

**A Journey Through the Life Course Stages:
New Research Projects of the Socio-Demographic Team at the University of Padova**

2 February 2024

Room SC140 – Department of Statistical Sciences, University of Padua
Via Cesare Battisti, 241, Padova

Program

Morning session: “*Health, wellbeing and ageing*” - 11.00-13.00

Chair: Virginia Zarulli (The Interdisciplinary Centre on Population Dynamics, Denmark)

- *Measure and determinants of frailty from a life course perspective* – Giovanna Boccuzzo
- *Beyond the nuclear family: Extended kinship and mental health in Italy (KinHealth)* – Marco Tosi
- *Socio-demographic determinants of Information and Communication Technologies (ICT) use among older people in Italy (ICTAGE)* – Bruno Arpino
- *Causes of death dependence structures and the compositional effect on overall mortality (CARONTE)* – Stefano Mazzucco

Lunch break

Afternoon session: “*Fertility and births*” - 14.30-16.00

Chair: Maria Sironi (University College London, UK)

- *Fertility Over forties (FORTIES)* – Alessandra Minello
- *Italians’ FERTility MOTivations in disorienting and uncertain time (FER-MO)* – Maria Letizia Tanturri
- *E-registo, E-xisto! Rafforzamento e modernizzazione del registro civile e delle statistiche demografiche in Mozambico* (Strengthening and modernizing the civil registry and demographic statistics in Mozambique) – Gianpiero Dalla Zuanna and Maria Castiglioni

Details on the projects

Measure and determinants of frailty from a life course perspective

Abstract

This is part of the AGE-IT Project. The presentation will illustrate the main paths of analysis and first results following two main lines:

(a) identification of measures of social and physical frailty, both on the basis of administrative data and sample surveys. These measures, in particular those based on administrative data, make it possible to stratify the population according to care needs, as required by current health care legislation.

b) Life course analysis with a view to identifying causal patterns leading to frailty. This second part builds on what was done in point a) with regard to measures of frailty, and focuses on the causal relationships between socio-economic conditions, life histories and social and physical frailty.

Funding: This project is part of the AGE-IT research program funded by the Italian Ministry of University and Research. For more info see: <https://ageit.it/>

PI: Giovanna Boccuzzo (University of Padova).

Other Padua Team members: Manuela Scioni, Margherita Silan, Pietro Belloni & the AGE-IT group.

Beyond the nuclear family: Extended kinship and mental health in Italy (KinHealth)

Abstract

Recent demographic trends, such as declining fertility and mortality rates and changes in union stability, will lead to larger numbers of middle-aged adults with fewer family members. Such a trend is of paramount relevance, given that individuals who have no kin may face greater risks of mental health deterioration and lack of personal care in later life. Yet, much of contemporary research has only focused on a small part of the family network, i.e. the nuclear family formed by partners and their children, or on vertical ties between parents, children and grandchildren. This focus ignores the potential effect of extended kinship relations on individuals' mental health and wellbeing.

The KinHealth project investigates whether the extended kinship, including in-laws, siblings, cousins, nieces/nephews, and uncles/aunts, plays a relevant role, over and above the nuclear family, in promoting individuals' wellbeing. Does the extended kinship matter for the mental health and subjective wellbeing of middle-aged adults? The project - which focuses on a specific cohort of adults aged 50-65 who are relatively free from health needs and are likely to have both older and younger relatives alive - articulates this overarching question into three research objectives. Objective 1: to uncover the extended kinship and describe its characteristics, i.e. the quantity of living kin and patterns of residential proximity, contact and support exchange between relatives. Objective 2: to assess the association between the extended kinship – i.e., the quantity and the geographical spread of kinship – and an individual's mental health and wellbeing. The kinship network is a web of potential support that may promote feelings of reassurance and wellbeing, whether or not family members need it. Objective 3: to assess whether providing support and care to older and younger relatives is associated with declines in mental health and wellbeing. This will provide new evidence on kinship as a social environment of shared responsibility and commitment to provide support, which may either increase or reduce the mental-health stress of support givers.

For more info on the project see: <https://sites.google.com/view/kinhealth>

Funding: Funded under the PRIN 2022 PNRR program, Italian Ministry of University and Research.

PI: Marco Tosi (University of Padua); **Co-PIs:** Valentina Tocchioni (University of Firenze), Marco Albertini (University of Bologna).

Other Padua team members: Bruno Arpino, Giovanna Boccuzzo.

Socio-demographic determinants of Information and Communication Technologies (ICT) use among older people in Italy (ICTAGE)

Abstract

Demography is transforming the Italian society: Increasing life expectancy coupled with sustained low fertility has made Italy a country with one the most advanced ageing process in the world. At the same time, we are witnessing an increasing role of digital technologies and skills in our lives and the development of digital services aimed at older people is of growing interest for business, public administration and society.

In an increasingly digitalized society, the use of Information and Communication Technologies (ICT) is of growing importance for guaranteeing equality of opportunities for ageing well and for social inclusion. To list just a few key potential uses of ICT for improving older people's health and wellbeing, ICT can serve to stay in contact with family and friends, especially those living at a distance, to facilitate access to services, information and digital health solutions. ICT can make it easier for older people to live safely and independently, promoting wellness, cognitive training, and early detection of risk factors for different medical conditions. The importance of these factors has become even clearer during the recent pandemic.

Because of the role of ICT in defining and influencing an active and healthy ageing of the population, as explicitly recognized for example by the Active Ageing Index framework of the UNECE, it is crucial to understand the factors that favor or limit the use ICT among older people. These factors are not only of technological nature, but include socio-demographic characteristics. By adopting a lifecourse approach, the ICTAGE project aims at adding a socio-demographic perspective into the literature on ICT use among older people. In particular, by using advanced quantitative techniques we examine the role of three important sets of socio-demographic determinants of older people's ICT use: 1) kin availability and family relationships; 2) socio-economic current and past conditions; 3) birth cohort and area of residence. The project focuses on Italy, a country characterized by an advanced ageing process and a strong digital divide that is likely to be heterogeneous across geographical areas, demographic and socio-economic groups.

By examining to what extent socio-demographic factors influence ICT adoption by older people, the ICTAGE project will: 1) pave the way for new theoretical developments on the quality of ageing and inequalities in ageing well in an increasingly digitalized society;

2) encourage public discussion on how the digitalization process can be fairer across generations and on its role in an ageing country; 3) provide relevant information for evidence-based policies that may reduce the digital divide, thus exploiting the potential of ICT for improving older people's wellbeing and social inclusion.

Funding: Funded under the PRIN 2022 program, Italian Ministry of University and Research.

PI: Bruno Arpino (University of Padova). **Co-PIs:** Marco Albertini (University of Bologna), Cecilia Tomassini (University of Molise).

Causes of deAth dependence stRuctures and the cOmpositioNal effecT on ovErall mortality (CARONTE)

Abstract

CARONTE aims at addressing fundamental open questions on the structure and functioning of competing death causes and their joint impact on overall mortality levels and forecasts, through the creation of innovative bridges between demography and statistics. Despite the availability of recent studies suggesting that a full understanding of modern mortality trends necessarily requires a finer-scale analysis of cause-specific mortality, the complexity underlying the functional, compositional and discrete nature of multivariate cause-specific mortality processes still hinders progress in the field.

Project CARONTE bridges demography and recent advancements in functional data analysis, compositional data analysis, graphical models and discrete choice models, to develop a unique statistical modeling framework which can learn the complex systems of graphical dependencies behind causes of death and unveil their combined effects on overall mortality. This will allow to:

- Explain the dynamic co-evolution of causes of death patterns, while understanding how variations in the incidence of one cause, or groups of causes, affect current and future dynamics of the other causes.
- Explain trends in overall mortality, along with their differences across countries and cohorts, in terms of causes of death co-evolution.
- Study and forecasting the impact of potential mortality shocks (e.g., covid-19) and health policies on the composition, dependence and dynamics of causes of death patterns.

Funding: Funded under PRIN 2022 program, Italian Ministry of University and Research.

PI: Daniele Durante, Bocconi University; **Co-PIs:** Stefano Mazzuco (University of Padova), Marco Stefanucci (University of Rome Tor Vergata).

Fertility Over forties (FORTIES)

Abstract

Italy is among the countries at lowest-low fertility (Billari, 2005), furthermore it is also characterized by a high level of late – over 35 years old – and latest-late – over 40 – fertility. Postponement of childbearing started in the middle of the 70s and the share of first births after 40 has increased spectacularly, accounting for around 6% of the total first birth rate (Beaujouan, 2020). Ministero dell'Università e della Ricerca MUR - BANDO 2022 PNRR The current demographic and sociological literature on Italy focuses mainly on the socio-economic determinants of fertility trajectories and postponement. FORTIES aims at a more comprehensive approach to the understanding of late and latest-late fertility, where parental wellbeing is the focal point, and by considering the overall process, from the choice to have a baby to the arrival (or not) of a child.

Focusing on mothers and couples aged 35 and over, FORTIES builds around three pillars: 1. Different trajectories of parenthood. On one hand, the spread of couples resorting to Assisted Reproductive Technologies (ART) is currently understudied in its complex connection with wellbeing and fertility choices. On the other hand, the multifaceted adoption process, which has been undergoing a counterintuitive reduction over recent years, deserves the same attention. 2. The experience of delivery. Recognized as a crucial moment in the life of parents, the delivery might have consequences on fertility choices. In this direction, the recent emergence of obstetric violence as a new theme in international literature makes the issue even more central. Moreover, the project will explore the theme of Postpartum depression (PPD). 3. Wellbeing after the birth of the first child. Late and latest-late fertility reduces the transition to the second birth, but the role of the life organization and changes after the first child's arrival is still unclear. In the context of a high gap in the gendered division of care among parents, we will extend the literature with a specific focus on mental workload. Moreover, societal expectations for a deep maternal commitment to care will be studied, investigating the recent emerging issue of parental regret in the Italian context, where it has never been researched. FORTIES foresees a mixed method approach: An Online Survey conducted to understand late and latest-fertility experiences, opinions and attitudes towards motherhood, exploring all the dimensions mentioned in the pillars. A qualitative approach used to analyze ART and adoption experiences of parenthood through Netnography and Collaborative Film-making approach, where the experiences of the delivery/arrival and wellbeing after the first child are explored. FORTIES extends the knowledge on late and latest-late fertility that is expected to gain centrality in developed countries. It also focuses

on socio-economic and geographical inequalities. It helps widen the offer of evidence-based family policies, services and support while giving a comprehensive view of parental wellbeing.

Funding: Funded under PRIN 2022 PNRR program, Italian Ministry of University and Research.

PI: Alessandra Minello (University of Padova); **Co-PIs:** Livia Ortensi (University of Bologna), Alessandra Decataldo (Milano Bicocca University).

Other Padua team members: Gianpiero Dalla Zuanna.

Italians' FERTility MOTivations in disorienting and uncertain time (FER-MO)

Abstract

Many studies have been conducted on Italy's three decades of persistent low fertility. Still, Italian fertility dynamics remain a conundrum: recent data from ISTAT reveal that monthly births were highly reactive to the ups and downs of the COVID pandemic. Yet the long-term trend remains stable – and importantly – at a very low level of below 1.3 children per woman.

Given that classical theories are not up to explaining fertility dynamics, especially in the Italian setting, this project asks whether Italians' motivation for having children is now changing. There are many good reasons to suspect that this is, indeed, the case: a deadly pandemic; sudden inflationary pressure sparked by an energy crisis, possibly bringing about an economic recession; geo-political tension such as has not been seen in Europe since the second World War; and a likely devastating climate and environmental crisis. Prospective young parents are, today, facing very different perspectives on the future compared to a few years ago. The Italian demographic winter risks turning into permafrost.

In order to answer whether Italian motivations for having children is changing, we take three lines of attack.

First, the 2016 Family, Social Subjects and Life Cycle (FSS) survey is used to investigate the fertility behaviour, intentions and ideals of a representative sample of 25,000 Italian adults. In collaboration with ISTAT, we are able to map fertility intentions with actual fertility using population register data. This unique data linkage allows us also to analyse, for the first time, the heterogeneous effects of the COVID pandemic on fertility.

Second, in close collaboration with ISTAT, we are able to identify the place of residence of the respondents, to map the economic, demographic and political characteristics of the municipality where they live. Combined with georeferenced environmental data, we also match the individual data with the climatic information of their municipality, including temperature and rainfall anomalies, and other extreme events, such as flooding. In this way we tap into underexplored fertility mechanisms.

Third, we plan to conduct a new survey where we ask individuals about their fertility intentions and ideals. Here we propose an important innovation: we design and implement a vignette study where

individuals are exposed to a series of narratives under which respondents report whether the scenario would favour having children (or not). The factors in the vignette include: 1) short-term climatic shocks; 2) long-term climate change; 3) economic recession; 4) geo-political tensions; 5) fear of (another) pandemic; and 6) fear of the rising cost of living. This approach is unique in tapping into the competing concerns that individuals may have when considering future scenarios for childbearing. Combining this with information on the respondents' background characteristics, we can also empirically analyse the heterogeneity of any concerns.

Funding: Funded under PRIN 2022 program, Italian Ministry of University and Research.

PI: Letizia Mencarini (Università Bocconi); **Co-PIs:** Raya Muttarak (University of Bologna), Maria Letizia Tanturri (University of Padova).

Other Padua team members: Anna Giraldo, Donata Favaro, Annalisa Donno.

E-registo, E-xisto! Rafforzamento e modernizzazione del registro civile e delle statistiche demografiche in Mozambico (Strengthening and modernizing the civil registry and demographic statistics in Mozambique)

Abstract

Failure to register children at birth poses a significant issue in numerous developing countries. An unregistered child is vulnerable to a range of rights being compromised, including access to education and voting, while also facing an increased risk of trafficking. In Mozambique, the registration rate is notably low, falling below 50% in 2015, with many children being registered at a considerably later age.

Thanks to funding from the Italian Agency for Development Cooperation, the Community of Sant'Egidio initiated a civil status registration system for children under six months old. This effort, launched in collaboration with the national government since September 2022, builds upon procedures already implemented in other African nations. As of March 2023, the new registration procedures are fully operational in three provinces of Mozambique—Gaza, Maputo, and Nampula.

The Department of Statistical Sciences at the University of Padua has established an agreement to monitor various aspects of the procedure, employing appropriate demographic and statistical techniques across diverse sources and databases, which may not always be of optimal quality. After the initial months, we are now able to present some results, particularly indicating whether the new procedures have led to an increase in the registration rate of children.

Funding: Funded by The Italian Agency for Development Cooperation – Maputo Office.

PI: Gianpiero Dalla-Zuanna (University of Padua). **Co-PIs:** Maria Castiglioni and Chiara Gargiulo (University of Padua).