or sessions):

Monday, 24 August:

- Module 1: 8:30–10:00
- Break: 10:00–10:30
- Module 2: 10:30–12:00
- Lunch: 12:00–13:00
- Module 3: 13:00–14:30
- Break: 14:30–15:00
- Module 4: 15:00–16:30

Tuesday, 25 August:

- Module 1: 8:30–10:00
- Break: 10:00–10:30
- Module 2: 10:30–12:00

Work format (lectures, practical exercises, data work, etc.):

The workshop is organized into two main blocks: a theoretical component and a practical component, with guided exercises in R.

The theoretical component covers the foundations of formal kinship demography and demographic microsimulation: the logic underlying demographic kinship models, the types of relatives that can be estimated, and extensions of the basic analytical model (time-varying rates and two-sex models). The methodological framework for estimating bereavement at the population level is then introduced, including the key parameters (annual incidence, cumulative prevalence, and bereavement multipliers), the corresponding formulas, and examples of application using real data.

The practical component consists of R lab sessions. These sessions guide participants from the preparation of demographic inputs and the generation of kinship estimates with R packages to the estimation of loss probabilities and the construction of bereavement multipliers.

Requirements for participants (prior knowledge, software, bringing a laptop, etc.): The workshop is aimed at demographers, epidemiologists, and social scientists with basic experience in R and fundamental demographic concepts (life tables, fertility rates). No prior experience in kinship demography is required.

Bring a laptop and install R and RStudio, as well as the rsocsim and DemoKin packages.

Estimated number of participants: maximum of 30 participants