<Longitudinal Health and Cross-Country Statistical Modelling>
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Our research group aims to develop and apply statistical models to identify health determinants, investigate trajectories of disability and explore causal relationships.

One main topic concerns with the implementation of statistical methods for the harmonization of big datasets across a number of longitudinal studies and countries. Indeed, the World Health Organization (WHO) has designated our Institute as a WHO Collaborating Centre for “Longitudinal Health and Cross-Country Statistical modelling” and Dr. Nadia Minicuci as Head of the Centre. The Collaborating Centre is actively contributing to implementation and data analysis of WHO population health studies, like the “Study on global AGEing and adult health (SAGE)” and the “World Health Survey”.

We collaborate with the team of the European project “Ageing Trajectories of Health: Longitudinal Opportunities and Synergies” to evaluate the predictors of pain, stroke, and sleep applying multilevel model as well as Age-Period-Cohort analyses.

We are members of the Italian Global Burden of Disease (GBD) Initiative, that collaborates with the Institute for Health Metrics and Evaluation to contribute to the generation of the GBD estimates, specifically focusing on sub-national estimates for Italy.

Other research topic deals with the investigation of the effect of salt reduction policy in South Africa, assessed examining changes in urinary sodium excretion and blood pressure over time in a random nested-sample of 1200 respondents to the SAGE survey (Salt and Tobacco sub-study). As a comparison, the same analyses was conducted on the Ghana sub-sample.

The “Interventions for Older people in sub-Saharan Africa” project examined the health and wellbeing of older people in six low and middle income countries to provide sub-Saharan African policy-makers with more robust evidence base for informed decisions about interventions for older people, including cash transfers, social health insurance and the screening of chronic health conditions.

The Horizon2020 “Models of Child Health Appraised” aimed to obtain and analyze key information on a range of child primary care issues from 30 European Commission and European Economic Area countries. Scientific partners from 11 European countries, plus Australia and USA, encompassing medicine, nursing, economics, informatics, sociology and policy management, have categorized health care models, school health and adolescent services; developed innovative measures of quality, outcome, cost, and workforce; assessed effects on equality, and on continuity of care with secondary care; indicated optimal future patterns of electronic records and big data to optimise operation of the model(s).

The “Identification of Determinants of Healthy Aging in Italy” project aimed to provide valid and reliable data on aging and factors determining health and disability in a population of subjects aged 18+, collected in three Italian regions, with a particular focus on the effect of social networks and features of built environment on disability, quality of life and well-being in Italian adults.
The “Study on the biological variation in sweat chloride concentrations” examined the intra-individual biological variability of sweat chloride both in healthy individuals and cystic fibrosis patients and assessed its correlation with diet, season, and menstrual cycle.

References:


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