

“Causal Methods in Early-Life Research”

An Interdisciplinary Scientific Workshop supported by GLOHRA

Early-life research is concerned with how circumstances and exposures during pregnancy and early childhood impact our health throughout the entire life course. Two processes are essential in this. First, physical damage from e.g., malnutrition or pollution during this foundational period can have long-run impacts, including the development of chronic diseases. Second, the developing body adapts to its surroundings via epigenetic mechanisms. This helps it to prepare optimally for similar later-life circumstances, which may or may not turn out beneficial.

The research field is closely connected to Sustainable Development Goal 3 (“Ensure healthy lives and promote well-being for all at all ages”). However, providing causal evidence on the associations between early-life circumstances and later-life outcomes is methodologically challenging, since randomized trials are often infeasible on ethical as well as practical grounds (long follow-up periods). At the same time, **establishing causal evidence is an important tool for understanding long-term trajectories from the earliest life stages onwards**, offering new opportunities for policy interventions.

Early-life research involves researchers from disciplines such as medicine, public health and epidemiology, but also econometricians who are specialized in causal analysis of large observational databases. However, there tends to be little cooperation and communication between the disciplines. **From 25 – 27 September 2024, 24 researchers with backgrounds in the various disciplines convened in Bad Kreuznach for in-depth discussions on dealing with causality in early-life research.**

“How do you deal with causality in your field?”

“I never thought that research by economists could be relevant for me. I will now start reading it”

“Interdisciplinary work can identify new questions that other disciplines might not have thought of in isolation”



“This workshop shows that we need to talk more to each other – and learn each other’s scientific language”

“The societal impact of what we do benefits from diverse perspectives”



The workshop featured scientific presentations in the areas of “**Nutrition in Early Life**”, “**Stress in Early Life**” and “**Growing Up in a Changing Climate**”. Lively discussions allowed for reflections on synergies between cross-disciplinary methodological approaches and new perspectives from researchers from other fields.

In her virtual keynote speech, **Maya Rossin-Slater**, health economist at Stanford Medicine, widened the perspective by zooming in to the role of public policy, and the need for convincing evaluations of these policies.

“If early-life health has lasting consequences on economic and health outcomes throughout the life cycle and across generations, then this implies that there is a **critical window of opportunity for intervention** with lasting—even intergenerational—benefits”

(Maya Rossin-Slater, keynote speaker)



A theme that emerged repeatedly was the importance of **academic languages**, since they can lead to misunderstandings and skepticism towards other disciplines. Moreover, many early or mid-career level researchers raised concerns about the **compatibility of interdisciplinary research and career-planning**, for instance due to disciplinary differences in terms of publication expectations. Participants agreed that interdisciplinary collaborations help overcome research gaps and lead to innovative methodological approaches, but that there is a need for institutional change so that interdisciplinary work becomes a promising career path for young researchers.



Organizational Team

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Any questions? Feel free to reach out to Fabienne (pradella@uni-mainz.de).