



SOCIETY FOR LONGITUDINAL
AND LIFECOURSE STUDIES (SLLS)

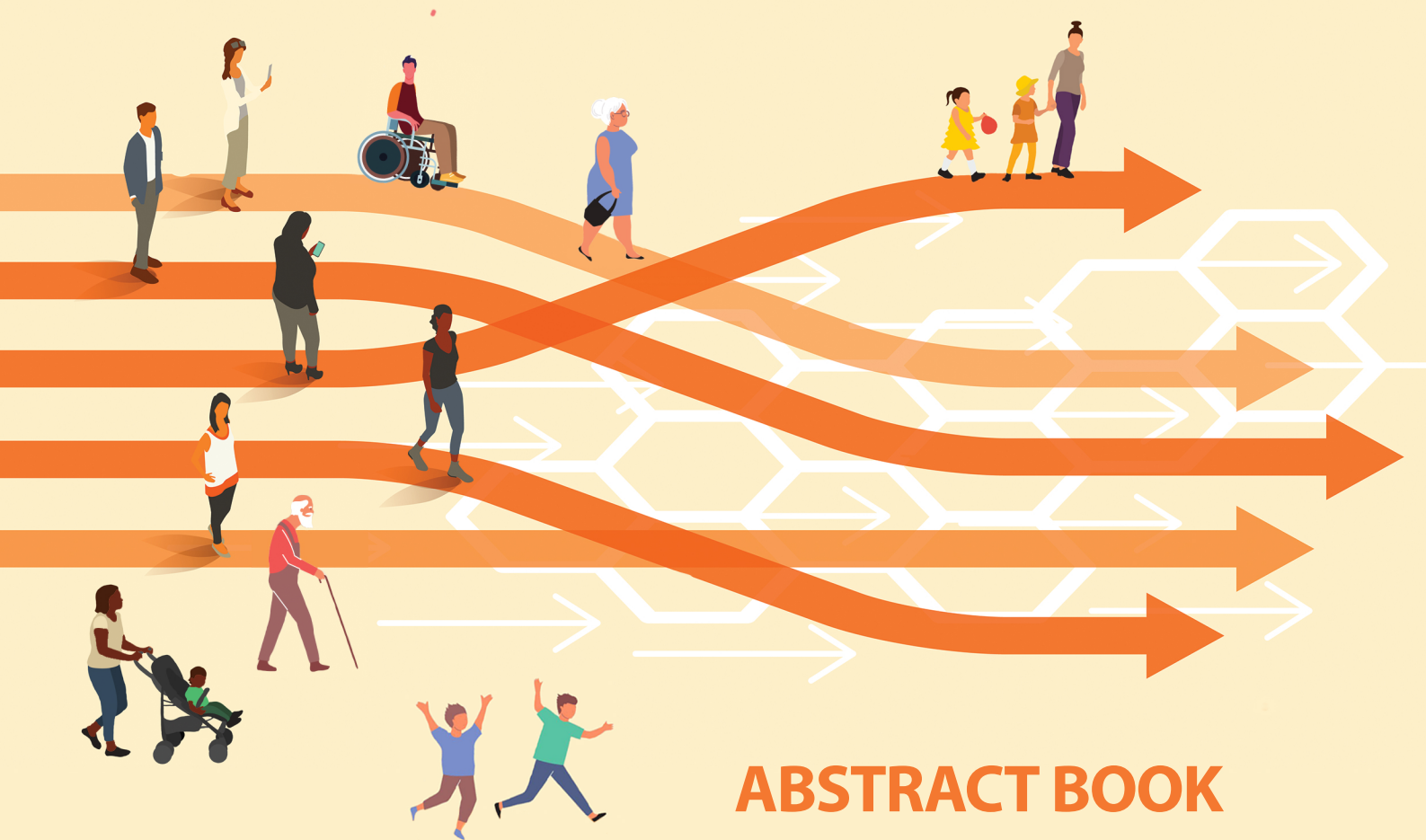
Promoting longitudinal and lifecourse research



SLLS Annual International Conference

Structure and Change in Critical Times: Implications for the Life Course

Hosted by the Université Libre de Bruxelles
29 June - 1 July 2026



ABSTRACT BOOK

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KEYNOTE PRESENTATION

The Emergence of Singlehood Studies: Why Singlehood Demands a Life-Course Lens

Presenter: Dimitri Mortelmans, University of Antwerp

Western partnership patterns have shifted in two waves: first, away from marriage towards cohabitation and non-residential relationships such as LAT; and second, towards a growing share of adults spending significant portions of their lives without a partner at all. For some, this is a brief transitional phase, but increasingly singlehood becomes a more prominent feature of the adult life course, sometimes developing into a long-term identity. Yet for much of the twentieth century, family scholarship treated singlehood as a residual category. Adults without a partner were framed as “not yet partnered” or absorbed into heterogeneous comparison groups that attracted little theoretical or empirical attention. Even as family research broadened from marriage to partnering more generally, singlehood itself rarely received sustained attention in its own right.

This keynote argues that singlehood has now emerged as a substantive field within family sociology and social demography, and that life-course methodology is not an optional addition to this field but its necessary foundation. Drawing on panel data from Understanding Society, pairfam and HILDA, as well as Belgian population register data, I show that singlehood is neither a homogeneous group nor a static life-course trajectory. It encompasses diverse pathways, ranging from never-partnered adulthood to post-dissolution trajectories, widowhood in later life, and short but recurring spells between relationships. Research suggests that these different forms of singlehood are associated with distinct patterns of health, economic well-being and housing outcomes that cross-sectional data cannot adequately capture.

To understand such differences, we need longitudinal insight into the timing, duration, sequencing and recurrence of singlehood across the life course. The rise of singlehood studies, therefore, marks more than the recognition of a previously neglected life-course status. It challenges family scholars to rethink adulthood not from the normative ideal of stable partnership, but from the broader reality of relational turbulence, heterogeneity and changing life-course configurations.

1A MIGRATION

SYMPOSIUM

Refugee's Education, Training and Employment

Chair: Ben Edwards, Australian National University

This symposium brings together four longitudinal studies examining how humanitarian and refugee background young people and adults navigate education, language learning, and labour-market integration from Germany and Australia. Paper 1 uses Refugees in the German Educational System (ReGES) to trace young refugees' occupational aspirations during lower secondary school, showing high initial aspirations but a marked decline over time, with early influences of perceived parental expectations giving way to opportunity structures linked to school track and vocational pathways. Papers 2–4 draw on up to a decade of Building a New Life in Australia data to map educational participation, English language development, and transitions from income support to employment. Findings highlight English proficiency as a pivotal driver of education engagement and early settlement gains, alongside persistent disengagement for a minority. Gendered patterns recur: women often benefit more from formal learning, while caregiving and health constraints slow progress; men show stronger long-term employment gains from job training. Collectively, the papers identify leverage points for policy-early assessment, flexible learning supports, and sustained, gender-responsive pathways linking language, education, and work.

TALK 1: Young Refugee's Development of Occupational Aspirations

Presenter: Oliver Winkler, Martin Luther University Halle-Wittenberg

Co-authors: Robin Busse, Ina-Arleen Mitze, Technical University of Darmstadt

In Germany, vocational education and training (VET) is central to refugees' educational and labour-market integration. This study examines how occupational aspirations develop among young refugees who migrated to Germany, and whether perceived parental occupational expectations, school track, and anticipated discrimination in the training market shape this development. We draw on Cohort 2 of Refugees in the German Educational System (ReGES) aged 14–16 and enrolled in lower secondary education. Analyses use survey waves 1 (2017/2018) and 4 (2019) when refugees were in grades 7 or 8 at T1 ($n = 1,050$). The outcome is respondents' realistic occupational aspiration, operationalised as the International Socio-Economic Index of Occupational Status (ISEI) of the aspired occupation. We estimate a cross-lagged structural equation model. At T1, young refugees report comparatively high aspirations ($M = 69.9$), comparable to or exceeding levels reported for non-refugee peers in prior work. Over the observed period (on average about 10 months), aspirations decline by approximately 7.5 ISEI points ($\Delta = -7.51$). The cross-lagged model showed good fit and systematic differences in aspirations across time. Parental occupational expectations are strongly associated with adolescents' aspirations at T1 ($\beta = 0.72$, $p < 0.001$), but weakens and is no longer statistically significant by T2 ($\beta = 0.11$, $p = 0.077$). School track predicts the initial level of aspirations: students in academic tracks report higher aspirations at T1 than those in non-academic tracks ($\beta = 4.00$, $p < 0.001$). Anticipated discrimination in the training market had no effect on aspiration levels or change. Overall, occupational aspirations among young refugees are highly dynamic. Over time, aspirations may become less anchored in perceived parental expectations and more aligned with the opportunity structures and constraints associated with school tracks and the VET system.

TALK 2: Refugees in Education and Training: Findings from the Building a New Life in Australia Longitudinal Study

Presenter: Ben Edwards, The Australian National University

Co-authors: John van Kooy, Scanlon Foundation Research Institute; Pilar Rioseco, Sally Baker, University of New South Wales

This paper examines the educational trajectories of humanitarian migrants in Australia using six waves of longitudinal data from the Building a New Life in Australia (BNLA) study (2014–2023). Our analyses draw on responses generated from 2,294 individuals across 8,606 person-wave observations. Using random effects logistic regression, we first identify key predictors of educational participation among the refugee sample, finding that English proficiency emerged as the strongest driver ($OR=2.73$), men faced 35% lower odds of participation than women, and each additional age bracket significantly reduced the odds of participation. Iraqi and Syrian-born refugees had significantly lower engagement compared to other origin groups, particularly those from Myanmar ($OR=3.78$). The transition sequence analysis reveals concerning patterns: when examining consecutive pairs of survey waves, 61% of disengaged participants (not in education, employment, or studying English) remained disengaged in the next immediate survey wave. Furthermore, 10% of participants remained persistently disengaged across multiple waves, highlighting sustained barriers to participation. Only 21% of those studying English transitioned into education in a later wave. However, those who reported dual engagement (combining employment with studies) had more positive outcomes, with 51% maintaining this status across multiple waves. Our findings demonstrate the critical role of English proficiency, the importance of early intervention for new arrivals, and the need to strengthen the links between education and labour force participation for refugees in Australia.

TALK 3: Unlocking Opportunity: English Language Development of Humanitarian Migrants in Australia

Presenter: Sean Martin, Australian Institute of Family Studies

Co-authors: Salma Ahmed, Catherine Andersson, Australian Institute of Family Studies; John van Kooy, Scanlon Foundation Research Institute

Background: English proficiency underpins access to education, employment and community life. Despite its significance, few studies have tracked how humanitarian migrants' English skills develop over time or what factors shape these trajectories. Given the gradual nature of language learning, there is a need for longitudinal studies in this area.

Aim: This paper examines changes in English proficiency of humanitarian migrants over ten years, focusing on determinants of spoken English comprehension through efficiency, exposure, and incentive-related factors.

Methods: Using longitudinal data from waves 1 [year 1], 3 [year 3], 5 [year 5] and 6 [year 10] of the Building a New Life in Australia (BNLA) study, we analyse data from adults aged 15+ who completed self-reported English questions across four domains. Discrete choice models estimate the probability of proficiency in understanding spoken English, adjusting for demographic, settlement, learning, and contextual characteristics.

Results: Oral language skills improved markedly, with spoken English comprehension reaching 58% by year 10. Men began settlement with stronger pre-arrival proficiency, while women experienced greater sustained gains from formal learning. Early access to settlement services and English programs boosted short-term gains, with formal English study making participants up to 46% more likely to report improved spoken comprehension in the first year. These gains did not persist for men over time but remained for women. Engagement in additional study or job-related training provided additional early advantages (participants were 1.3 times more likely to show early improvement). Mental health challenges—particularly for women—and caregiving responsibilities constrain progress for both sexes.

Conclusion: Results highlight the value of early language assessment, scaling up initial settlement programs, and tailoring support to address gendered barriers and caregiving demands. Flexible, integrated learning environments and childcare support are important to improving long-term English proficiency and promoting successful settlement outcomes for humanitarian migrants.

TALK 4: Employment Transitions Among Humanitarian Migrants: Evidence from a Decade of BNLA Data

Presenter: Sean Martin, Australian Institute of Family Studies

Co-authors: Salma Ahmed, Sheenagh McShane, Australian Institute of Family Studies

Background: Humanitarian migrants often face disrupted education, limited work histories, and health challenges that shape their early reliance on government income support. Understanding how people move from income support to paid work over time is essential for designing effective settlement and employment policies.

Aim: This paper identifies factors that enable and act as barriers to transitions from government income support to employment in Australia among a cohort of humanitarian migrants aged 15–59.

Methods: Using longitudinal data from the Building a New Life in Australia (BNLA) study (n=2,399), we analyse three comparable waves spanning 2013–2023 (Waves 1 [year 1], 5 [year 5], and 6 [year 10]). Discrete choice models estimate the probability of transitioning into employment as a function of individual, structural, and contextual characteristics.

Results: Findings show a clear shift from government income support into employment over the first decade of settlement, rising to 41% for women and 63% for men. Early English study boosts employment transitions by 12 percentage points in the short term but does not offer sustained long-term gains. Other studies or job-training programs increase men's employment transitions by 22 percentage points by year 10, with no similar long-term effect seen for women. However, caregiving responsibilities and disability hinder progress. Disability or long-term health conditions during early years reduce employment transitions by 21 percentage points for women and 27 percentage points for men by year 10.

Conclusion: These results emphasise the need for gender-responsive, sustained support that tackles structural barriers to paid work. Leveraging a decade of longitudinal evidence, this research informs strategies to shift away from long-term reliance on income support as the main source of income and strengthen economic security for migrant families.

1B STREAM: HEALTH / WELLBEING 1 SYMPOSIUM

Neurodevelopmental Disorders Across the Life Course: Social Inequalities and Consequences

Chair: Niina Metsä-Simola, University of Helsinki

Across developed countries, the rapidly rising numbers of neurodevelopmental disorder (NDD) diagnoses among children and adolescents pose a major challenge to health service systems. NDDs such as Attention-Deficit Hyperactivity Disorder (ADHD) typically cause functional impairments across multiple domains of life, and prior research has linked them to multiple adverse outcomes such as poor educational attainment and union instability later in the life course.

Although NDD diagnoses are more common in socioeconomically disadvantaged families and between-area differences in prevalence are substantial, it remains unclear how different levels of the social environment jointly shape who gets diagnosed and when. Even less evidence is available on how the social environment potentially shapes the adverse consequences of NDDs. Moreover, despite NDDs being highly heritable, their association with entry into parenthood remains poorly understood. This symposium addresses these questions using longitudinal Finnish register data. The first paper covers multiple NDDs while the others focus on ADHD, the most common NDD diagnosis. Together, the findings suggest that the social environment shapes not only the likelihood and timing of diagnosis but also its educational consequences. ADHD may also increase the probability of remaining childless later in the life course.

TALK 1: Spatial and Socioeconomic Variation in Neurodevelopmental Diagnoses: A Multilevel Finnish Population Study

Presenter: Eevi Haverinen, University of Helsinki

Co-authors: Moritz Oberndorfer, Hanna Remes, Pekka Martikainen, Niina Metsä-Simola, University of Helsinki

Background: Neurodevelopmental disorders are a common reason for service use in childhood, with studies showing significant within-country variation in attention-deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), and, to a lesser extent, developmental learning disorder (DLD) diagnosis prevalence. However, it remains unclear where within a multilayered service structure this variation arises and whether it can be attributed to underlying population composition or contextual sociodemographic characteristics.

Methods: Using nationwide Finnish register data, we followed 343,385 children born between 2005 and 2010 until age 12 and identified the first diagnosis of ADHD, ASD, or DLD using healthcare and prescription data. Family characteristics were measured longitudinally across childhood and municipality characteristics at the child's age 6. We then assessed gender-stratified municipality- and hospital district-level variation in diagnoses using mixed-effects logistic regression. By adjusting for individual-, family-, and municipality-level sociodemographic characteristics, we quantified residual variation attributable to municipality and hospital district levels.

Results: The odds of receiving a neurodevelopmental diagnosis by age 12 varied across both municipalities and hospital districts for ADHD and DLD, while this variation was largely confined to the hospital district-level for ASD. Across diagnoses, median odds ratios at the hospital district-level ranged 1.33–1.69 among boys and 1.47–1.61 among girls, with hospital districts accounting for a greater share of residual variance than municipalities. This variation persisted after adjustment for population sociodemographic composition and municipality-level characteristics.

Conclusion: Even in the context of a universal healthcare system, children may have varied odds of receiving a neurodevelopmental diagnosis based on the hospital district they live in. This pattern points toward institutional processes within specialized healthcare as a potential source of geographic variation. Because diagnoses influence access to services and support, such variation may have implications for later lifecourse trajectories.

TALK 2: Age at ADHD Diagnosis and Educational Outcomes by Parental Education Level

Presenter: Lotta Volotinen, University of Helsinki

Co-authors: Hanna Remes, Pekka Martikainen, Niina Metsä-Simola, University of Helsinki

Background: Early diagnosis of ADHD seems to improve educational outcomes. While ADHD is diagnosed more often among individuals with low parental education, it remains unclear if age at diagnosis also varies by family background. Moreover, the association between age at diagnosis and later educational outcomes may differ by parental education, as resources to provide educational support are likely to vary.

Methods: To examine the associations of age at first ADHD diagnosis and educational outcomes by parental education level, we used registry data on 579,459 individuals born in Finland between 1990–1999. We identified ADHD diagnosis with the first recorded clinical diagnosis or medication purchase. We predicted grade point average (GPA) (4–10, fail–excellent) at the end of compulsory education (age ~16) using linear regression models and school dropout with logistic regression models using predicted probabilities at age 20.

Results: Having parents with basic education was associated with an earlier diagnosis of ADHD than having higher educated parents. A diagnosis during the first school years was associated with higher GPA and less school dropout than a diagnosis towards the end of compulsory education – irrespective of parental education. Among the diagnosed individuals with tertiary educated parents, GPA ranged from 7.64 to 6.94 and the probability of school dropout from 5.1% to 16.9%. Among the diagnosed individuals whose parents had basic education, GPA varied from 6.99 to 6.38 and the probability of dropout from 28.2% to 49.0%.

Conclusions: Individuals whose parents had basic education received their diagnoses relatively early, and an early ADHD diagnosis was associated with better educational outcomes regardless of family background. Yet, educational outcomes were the weakest among individuals whose parents had basic education, and particularly those who were diagnosed in adolescence may require additional support to continue their studies after compulsory education.

TALK 3: Heterogeneity in Educational Outcomes Following ADHD: A Full Population Register-Study in Finland

Presenter: Niina Metsä-Simola, University of Helsinki

Co-authors: Aapo Hiihimo, Max Planck Institute for Demographic Research; Lotta Volotinen, Pekka Martikainen, Hanna Remes, University of Helsinki

Background: ADHD has consistently been linked to impaired educational outcomes. While these associations are unlikely to be uniform across social strata, prior studies on heterogeneity in educational outcomes following ADHD are scarce, and our understanding of potential moderating factors remains limited.

Methods: We used Finnish register-data to follow children born in 1998–2000 for ADHD diagnoses at age 6–16 and educational outcomes by age 20. ADHD was identified from healthcare records and medication purchases. We matched 4,367 diagnosed children to 41,966 non-diagnosed controls and used causal forests to estimate average associations between ADHD and educational outcomes – grade point average (GPA) at the end of compulsory education (~age 16) and probabilities of completing any upper secondary degree, academic secondary degree, and enrolment in tertiary education by age 20 – as well as the modifying roles of individual, family, household, school, and area level covariates.

Results: Compared to matched controls, children diagnosed with ADHD had lower GPA (6.9 vs. 7.5) and were less likely to complete any upper secondary degree (59.0% vs. 82.5%), an academic secondary degree (13.4% vs. 41.4%), and to be enrolled in tertiary education (7.3% vs. 21.2%) by age 20. All associations were heterogeneous. Diagnosed children from socioeconomically advantaged families, schools, and areas had substantially lower GPA and lower probabilities to complete academic degrees and enroll in tertiary education than their matched controls, whereas diagnosed children from disadvantaged backgrounds were at higher risk of not completing any upper secondary degree.

Conclusions: Educational outcomes following ADHD diagnosis show substantial variation, particularly by family, school, and area level socioeconomic characteristics. Social advantage may buffer early educational transitions from compulsory to upper secondary education but not later progression to tertiary education.

TALK 4: From Early to Fewer First Births: ADHD and Family Formation Among Young Adults

Presenter: Sanna Kailaheimo-Björkqvist, University of Helsinki

Co-authors: Niina Metsä-Simola, University of Helsinki; Mikko Myrskylä, Max Planck Institute for Demographic Research

Background: Although attention-deficit/hyperactivity disorder (ADHD) has been linked to difficulties in social relationships and higher union instability, its association with the probability of having children remains unclear.

Methods: We used Finnish population register data to follow 759,430 individuals born in 1982–1993 and estimated discrete-time event history models to examine how ADHD is associated with the overall probability and timing of a first birth. ADHD was identified using healthcare diagnoses and prescription records. Fixed effects models comparing diagnosed and undiagnosed siblings were used to account for shared family background. All analyses were conducted separately for women and men, and interaction analyses assessed whether partner's ADHD modified the associations.

Results: In models adjusted for age and birth cohort, ADHD was associated with a lower likelihood of a first birth (men OR 0.92; women OR 0.90). After adjusting for partnership status, the association reversed (men OR 1.07; women OR 1.09). Age-stratified analyses showed that ADHD was associated with a higher likelihood of first birth at ages 18–23, but with a lower likelihood at ages 24–30 and 31–38, indicating earlier entry into parenthood among individuals with ADHD. Having a partner with ADHD did not substantially modify these associations. Results from sibling fixed effects models were broadly similar to the population level estimates, suggesting limited confounding by shared family background.

Conclusions: ADHD is associated with earlier entry into parenthood but a lower probability of first birth at later ages. Accounting for partnership status largely explains the negative association, highlighting partnerships as a key pathway linking ADHD to fertility outcomes.

Discussant: Hanna Remes, University of Helsinki

1C STREAM: HEALTH / WELLBEING 2 SYMPOSIUM

Social to Biological Research

Chair: Hélène Colineaux, Imperial College London / SLLS Interdisciplinary Health Research Group

This symposium brings together social epidemiological research on social-to-biological processes in the production of health inequalities, using longitudinal data and life course approaches. It focuses on recent analytical, methodological, and conceptual developments in the study of biological embodiment and the interactions between social exposures and biological functioning across the life course, including work that draws on or critically engages with exposome perspectives.

TALK 1: Socioeconomic Position and Biological Wear and Tear in Older Adults: Allostatic Load Trajectories from the ELSA Study

Presenter: Camille Joly, CERPOP – University of Toulouse

Co-authors: Raphaële Castagné, Michelle Kelly-Irving, Cyrille Delpierre, Lola Neufcourt, Benoit Lepage, CERPOP – University of Toulouse

Low socioeconomic position (SEP) is a significant determinant of poor health. The embodiment of SEP into biology functioning and then on health status involves chronic stress mechanisms, which may be measured by allostatic

load (AL). This study examines how different dimensions of SEP, representing life course exposures (education, occupation, and wealth), shape AL trajectories between the ages of 50 and 90, according to sex. We aim to provide evidence of this relationship over time through repeated biological measurements, which is rarely done in the literature.

We used five waves of the English Longitudinal Study of Ageing (ELSA), including 12,135 participants. We measured AL using nine biomarkers at four time points, allowing the construction of individual AL trajectories over a maximum period of 15 years. We then estimated average trajectories between ages 50 and 90, represented by sex. SEP variables were chosen according to a life-course perspective, with education reflecting early adulthood, and occupation and wealth reflecting mid- to late-adulthood SEP. We used mixed-effects models to assess the impact of SEP on average trajectories, with fixed effects for age and covariates, and random slopes for age. An interaction with sex was included to examine sex-specific effects. We used multiple imputation to account for missing data. AL increased until age 80, then declined, with women exhibiting higher trajectories than men. Lower education (early adulthood disadvantage measure) was linked to higher AL trajectories, after adjusting for confounders, comorbidities, health behaviours, and anthropometrics. In models including occupation or wealth (with education as a confounder), only lower wealth remained significantly associated with higher AL trajectories, whereas the association with manual occupation was no longer observed in the fully adjusted models.

Our findings highlight that social inequalities in health operate through multiple and complex mechanisms across life stages, emphasizing the importance of using life-course approaches.

TALK 2: Life-course Social Participation and Midlife Health: Evidence from the National Child and Development Study (NCDS) and the 1970 British Cohort Study (BCS70)

Presenter: Stergiani Tsofli, London School of Economics and Political Science

Co-authors: Daisy Fancourt, Alice Sullivan, George B. Ploubidis, University College London; Ichiro Kawachi, Harvard T.H. Chan School of Public Health

Social participation may influence health outcomes across the life course, yet the temporal dynamics of these associations remain unclear. Building on my previous work on physical activity, I applied a lifecourse framework to examine the association between social participation and midlife health in the UK. Using data from two British birth cohorts, the 1958 National Child Development Study and 1970 British Cohort Study, I tested two life-course models: (i) an accumulation model: capturing cumulative social participation between adolescence and adulthood and (ii) sensitive/critical period model: examining participation at specific life stages. Outcomes included smoking status at age 42 and cardiometabolic biomarkers (lipid profiles, HbA1c, blood pressure, and waist-to-hip ratio) assessed at ages 44-46. Modified Poisson regression with robust standard errors was used for binary outcomes, and ordinary least squares regression was used for continuous outcomes.

In both cohorts, accumulated social participation showed consistent dose-response associations with reduced smoking risk and increased physical activity at age 42. High cumulative participation was protective against smoking in both cohorts. Sensitive period models suggested that more recent participation had the strongest protective effects on health behaviours. Associations between social participation and cardiometabolic biomarkers were weak. Social participation accumulated across the life course promoted positive health behaviours in midlife. However, these behavioural gains did not translate into improvements in the biological profiles of the participants, suggesting that longer follow-up periods may be required to detect biological impacts.

TALK 3: From Exposome Domains to Health and Mortality Through Biology: Estimating Attributable Risks and Proportions Mediated by Biomarkers

Presenter: H el ene Colineaux, Imperial College London

Co-authors: Ruben Colindres Zuehlke, Rin Wada, Dragana Vuckovic, Marc Chadeau-Hyam, Imperial College London; Kees de Hoogh, Swiss Tropical and Public Health Institute Basel; Roel Vermeulen, Jelle Vlaanderen, Utrecht University; Michelle Kelly-Irving, Cyrille Delpierre, CERPOP – University of Toulouse

The exposome aims to capture the totality of environmental influences on health across the life course, yet many applications remain insufficiently anchored in social and life-course theories and lack explicit causal structure. We aimed to quantify the contribution of external exposome domains to mortality and chronic diseases using a causal framework, and to assess the extent to which these effects are embodied/captured by clinical biomarkers.

We analysed 482,249 UK Biobank participants. Nine external exposome domains were defined and ordered a priori using a life-course framework, from early-life history and socioeconomic resources to later environments, behaviours, morphology, and mental and physical health at baseline. Each domain was summarised using clustering approaches. Using gcomputation, we estimated attributable risks and fractions of deaths, incident atherosclerotic cardiovascular diseases (ASCVD), and incident chronic obstructive pulmonary diseases (COPD) within 10 years for each domain. Causal mediation analyses then assessed the proportion of domain effects captured by 70 clinical biomarkers spanning multiple physiological systems.

If all participants had had the most favourable profiles across domains, an estimated 80% of deaths, 60% of ASCVD and over 85% of COPD within 10 years would not have occurred. Mental health, physical health at baseline, socioeconomic resources, morphology and smoking were the largest contributors, while environmental exposures showed modest effects except for COPD. Biomarkers captured around one-third of the effects of early-life history, resources, and life place on mortality, and up to 70% of morphology effects on ASCVD, but less than 15% of mental health effects. Mediated effects were distributed across several physiological systems, particularly haemato-inflammatory and hepatic pathways. These findings highlight how early-life and social conditions shape biological responses, and disease risk. Anchoring exposome research in social epidemiology and life-course causality is essential to move from horizontal mapping toward mechanistic understanding of social-to-biological processes.

TALK 4: The Measurement and Embodiment of Proteomic Ageing Signatures

Presenter: Thomas O'Toole, University of Manchester

Co-authors: Todd Hartman, Alex Cernat, University of Manchester; Meena Kumari, University of Essex

The life-long association between exposure to prior (dis)advantage and inflammatory ageing is supported by cumulative and replicable research. Inflammatory ageing signatures can be explored via the proteome, which bridges the gap between genotype and phenotype. A more granular understanding of age-related proteomic pathways and their social patterning can enhance risk prediction and help to identify modifiable, causal factors to improve population health. To explore proteomic ageing signatures, we use an approach of feature selection, data exploration and measurement confirmation using the cardiometabolic and neurology protein panels measured in Understanding Society (the UK Household Longitudinal Study). Using 184 proteins, (92 per panel) from a final sample of 5,524 respondents, we applied L1 regularised regression modelling to predict chronological age, identifying 67 associated proteins in the neurology panel, and 59 proteins in the cardiometabolic panel at a lambda of 1se. We then modelled these identified proteins via gaussian graphical modelling, using a walk-trap algorithm to identify latent communities of proteins. A series of measurement and criterion validity tests were performed using the identified latent protein groups, finding four stable communities per panel (eight in total). Functional enrichment analyses were used to inform on the molecular function and biological processes of each identified protein group, mapping associated genetic information to each protein group to detect enrichment. This step found a variety of functions from cell adhesion to chemokine regulation and kynurenine pathway activity. We will conclude this analysis by investigating association with sociodemographic characteristics and lifecourse exposures (including socio-economic position and social mobility) to evaluate the social-to-biological embedding of proteomic ageing signatures.

1D STREAM: WORKINDIVIDUAL WORK, INCOME AND HEALTH 1
PAPERS**TALK 1: Intertwined Trajectories of Debt and Health in Switzerland: A Multichannel Life-Course Perspective**

Presenter: Boris Wernli, FORS - University of Lausanne

Co-authors: Jacques-Antoine Gauthier, University of Lausanne; Tristan Coste, Caroline Henchoz, University of Applied Sciences and Arts of Lausanne; Stéphane Cullati, University of Fribourg

Background: Household debt has increased substantially across high-income countries over recent decades and become a major concern for public policy. Yet, in Switzerland as elsewhere, the relationship between household debt and health remains understudied. Most research relies on cross-sectional designs or short follow-up periods, failing to capture the long-term, cumulative nature of both debt problems and health deterioration. Based on qualitative evidence and prior research, we focus on four health problems frequently reported by over-indebted individuals: sleep problems, headaches, weakness, and back pain.

Objectives: This paper aims to (1) identify distinct trajectories of debt and health problems, and (2) examine associations between these two trajectories using a life course perspective.

Methods: We use data from 5,108 individuals, aged 20- 45 at baseline, followed from 2004 to 2022 in the Swiss Household Panel, an annual longitudinal survey of a representative sample of the Swiss population. Debt is measured by self-reported payment arrears. Self-reported health problems are assessed through four symptoms: sleep problems, headaches, weakness, and back pain. We used sequence analysis to identify debt trajectories and multichannel sequence analysis to construct health problems trajectories capturing symptom co-occurrence. Logistic regression models examined associations, progressively adjusting for demographics, socioeconomic status, and baseline health.

Results: Four debt trajectories emerged: Never in arrears (87.8%), Occasional (1.9%), Persistent (2.4%), and Decreasing (7.9%). Seven health problems trajectories ranged from sustained good health (23.0%) to severe multi-symptom accumulation (3.6%). Persistent debt was strongly associated with the worst health problems trajectory, remaining significant after full adjustment.

Discussion: Based on observational and self-reported data, we confirm the link between debt and cumulative health burden. Associations persist even in Switzerland's context of universal healthcare and (strong) social protection, suggesting debt operates as a specific stressor beyond general socioeconomic disadvantage. These findings highlight the need for integrated financial and health interventions targeting over-indebted individuals.

TALK 2: Heterogenous Risks for Ill-Health, Family Breakdown and Income After Unemployment in Times of Crisis

Presenter: Josephine Jackisch, Max Planck Institute for Demographic Research

Heterogenous effects of economic downturn are incompletely understood. Crises shake whole societies but families are often hit especially hard. By studying dynamics of past crises, we might be able to learn lessons for the future. Since the 1990s Nordic countries saw increasing social inequalities in life expectancy and health with diverging trends particularly for the lower educated. It remains unknown how adverse events such as unemployment in the turbulent times of economic crises might contribute to widening health inequalities. Following the Diderichsen Model, we will investigate differential exposure to unemployment during crisis, differential susceptibility, and differential consequences as putative mechanisms driving widening health inequalities. The aim of this study is thus to estimate differential exposure to and differential consequences of unemployment in times of crisis on health, income, and family.

Using data from a 1953 Swedish birth cohort (RELINK53, n= 110,154), unemployment during the 1990s economic crisis hits the cohort roughly at ages 37-47 with putative differential prevalence by education. Following the paradigm of "leaving no-one behind", we will investigate heterogeneity also based on other markers of potential

vulnerability such as single parenthood, migration background, and past childhood adversity. First, we model unemployment risks by social group. Second, we stratify by education and these group markers to estimate associations between experiences of unemployment during the 1990s crisis on income, health (mental health-related in-patient care, mortality, children's birth outcomes), and family break-downs (union dissolution, child welfare involvement) in the short and in the long-term. We hypothesize that differential associations can be observed by education, but are even more pronounced by other social markers of vulnerability. If the risks of the crisis are not evenly distributed across social groups, increasing health inequalities might be a likely consequence. Future studies should explicitly study heterogeneous effects of policies, and test whether universal or more proportionate policies could mitigate inequalities.

TALK 3: The Impact on Human Capital Lifecourse Outcomes of Income-Support Policies Implemented During Early Childhood in High-Income Countries: A Systematic Review

Presenter: Oliver Carlile, University of Sheffield

Co-authors: Laura Gray, Alan Brennan, University of Sheffield

Background: The first 2,000 days of life between conception and 5 years represents a critical period in human capital development, with long-lasting impacts continuing across the lifecourse. While income support policies can effectively mitigate immediate poverty and improve children's lives immediately, the influence on longitudinal health and economic trajectories is less understood. This review aimed to identify and describe relevant studies which employed reliable causal methods (randomised controlled trials, quasi-experimental analyses) to estimate the impact of income support during this early developmental stage of life on human capital (health, education and employment) across the lifecourse.

Methods: We systematically searched Scopus, Web of Science, Medline, Embase, CINAHL, ERIC, Econlit, and PsycINFO for published research between 1 January 1980 - 5 November 2025. Eligible studies focused on macroeconomic income supports (cash transfers, tax credits, benefit payments, social protection) to parents/carers of children aged 0-5 years on outcomes of human capital in high-income countries. Due to the heterogeneity in papers included, we present the results in a narrative synthesis.

Results: The primary results consist of quasi-experimental analyses of changes in policy environments, alongside a smaller subset of papers assessing targeted RCTs. Preliminary data extraction indicates a positive relationship between early-life transfers and early-life health, with improved birthweights and slight improvements in childhood body-mass index. Influences on education and cognitive development outcomes are more nuanced but show minor improvements; these effects are more pronounced from targeted interventions compared to universal transfers. For the limited studies which assessed the impact on employment, there are small but significant impacts on adult economic outcomes.

Conclusions: The synthesis reinforces the 2,000-day hypothesis, with this review showing that targeted financial interventions in early-life can act as a protective mechanism for human capital. Further research using integrated longitudinal data is needed to track these developmental pathways into adulthood.

TALK 4: Housing Wealth, Capital Income and Earned Income as Predictors of Health Outcomes

Presenter: Luca Dei Bardi, University of Helsinki

Co-authors: Luca Dei Bardi, Joan Damiens, Michael Berger, Lasse Tarkiainen, Pekka Martikainen, University of Helsinki

Traditionally, research on health inequalities by economic resources has focused on disposable income, although wealth better captures long-term resources and has a complementary influence on health. Despite disposable income containing some information on wealth, namely income from capital, it does not provide a full picture of wealth.

Measuring wealth is challenging in many countries following the abolition of wealth taxes, which discontinued the availability of register-based data, but the primary residence value (PRV) can approximate wealth. PRV represents

the largest component of wealth, is similarly associated with health, and reflects cumulative advantages and disadvantages over the life course. By distinguishing wealth as a stock (PRV) from income as a flow (earned and capital income), this study contributes to life course research by clarifying how different types of economic resources are linked to health inequalities at different stages of life. For preliminary analyses, we explored the distribution of PRV and its association with mortality and mental health.

Using population-wide register data, we gathered information on all native Finnish residents aged 35+ in 2016. To estimate owner-occupied PRV, we multiplied the size of the dwelling to the average price of similar dwellings in the area. Then, we divided homeowners into age-group- and gender-specific deciles, considering tenants as a separate category. Our outcomes were three-year mortality and mental healthcare use (psychotropic medication purchase, mental health hospitalizations, and specialised visits). We estimated incidences by PRV deciles using gender-stratified age-adjusted Poisson models. People in the highest decile owned 22.3% of PRV. Men and women in the lowest decile had respectively 13% and 6% higher mortality than their richest peers but 5% lower mental-healthcare use. Tenants consistently showed the highest incidences. We will expand our analyses stratifying by age group and expanding to other years, also including earned income, capital income, and other demographic characteristics.

1E STREAM: EDUCATION

INDIVIDUAL EDUCATIONAL TRAJECTORIES PAPERS

TALK 1: Childhood Material Hardship, Welfare Benefits, and Young Adults' Educational Aspirations in the United States

Presenter: Melissa Alcaraz, Brigham Young University

Co-author: Claire Duncan, Brigham Young University

Young people's educational aspirations, like other goals, are shaped by their individual desires, perceived constraints, and an understanding of what is both acceptable and desirable by the broader society. Aspirations are strong, though imperfect, predictors of future outcomes. Though aspirations are meant to capture the most ambitious version of what is possible, without constraints, young people's aspirations tend to incorporate some understanding of potential barriers to meeting their goals. In this paper, we analyze the relationship between material hardship experienced during childhood and young adults' educational aspirations, and whether this relationship varies by childhood receipt of government benefits.

We draw on data from the Future Families and Child Well-being Study, a longitudinal survey of 4,898 children (and their mothers) born in the United States between 1998 and 2000, with an oversampling of children born outside marriages. This allows us to capture government benefits after 1996 Welfare Reform, which fundamentally changed cash transfer programs to the new Temporary Assistance for Needy Families (TANF) program. Changes included work requirements, consecutive time limits, and lifetime limits. FFCWS's first household survey (usually completed by the mother) was administered within days of the child's birth. In addition to this baseline survey, primary caregivers (usually mothers) completed surveys when children were ages 1, 3, 5, 9, 15, and 22. Children themselves began to be interviewed at Year 15, and our analytic sample focuses on young adults interviewed at Year 22 (n~2,800).

We will use multinomial logistic regressions to examine the relationship between material hardship experienced in childhood and young adults' educational aspirations, controlling for individual- and household-level sociodemographic characteristics. Further, we will examine whether this relationship is moderated by receipt of TANF. Our research will engage a lifecourse perspective to explore how both the frequency and timing of hardship are associated with educational aspirations.

TALK 2: Emerging Studenthood: A Qualitative Longitudinal Study on Transition to University for Students with Long-Term Physical Health Conditions

Presenter: Melody Bishop, Durham University

University students represent a large, increasing population whose needs are under-acknowledged and insufficiently understood. For young people pursuing higher education, emerging adulthood (Arnett 2004) - the period between adolescence and young adulthood - involves transition towards a host of newfound personal, academic, and social responsibilities. I conceptualise this unique transitional stage as “emerging studenthood”: emerging adulthood as performed in the context of being a university student. During transition to university, students with long-term physical health conditions (LTCs), such as diabetes and chronic fatigue syndrome, face challenges across several areas of student life. This, I argue, is due to the complexity of having a LTC whilst also occupying a liminal (Turner 1967) position between adolescence and adulthood, and between “home” and “university”.

I will present findings from my PhD (approaching completion), an interview and diary-based qualitative longitudinal research project exploring the experiences of 19 students with LTCs throughout their first year at an “elite” collegiate university (Durham University, UK). I unpick participants’ experiences across several themes - developing independence; navigating healthcare; learning to learn; seeking support; and finding a new sense of “home” - also highlighting opportunities to better support this population. I explore how, for my participants, health-and student-related tasks (attending appointments, arranging reasonable adjustments, etc.) were imbued with great significance by the newly independent state of being a university student. Meanwhile, participants grappled with socio-temporal norms (Ellis et al. 2021) of what “student life” looks like, as perpetuated through ableist structures within and beyond higher education.

Findings from this project will inform higher education and healthcare providers about key issues faced by SLTCs, develop sociological debates around life transitions for young people with chronic illnesses, and prompt critical policy changes around supporting students during transition to university.

TALK 3: Engagement and Motivation Profiles Related to Primary-Secondary School Transitions and Educational Pathways

Presenter: Calum MacGillivray, University of Dundee

Co-authors: Keith Topping, Divya Jindal-Snape, Ben Kumwenda, University of Dundee; Louise Marryat, University of Glasgow; Paul Bradshaw, Scottish Centre for Social Research

Primary-secondary school transitions are experienced annually by many pupils in Scotland. Although evidence suggests most pupils report positive transitions experiences (Jindal-Snape et al., 2023), this period has been linked to declines in engagement, motivation and attainment (Sutton et al., 2018). Experiences vary by gender, socioeconomic circumstances, ethnicity, and differences between primary and secondary contexts (Gilbert et al., 2021). To investigate longer-term implications of transition experiences, this study examined associations between engagement and motivation profiles before and after the move to secondary school and educational pathways. Data were drawn from birth cohort one of the nationally representative Growing Up in Scotland study, comprising 5217 young people born in Scotland from 2004–2005. Latent Class Analysis was conducted at primary six (P6), secondary one (S1) and secondary three (S3) to identify engagement and motivation profiles. These profiles were entered as predictors in multinomial logistic regression models. The outcome was educational pathway in secondary six (S6): remaining in school, attending college, attending university, or not in education. Models were first unadjusted, then adjusted for gender, Scottish Index of Multiple Deprivation quintiles, ethnicity, and urban-rural school moves.

A three-class solution fit best at each stage. Compared to the highest group, the middle and lowest groups showed lower enjoyment, greater school dislike and, by S3, more school skipping. In adjusted models, membership of the lowest and middle groups was associated with higher odds of college attendance (P6 lowest OR=1.9, middle OR=1.6; S1 lowest OR=4.5, middle OR=1.8; S3 lowest OR=2.4, middle OR=2.2) or not in education, except for the middle group in S1 (P6 lowest OR=2.2, middle OR=1.7; S1 lowest OR=3.8; S3 lowest OR=2.8, middle OR=1.8). Associations were strongest for the lowest group in S1. These findings demonstrate that engagement and motivation related to primary-secondary transitions have lasting consequences for later educational pathways.

TALK 4: Does School Completion in Australia Matter? Findings from Linked Longitudinal Census Data

Presenter: Anne Walstab, Victoria University

Following decades of steady increases, rates of school completion in Australia have been declining in recent years. Currently, one in five secondary school students leaves before the end of their final year. This magnitude of school dropout is set against a national policy agenda which aims to lift levels of educational attainment in the Australian population to meet national skill needs and drive workforce participation, a response in part to structural changes in the labour market.

Young people who leave school early are disproportionately drawn from disadvantaged communities, including those living in regional and remote Australia. While the literature points to a number of explanatory factors, questions remain regarding longer-term implications, and specifically over the recent decade where numbers of early school leavers are increasing. In order to address this, our study draws on the Australian Census Longitudinal Dataset (ACLD), linking a sample of individual records from 2011 to 2016 and 2021, to track the educational and employment trajectories of a cohort of 19-year-olds over the decade.

The results show that while over half of early leavers in the cohort have obtained equivalent or higher qualifications by 2021, the chances of qualification recovery of young people from low socioeconomic and rural communities were less than those from higher status backgrounds. The significance of the gaps is compounded by the relationship between longer-term job prospects and attainment levels. Further, given the variation in levels of early leaving and qualification recovery across Australian communities, linear regression techniques are used to determine the relative impact of a range of regional demographic, economic and educational provision factors on these outcomes by age 29 years. This paper provides insights into the extent of the effort required to raise levels of educational attainment across communities and provide better targeted supports at the local area level.

1F STREAM: YOUTH / FAMILY INDIVIDUAL YOUTH WELLBEING PAPERS

TALK 1: Growing Up in Ireland: Designing for the Original Infant Cohort Turning 18

Presenter: Dianne Hillery, Central Statistics Office (Ireland)

Growing Up in Ireland (GUI) is the national longitudinal study of children and young people in Ireland. The study is centered within the Bronfenbrenner model and utilizes a multi-cohort design with three cohorts now active. The middle cohort, born in 2008, joined the survey at 9 months of age and are now aged 17/18. In the years that have now passed since these young people joined the study, Ireland has undergone significant demographic, social, and economic change. Data from this wave will support policy makers in making evidence informed decisions at a national level.

This presentation will discuss the design of this latest wave of the survey for cohort '08 at aged 17/18. It will touch on the multiple instruments used which includes the main questionnaire administered by an interviewer in the young person's home to both the young person and their resident parent(s), cognitive tests for the young person, sensitive self-complete questionnaires for both the young person and their parent(s), a short main and a proxy main as alternatives to the main questionnaire for the young person and a web-based questionnaire for school principals.

The presentation will also discuss how the use of secondary data sources and data linkage informed the design of the questionnaire, with the aim of reducing the response burden for participants and enriching the final dataset that will be made available for research.

TALK 2: Perceived Discrimination and Young People's Health and Wellbeing in Ireland: A Longitudinal Analysis

Presenter: Helen Russell, The Economic and Social Research Institute (Ireland)

Co-authors: Daniel Capistrano, Eva Slevin, The Economic and Social Research Institute (Ireland)

Discrimination has widespread detrimental impacts for minority groups in many domains. There is a substantial literature linking perceived discrimination to adverse psychological and health outcomes (Pascoe & Smart Richman, 2009; Williams et al., 2019). Extant research has focused on adult populations, despite young people reporting discrimination at a higher rate than other age groups (Bratt et al., 2018). Young people are also at a critical period of identity formation and social-cognitive development and may be more vulnerable to discrimination (Benner et al., 2018).

This research presents a first longitudinal examination of discrimination in young people in Ireland. Using data from the Growing Up in Ireland cohort study, we examine the impacts of discrimination on health and wellbeing as the cohort transitions from school to adulthood. We use the Everyday Discrimination Scale (EDS), asking individuals the frequency they had encountered different experiences (e.g. threatened/harassed). We focus on five outcomes: general health, perceived wellbeing, life-satisfaction, depression, and problematic alcohol consumption. The cohort studied had high rates of perceived discrimination, with age seen as the main reason for discrimination at 17, and gender at 25. EDS scores are significantly higher at 25 for young women, gay/lesbian/bisexual, minority ethnic, or disabled persons. The longitudinal analysis finds EDS score at age 25 is a significant predictor for all outcomes, controlling for the levels of these outcomes at age 17 and other socio-demographic covariates. Particularly, there is a 1-point reduction in self-esteem for every 1-point increase in EDS score, a similar magnitude to unemployment. Similarly, self-reported general health, depression scores and alcohol consumption are all negatively associated with perceived discrimination. This research presents an important picture of how young people in Ireland are experiencing the world. As late adolescence and early adulthood are important periods of development such harms may have longer term or cumulative effects.

TALK 3: Structure and Change in Critical Times: Childhood Agency and Life-Course Narratives of Forced Mobility After 1960 Valdivia

Presenter: Margarita Mönckeberg, Universidad de los Andes

Life-course research has shown how structural conditions and historical change intersect to shape individual trajectories, yet children's agency in critical times remains under-theorized, particularly through retrospective qualitative designs. This paper examines how children enacted and later interpreted agency during the evacuation and displacement following the 1960 Valdivia earthquake in Chile, when thousands of children were removed from the city, many travelling without parents within emergency, state-led arrangements.

The study asks how childhood agency was enacted under severe structural constraints and reconfigured linked lives, and how this early turning point contributed to subsequent life-course trajectories. Drawing on multiple retrospective narrative-biographical interviews with former evacuees (now older adults), complemented by testimonies and archival materials used for contextual triangulation, the analysis conceptualizes evacuation as a moment in which structural disruption and institutional intervention generated both constraint and change within a shared spatiotemporal context.

Methodologically, the paper adopts a reconstructive, sequential approach to biographical narratives. It identifies biographical segments and key sequences, differentiates narrative, descriptive, and argumentative passages to distinguish lived experience from contextual framing and subjective theorizing, and reconstructs dominant biographical process structures, including action schemes, institutional expectation patterns, trajectories of suffering, and transformation. A documentary-interpretive layer further examines orientation frameworks and the interplay between communicative and conjunctive knowledge in retrospective meaning-making.

The argument advanced is that children's agency was neither heroic nor purely individual but relational, situated, and everyday-enacted through micro-decisions, negotiations, attachments, and moral obligations within constrained options. These agentic practices resonated across the life course, contributing to non-linear processes of change that reconfigured horizons of possibility. The paper contributes to lifecourse research by foregrounding childhood agency under constraint and clarifying how structure and change operate in critical times to shape long-term trajectories.

TALK 4: Residential Mobility and Children's Health Outcomes: A Cross-National Comparison

Presenter: Emily Pulsipher, Brigham Young University

Co-author: Mikaela Dufur, Brigham Young University

Residential mobility is a common feature of contemporary family life, yet it remains a source of concern for policymakers (Kerbow, 1996; Pribesh & Downey, 1999). Specifically, there is much concern about how residential mobility affects children and youth. Children who have moved more than 3 times are more likely to report lower overall physical health and oral health status (Busacker & Kasehagen, 2012). Moves often coincide with family transitions such as dissolution, partnering, job loss, ill-health, or many other stressful life events (Amato, 2010; Conger et al., 2010; Rumbold et al., 2012). These types of transitions often cause a lot of stress for the child, which can cause their overall health to be worse. This project hopes to examine what can be done to alleviate this. There is a large body of literature that shows social capital can have a beneficial impact on children and adolescents. Much of that literature focuses on academic achievement. We wish to extend this literature by seeing if social capital can also have a positive effect on health outcomes. Our research asks: Can the health consequences of residential mobility on children be moderated by the effects of social capital? We will be using three longitudinal studies (the Millennium Cohort Study (UK), the Early Childhood Longitudinal Study (US) and the Longitudinal Study of Australian Children (AUS)) to compare health outcomes cross-nationally and longitudinally. We hypothesize that social capital will have a moderating impact on the outcomes of residential mobility.

1G STREAM: HEALTH / WELLBEING 3

INDIVIDUAL SOCIO-ECONOMIC IMPACTS PAPERS

TALK 1: Inequalities in Risk of Dementia and Death in People With Multimorbidity in England: A Cohort Study

Presenter: Hilary Shepherd, Newcastle University,

Co-authors: Adam Todd, Charlotte L. Richardson, Andrew Kingston, Newcastle University

Background: People with multimorbidity have a greater risk of developing dementia than people without (hazard ratio [HR] = 4.01, 95% confidence interval [CI] 3.94-4.07). However, few studies have disaggregated results by sex or socioeconomic status, despite knowledge that men and women are affected differently by disease and have different life expectancies. This study investigated inequalities in dementia and mortality risk for people with multimorbidity by sex and deprivation in England.

Methods: Primary care records from Clinical Practice Research Datalink (CPRD) were linked to Index of Multiple Deprivation data, and individuals with existing multimorbidity were followed up to dementia, death, or censoring. Cox regression and competing risk of death models were used to generate hazard ratios for dementia and mortality risk for men vs women, and low vs middle and high deprivation levels.

Results: Of 846,203 individuals, 57% were female and 60% were from the middle deprivation category. Men living in greatest deprivation had lower risk of dementia than women (HR in women = 1.27, 1.24-1.29) but a greater risk of death (HR in men = 1.34, 1.32-1.37) after adjusting for age, number of conditions at baseline, and competing risk of death. On average, they experienced youngest onset age of multimorbidity (age 49), dementia (age 79), and death (age 76) than their female counterparts and those living with lower levels of deprivation.

Conclusions: People with multimorbidity experience unequal risk for dementia and death depending on sex and deprivation. Those living in greatest deprivation do not live long enough to be at risk of dementia, indicating that policy and prevention measures for life-limiting diseases in these groups need further attention. Analyses which account for the competing risk of death are important in populations with sicker or older populations, where death may prevent the outcome of interest.

TALK 2: Socioeconomic Position and Intra-individual Variability in Systolic Blood Pressure from Childhood to Young Adulthood: A Prospective Birth Cohort Study

Presenter: Thomas Vogt, Uppsala University

Co-authors: Hannah Brooke, Uppsala University; Linda O'Keeffe, Kate O'Neill, University College Cork; Richard Parker, University of Bristol

Background: Intraindividual variability (IIV) in resting blood pressure is associated with adverse health outcomes, including mortality and cardiovascular events. Determining whether IIV in blood pressure differs by socioeconomic position in early life would shed light on how health inequalities emerge across the life course.

Methods: This study included individuals from the Avon Longitudinal Study of Parents and Children (ALSPAC) birth cohort with ≥ 1 measurement of systolic blood pressure (SBP) and complete data on sex, age, and maternal education ($n=9,062$). On average, individuals had 6 measurements of SBP (in mmHg) taken between ages ~ 3 and ~ 24.5 years. Socioeconomic position was measured using maternal education from questionnaires at 32-weeks' gestation and categorised into "university degree" (highest), "A-level", "O-level", and "less than O-level" (lowest). We used sex-specific Bayesian mixed-effects location scale models, including maternal education and age (modelled with linear splines) as fixed effects predicting the mean SBP trajectory, and individual-level intercepts and slopes (for age). The residual error (i.e., IIV) was modelled as a function of age, maternal education, and individual-level intercepts. Individual-level intercepts and slopes were allowed to correlate.

Results: In males, lower maternal education was associated with increased IIV in SBP in the offspring. At age 15, from highest to lowest maternal education, the predicted IIV was 7.79 mmHg (95% CrI: [7.58–7.99]), 7.81 [7.65–7.98], 7.97 [7.81–8.12], and 8.04 [7.85–8.24]. Individual-level intercepts in IIV were correlated with individual-level intercepts (ρ : (0.47, [0.32–0.64]) and slopes for mean SBP (0.34, [-0.05–0.79]). Analyses in females are under way.

Conclusions: Small socioeconomic differences in SBP variability arise early in life. Individuals with higher SBP variability appear more likely to have higher and more rapidly increasing SBP. Investigating the relationship between socioeconomic position and IIV in other health relevant traits in future studies could further our understanding of health inequalities.

TALK 3: Screen Time, Context of Use, and Developmental Outcomes in Early Childhood: Evidence from a Hungarian Birth Cohort

Presenter: Krisztina Kopcsó, Hungarian Demographic Research Institute

To support optimal early development, international guidelines recommend avoiding digital media use before age two and discouraging use without parental involvement, during meals or before bedtime, and as a soothing strategy. Screen use, however, is already widespread at this age, particularly among socioeconomically disadvantaged children. This study examined whether screen time and context of use at 18 months predicted developmental outcomes at age three. The sample comprised 2,098 children from the Cohort '18 Growing Up in Hungary study (50.8% boys, 49.2% girls). Outcomes were assessed using the Ages & Stages Questionnaires-3. Context of use was operationalised as a count of non-recommended screen-use situations, reflecting whether parents allowed screen use while occupied with household chores, during meals, at bedtime, or for soothing. Mean daily screen time at 18 months, based on maternal report of a typical day, was 84.3 minutes, and only 13.6% of children had no screen exposure. Screen time was higher among socially disadvantaged children. Higher levels of screen time were associated with increased odds of delays in communication, fine motor, problem-solving, and personal-social skills at age three in both bivariate and multivariate logistic regression models, adjusted for child's sex and baseline delay in the same domain. After accounting for indicators of social disadvantage, including maternal educational attainment, age, partnership status, financial difficulties, and place of residence, associations were modestly

attenuated. Context of use was also independently associated with delays in these domains. At comparable levels of screen time, each additional non-recommended context was associated with 1.2-1.3- fold higher odds of developmental delays. Gross motor skills were not associated with screen time or context of use. Given the high prevalence of screen use, promoting moderate, developmentally appropriate screen practices may help support early development.

TALK 4: The Social Gradient and the 'Deaths of Despair' in Germany: Findings from the German National Cohort (NAKO)

Presenter: Ronny Westerman, Federal Institute for Population Research (BIB)

Co-authors: Andrea Werdecker, Federal Institute for Population Research (BIB); Ulrich Mueller, University of Marburg

Background: 'Deaths of despair' have extensively researched, particularly in the United Kingdom and the United States, but this phenomenon is not limited to these countries. Germany, which experienced significant social inequalities during the economic transition of German reunification, continues to face specific social disparities in health and mortality. Nevertheless, the impact of the social gradient on the 'deaths of despair' in Germany has not received much attention.

Methodology: We used cause-specific mortality data from the German National Cohort (NAKO) for the period 2014–2023. A total of 2,820 deaths were considered for which complete information on the causes of death was available. A multiple-causes of death analysis was performed considering the complete death certificate information and additional medical records. The social gradient was derived from employment status, the European Socio-Economic Classification (ESeC), education (ISCED 11) and relative income position based on the NAKO baseline questionnaires. Logistic regression models were used for statistical analysis, providing odds and relative risk ratios for the analyses of the 'deaths of despair' categories.

Results: The major outcome indicated that individuals with a low socioeconomic status were at a higher risk for the deaths of despair'. Those who had been unemployed for a long time and those with the lowest income levels were disproportionately affected. Surprisingly, educational attainment and occupational status had no significant influence on the risk for the 'deaths of despair'.

Conclusion: The social gradient is a significant predictor of the risk of the 'deaths of despair' in Germany.

2A STREAM: MIGRATION SYMPOSIUM

Mobility and Migration Trajectories and Health Inequalities Across the Life Course

Chair: Sergi Vidal, Autonomous University of Barcelona

This symposium features five studies adopting a lifecourse perspective to examine how spatial mobility trajectories contribute to the emergence and accumulation of health inequalities. In increasingly mobile societies, residential mobility and migration are not isolated events but recurrent processes that intersect with key life-course transitions and shape exposure to resources, risks, and institutions. Moving beyond static or single-event perspectives, the session conceptualizes mobility and health as interdependent, dynamic processes embedded in family, institutional, and spatial contexts.

Using population registers and longitudinal survey data and life-course-oriented analytical approaches, including algorithmic and causal methods, the papers interrogate how mobility-related processes unfold over time and intersect with family and neighbourhood dynamics to generate unequal health outcomes and trajectories. The contributions address underexplored life-course processes, including transnational separation due to migration, disruptions in healthcare access through mobility trajectories, the interdependence between international and internal mobility, cumulative and age-sensitive effects of neighbourhood disadvantage, and the interplay between

migration and partnership trajectories. By combining substantive insights with methodological advances suited to dynamic processes and selection, the symposium highlights how a trajectory-based lifecourse approach can refine existing theories and provide new, policy-relevant evidence on the production of health inequalities in contemporary mobile societies.

TALK 1: Family Migration Strategies and the Health of the 1.5 Generation

Presenter: Claudia Brunori, Autonomous University of Barcelona

Immigrant children have limited agency and understanding in the migration process: their migration is typically defined by parental decisions, including regarding the family migration trajectory, that is, whether the family migrates jointly or sequentially. Literature has shown that sequential family migration (where children spend some time being transnationally separated from one or both parents in the migration process) tends to be associated with worse emotional and relational outcomes among immigrant children. However, our knowledge of the long-term consequences of different family migration strategies on immigrant children is very limited. In this article, we advance the literature on the consequences of different family migration trajectories by looking at physical and mental health outcomes in young adulthood and by using a fine-grained classification of sequential migration experiences, considering both the length of separation and the order of migration. We use whole data from Sweden to study (1) the diversity of family migration strategies experienced by immigrant children and (2) how these relate to physical and mental health from late adolescence to young adulthood (age 16 until the last available observation, in 2021). Our preliminary results challenge the idea of a straightforwardly negative impact of transnational separation from a parent on health: while some experiences of sequential migration are associated with higher risks of mental disorders, these are mostly characterised by long or permanent separations and by migration with the first mover. We find no difference between those who migrated with both parents and those who migrated with a parent to join the first mover.

TALK 2: When Partnerships End: Mental Health Consequences of Union Dissolution by Own and Partner's Migration Background in the Netherlands

Presenter: Christiaan Monden, University of Oxford

Co-author: Carla Grindel, University of Oxford

We investigate how diverse migration backgrounds shape mental health trajectories throughout the union dissolution process. Union dissolutions are profoundly stressful life course events. While differences in the mental health consequences of union dissolutions by gender or socio-economic status are well-established in the literature, less is known about variations by migration background. Using rich administrative data from the Netherlands, we examine anticipatory, short-, and medium-term health outcomes of union dissolution vary between first-generation-migrants and native-borns. Building on life course migrant health literature and the stress process framework, we argue that migrants, especially females, might be particularly at risk of experiencing negative mental health consequences due to compounding stressors, such as financial strain. We further distinguish between union type, that is, whether migrants are in a partnership (marriage or long-term cohabitation) with another migrant or a native-born partner. Native-born partners might provide support in accessing social networks, healthcare, and financial support, and thus, the dissolution of these unions might have more negative mental health consequences. We use two measures of mental health care: declared healthcare costs and reimbursed medications. Using fixed-effects linear probability models, we can capture within-individual changes in health from three years before to five years after the point of separation, modelling health as a dynamic outcome that changes in response to evolving family contexts. Migrants make up a significant share of Europe's population and numbers are expected to increase. Gaining insights into the intersection of migration and partnership trajectories and how they shape health inequalities across the life course is crucial to align health care systems and uphold human rights.

TALK 3: Timing and Duration of Neighbourhood Disadvantage: A Life Course Perspective on Health Behaviours

Presenter: Justė Lekšytė, Autonomous University of Barcelona

Health behaviours are critical determinants of long-term health, and they are shaped not only by individual choices but also by the social and physical environments in which people grow up and live. While research suggests that growing up in disadvantaged neighbourhoods adversely affects children's education, health, behavioural, and emotional outcomes, longitudinal evidence tracking these effects into adulthood remains scarce. This study addresses this gap by examining how the timing and accumulation of exposure to neighbourhood disadvantage from birth to young adulthood influences health behaviours in later life. Beyond estimating the overall effects of neighbourhood disadvantage, we also explore potential mechanisms to assess whether physical environment or social factors play a more important role in shaping later health behaviours. Using Swedish population register data, we study individuals who were born in Sweden in 1990 and who lived continuously in the country until 2023. We construct residential histories from birth to age 25, identifying four sensitive periods: early childhood (0–5), early school years (6–10), adolescence (11–16), and early adulthood (17–25). Health behaviours in adulthood are proxied by preventable hospitalisations, capturing conditions avoidable through healthier lifestyles or preventive care. Because neighbourhood conditions and family circumstances change over time and jointly influence mobility and health, we use a marginal structural model with inverse probability of treatment weighting to account for time-varying confounders and selection issues. Preliminary results indicate that exposure to disadvantaged neighbourhoods is associated with a higher likelihood of preventable hospitalisations, with longer exposure (6–10 or 11–25 years) having a more significant effect than shorter exposure (1–5 years). Experiencing disadvantage during any sensitive period, except early school years, increases the risk of preventable hospitalisations.

TALK 4: The Long Shadow of Migration: How Early-Life Mobility Shapes Health in Later Life

Presenter: José David López-Blanco, University of Bologna

While research on the immigrant health paradox has documented initial health advantages among migrants that erode over time through unhealthy assimilation processes, less is known about whether these migration experiences earlier in life continue to shape health decades later, or whether such effects are specific to international border-crossing or reflect broader processes of residential mobility.

This study examines how migration before age 50 affects mental and physical health among Europeans aged 50 and older, distinguishing between internal long-distance moves and international migration, including return migration. Using longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE, waves 4–9, 2011–2021) merged with retrospective life histories (waves 3 and 7), we analyze individuals from the 1945–1965 birth cohorts across 20 European countries. Employing correlated random effects models to account for unobserved heterogeneity, we examine whether socioeconomic resources, household composition, and social network integration mediate the relationship between migration history and health.

Additionally, we investigate the accumulation and timing of migration episodes, testing whether multiple moves and migrations at older ages exacerbate health effects. Results show that both return international migrants and long-distance internal migrants report higher depressive symptoms compared to non-migrants, with return migrants exhibiting the most pronounced effects and similar patterns of deterioration associated with migration frequency and later-age moves. Notably, we find no significant differences in physical health outcomes, neither in the number of chronic conditions nor in self-rated health, suggesting that migration's long-term health consequences operate primarily through mental health pathways. These findings suggest that the health erosion documented in unhealthy assimilation research extends well into later life, with psychological costs of migration accumulating over time and across multiple episodes.

TALK 5: Children Emigration and Loneliness of Older Parents in Europe

Presenter: Margherita Odasso, Autonomous University of Barcelona

Migration is a life-course process with profound and long-lasting consequences not only for migrants' material and emotional wellbeing, but also for those of their non-migrant kin. In high-emigration contexts, research has generally found that long-distance separation from adult children is associated with worse emotional wellbeing and higher loneliness in non-migrant ageing parents. However, despite growing levels of intra-European mobility and increasing attention to loneliness in Europe's ageing populations, little research has investigated the association between geographical distance from adult children and loneliness in old age in the European context. In this article, we use longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE) to study the association between long-distance separation from adult children and the emotional wellbeing of older parents across several European countries.

Preliminary cross-sectional results indicate that older parents with long-distance separation from an adult child report substantially higher loneliness than comparable individuals living closer to all their children, while no differences were found in terms of depressive symptoms and emotional wellbeing. We extend the analysis in several ways. First, we leverage the panel structure of SHARE and parent-child dyads to estimate within-parent changes following children's migration, controlling for unobserved time-invariant confounders. Second, we consider different distances between parents and children. This allows us to disentangle the empty nest syndrome – that is, parents' feelings of sadness when their children leave home – from long-distance emigration. Lastly, we consider contextual moderators, such as European region and the availability of non-family social support. By adopting a life-course and linked-lives perspective, this article study extends research on intergenerational consequences of migration and contributes to debates on ageing, family ties, and well-being in mobile societies.

2B STREAM: HEALTH / WELLBEING 1 SYMPOSIUM

The Dynamics of Health and Care Shocks in Later-Life: The Role of Anticipation, Policy and Social Support

Chair: Bram Vanhoutte, Université Libre de Bruxelles / SLLS Interdisciplinary Health Research Group

This symposium explores how well-being is shaped in later life, focusing on the critical junctures of declining health and the onset of care needs. We examine the multifaceted impact of health shocks, considering both the role of public policies and the heterogeneity of disability trajectories. We analyse the consequences of providing and receiving care, highlighting how social support systems—both informal (family contact) and formal (long-term care policies)—respond to these challenges. This collection of papers underscores the complex interplay between individual health, family dynamics, and broader policy contexts, revealing how different pathways into care and disability profoundly affect well-being in old age.

TALK 1: Mitigating the Blow: The Role of Social Policies in Tempering the Impact of Health Shocks on Later-Life Well-being

Presenter: Ecenur Irbik, Université Libre de Bruxelles

Co-author: Bram Vanhoutte, Université Libre de Bruxelles

Ageing policies aim to mitigate the negative impact of declining physical health on later-life well-being. Although a link exists between generous welfare states and higher well-being in old age, their specific role in tempering the effect of a health shock remains less understood. Furthermore, life-course precarity is a potential confounding factor that needs consideration.

This study uses the Survey of Health, Ageing and Retirement in Europe (SHARE), employing a multilevel framework to examine the change in well-being following a health shock. The research explores how key ageing policies minimize this well-being decline, considering both the country context and adjusting for life-course precarity.

The findings indicate that more generous health and labour market policies are effective in reducing the detrimental impact of a major health shock on older adults' well-being.

TALK 2: The Anticipation Effect: Trajectories of Disability Onset and Their Role in Shaping Well-being in Later Life

Presenter: Thibault Kohler, Université Libre de Bruxelles

Co-author: Bram Vanhoutte, Université Libre de Bruxelles

The disabled population is highly heterogeneous, with different pathways leading to disability. Two main trajectories can be identified: gradual and progressive functional decline, and sudden onset disability without prior decline. This study examines the impact of disability in later life on wellbeing and the role of anticipation in this process. We use longitudinal data from the Survey of Health, Ageing, and Retirement in Europe (SHARE, waves 4–9). Transitions were aligned to create a time-to/from-disability metric, defining disability as the shift from no limitation to at least one ADL limitation, complemented by functional decline measured with the Short Form 36. Spline growth models assessed trajectories of wellbeing (depression, life satisfaction, quality of life).

Results show that progressive onset is linked to lower wellbeing before transition but a smaller decline at onset, highlighting the importance of considering pre-disability trajectories as well as the disability shock for understanding wellbeing in later life.

TALK 3: Mental Health Trajectories of Men and Women Who Start Providing Personal Care: European Findings from SHARE Using Propensity Score Matching

Presenter: Morten Wahrendorf, Heinrich Heine University Düsseldorf

This study examines the mental health trajectories of older adults who begin providing personal care in Europe and compares them with matched non-carers. Using longitudinal data from the Survey of Health, Ageing, and Retirement in Europe (2004–2022) across 28 countries, we track depressive symptoms before, during, and after caregiving transitions. Matched controls from the same country are identified with propensity score techniques. Results show a consistent increase in depressive symptoms when becoming a carer, beginning even prior to the transition, with stronger effects for women and those with fewer financial resources. National long-term care policies do not substantially mitigate this adverse impact. The paper argues that while such policies influence the proportion of people taking on caregiving responsibilities in a country, their role in buffering the mental health consequences of care remains limited. This highlights the need to interpret policy effects broadly, considering multiple pathways through which long-term care arrangements may affect carers health.

TALK 4: Changes in the Frequency of Contact with Adult Children during the Transition to a Subjective Need for Care: Longitudinal Evidence from the German Ageing Survey

Presenter: Katharina Mahne, Kempten University of Applied Sciences

Co-authors: Andrea Cass, Martin Wetzel, Kempten University of Applied Sciences

When older adults transition into needing care, their family relationships adapt in ways that are often overlooked. This study investigates changes in intergenerational contact by analyzing data from the German Ageing Survey (DEAS, 2002–2021). Using fixed-effects panel regression models, researchers examined how the frequency of contact with adult children changes before, shortly after, and three years after a parent develops a need for care.

The findings reveal that, while the overall average contact frequency remains unchanged, there's a significant increase in contact when mothers require care, with no similar effect for fathers. Both daughters and sons increase contact with their mothers, although sons show a larger percentage increase from a lower starting point. This suggests that the adaptation to a parent's changing needs primarily occurs within relationships with mothers. This difference may stem from fathers' care needs being met by their spouses earlier in life, while widowed mothers often depend more heavily on their children for support.

2C STREAM: HEALTH / WELLBEING 2 SYMPOSIUM

Predictors and Outcomes of Motivation, Self-Esteem, and Learned Helplessness Across the Lifespan and Generations: Findings and Challenges of the Long-Term Study LifE3G

Chairs: Fred Berger, University of Innsbruck, and Wolfgang Lauterbach, University of Potsdam

The LifE3G study on life courses and intergenerational relationships is a longitudinal study that has been running for almost five decades including eight measurement points from adolescence to late adulthood. This design provides a rare empirical basis for investigating long-term stability and change in agency-related psychosocial characteristics, as well as their predictors, outcomes and intergenerational transmission.

The symposium brings together four papers, three of which examining motivation, self-esteem, and learned helplessness as interrelated facets of agency development across the life span. A fourth introductory contribution provides the conceptual and methodological framework of the study including challenges linked to repeated surveys over several decades. It shows LifE3G fieldwork strategies to address e.g. selective attrition and difficulties in participant contact.

The second contribution examines competence-, autonomy-, and connectedness-related predictors of motivational development in adolescence and their long-term stability in adulthood.

The third contribution investigates the impact of self-esteem development in adolescence on depressive symptoms, job satisfaction, relationship satisfaction, and self-esteem stability at three measurement points in adulthood.

The fourth paper examines the effects of intergenerational factors such as family educational resources and socioeconomic status, as well as peer- and school-related factors on learned helplessness in students aged 12 to 17.

TALK 1: Approaches to Solving Methodological Challenges Associated with Sustaining High Response Rates Using the Example of Life3g, the Longest-Running Prospective Longitudinal Study on Life Courses in the German Speaking World

Presenter: Susanne Gadinger, University of Innsbruck

Co-author: Jana Jung, University of Potsdam

The LifE3G-Study is the longest-running prospective longitudinal study on life courses and intergenerational relationships in the German-speaking world. Approximately 1,300 persons have participated in eight survey waves between 1979 and 2024. Furthermore, LifE3G is characterized by a multi-actor and multidomain design. Parents were surveyed during participants' adolescence and all children of the participants in 2025, allowing analyses of stability and change in key psychosocial resources across the life course as well as intergenerational transmission processes. The study covers multiple life domains, e.g. education and partnership.

Longitudinal studies face persistent challenges related to declining participation over time, increasing difficulties in participant contact, and selective attrition. They are also complicated by social change, such as competing time demands, stricter data protection regulations, and changing communication practices. Nevertheless, LifE3G has achieved exceptionally high response rates with 82–85% between 2002 and 2024. And participation among the respondents' children, who do not have a strong sense of connection with the study, reached 68%.

This contribution serves two purposes. First, it provides a concise description of the LifE3G study design, including its longitudinal structure, central research questions, and patterns of longitudinal participation, thereby establishing the empirical framework for the symposium contributions. Second, it discusses methodological challenges associated with sustaining high response rates in long-term longitudinal research and outlines fieldwork

strategies employed in LifE3G to address these challenges. By situating these experiences within the broader life-course research literature, the contribution aims to inform ongoing methodological discussions on participant retention and data quality in long-running panel studies.

TALK 2: Development and Stability of Achievement Motivation from Adolescence to Adulthood

Presenter: Lena Gleirscher, University of Innsbruck

Ongoing societal and labor market changes, including digitalization and increasingly flexible career trajectories, are changing education and development trajectories across the lifespan. In these contexts, motivation is a crucial resource, as it influences how individuals respond to changing performance and learning requirements. School-related achievement motivation is considered a key condition for participation in education, professional adaptability and long-term development.

Building on well-documented declines in intrinsic motivation and ability-related self-concepts during adolescence, it is examined how school-related achievement motivation develops, which social and motivational factors may counteract declines and the long-term stability of performance-related orientations into adulthood.

Theoretically, motivation is conceptualised as a relatively stable, socially embedded orientation emerging from the interaction of personal dispositions and situational demands. Self-determination theory explains the internalisation of performance requirements through the satisfaction of basic needs for autonomy, competence and relatedness, while Bandura's theory highlights the role of self-efficacy and control beliefs.

Empirically, longitudinal data from the LifE study is used, in which young people between the ages of 12 and 16 were surveyed annually starting in 1979 and again in early, middle and late adulthood. Developmental trajectories during adolescence are analysed using latent growth curve models, with contextual factors modelled as predictors of individual change. Long-term stability is examined by linking the surveys in adolescence and adulthood using autoregressive structural equation models. Initial results indicate a decline in motivation during adolescence, which is expected to be reduced through supportive family, teacher-student and peer relationships as well as strong self-efficacy and control beliefs. Overall, the findings should contribute to a better understanding of how achievement motivation develops and how early motivational and contextual conditions shape long-term trajectories.

TALK 3: Self-Esteem Development in Adolescence and its Effects on Adult Life Outcomes

Presenter: Nadine Kritzing, University of Innsbruck

Previous research shows that self-esteem increase across adolescence, although individuals differ in shape and direction of their development (Steiger et al., 2014). Physical changes during puberty, as well as transitions in education and peer relationships, can contribute to these individual differences (Robins et al., 2012). Evidence that changes in adolescent self-esteem predict depressive symptoms in young adulthood (Steiger et al., 2014) highlights the need for further research on self-esteem development as a predictor of diverse life outcomes. Beyond mental health, self-esteem is also linked to physical health, job satisfaction, and relationship satisfaction in adulthood (Orth et al., 2012).

This study examines how levels and changes in self-esteem between ages 12 and 16 are associated with depressive symptoms, job satisfaction, relationship satisfaction, and self-esteem stability in adulthood. Data come from the LifE3G-study, which followed approximately 2,000 adolescents annually between 1979 and 1983 and reassessed them in adulthood at ages 35, 45, and 57. Latent growth curve models are used to estimate the initial level and change in self-esteem during adolescence and to examine their associations with health, social, and work-related outcomes later in life, as well as with self-esteem stability across the three investigated adult measurement points.

First analyses show that self-esteem increases in adolescence and remains highly stable across the life course. It is expected that adolescent self-esteem development predicts not only depressive symptoms at age 35 but also a range of other important adult life outcomes. The findings may highlight the role of adolescent self-esteem development for later life and point to the potential value of early interventions to strengthen self-esteem.

TALK 4: Protective Factors Against Learned Helplessness in Students: A Multigenerational Analysis

Presenter: Sören Freisem, University of Potsdam

Embedded within the broader concept of agency, self-efficacy is a key resource for building resilience and overcoming adversity. By contrast, learned helplessness is a known risk factor for depression and, in school contexts, is associated with difficulties in solving assignments and lower academic performance. While agency is often treated as an internal self-conviction that enables individuals to overcome structural barriers, it has been shown to systematically vary with socioeconomic background. However, few studies have examined socioeconomic and educational effects across more than two generations.

Framing learned helplessness within the socioecological theory of human development, this study investigates intergenerational factors associated with school-related learned helplessness among 581 students aged 12 to 17 who participated in the LifE survey as children of the original respondents. The LifE survey allows a multigenerational approach, considering information on families across three generations. Learned helplessness is measured using a scale of school-related competency self-assessment. The properties of this scale are examined, resulting in the construction of a binary dependent variable that is analysed using hierarchical logistic regression models.

Preliminary results indicate that lower familial educational resources and socioeconomic status are associated with higher learned helplessness. However, supportive school environments can buffer these effects. The persistence of these associations across multiple generations highlights the extent to which agency-related beliefs are shaped by social circumstances.

Understanding how familial histories shape expectations of success and trust in one's own abilities, as well as the role schools play in mitigating adverse circumstances, can deepen our understanding of what is required in classrooms to foster fair learning environments. Such insights are essential for addressing social inequality and for fulfilling the meritocratic promise of equal educational opportunity.

2D STREAM: WORK

INDIVIDUAL WORK TRAJECTORIES PAPERS

TALK 1: Career Trajectories of Swiss Healthcare Professionals: Insights from Life History Calendar Data

Presenter: Leonard Roth, Unisanté

Co-authors: Andre Berchtold, University of Lausanne; Emilie Zuercher, Isabelle Peytremann-Bridevaux, Unisanté, University of Lausanne; Ingrid Gilles, Lausanne University Hospital; Matthias Studer, University of Geneva; Jonathan Jubin, Annie Oulevey-Bachmann, HES-SO University of Applied Sciences and Arts Western Switzerland

Objectives: Challenges such as staff shortages, low job satisfaction and burnout are widespread within the health workforce. These issues often result from processes that develop over the course of professional careers rather than isolated events. The Swiss Cohort of Healthcare Professionals and Informal Caregivers (SCOHPICA) was established to investigate career pathways, turnover intentions and well-being among healthcare professionals (HP) and informal caregivers. This study examines HPs' career trajectories in Switzerland and assesses how long-term career patterns are associated with intention to stay in the profession.

Methods: The analysis draws on information from over 1'500 HPs working across diverse professions and care settings who participated in SCOHPICA and completed an electronic Life History Calendar (LHC) in 2024-2025. The LHC, designed for this population, captures retrospective life-course information across five domains: employment, education, place of residence, personal relationships and health. These data are linked to the SCOHPICA annual cohort survey, which collects organizational, psychosocial, and sociodemographic variables relevant to intention to stay and well-being. Sequence Analysis is used to examine career patterns over time.

Results: Multi-domain life-course sequences reveal distinct patterns of healthcare careers across professions, career stages, and gender. A typology of trajectories emerges, reflecting heterogeneous career pathways within the health workforce. Differences in intention to stay across trajectory profiles indicate that long-term career dynamics such as patterns of stability and change are related to later retention.

Conclusion: Integrating retrospective life-course information with cohort survey data advances understanding of HP's career trajectories and provides a longitudinal perspective on workforce retention that supplements cross-sectional approaches. Practical implications: By identifying career patterns associated with lower intention to stay, this study provides evidence to support health workforce monitoring and the development of targeted retention strategies, informing organizational practices and policy interventions aimed at sustaining a stable and resilient health workforce in Switzerland and beyond.

TALK 2: Pathways to Labour Market Exit in Belgium and the Link with Employment History

Presenter: Daniela Skugor, University of Antwerp

Population ageing is driving the need for longer working lives. Yet, when and how we exit the labour market differs greatly across socioeconomic groups. Diverse employment histories shape individuals' opportunities and constraints to remaining economically active in later life, leading to divergent patterns of labour market exit. This study examines the pathways through which Belgian individuals aged 65 and over, exit the labour market, and analyses the relationship between these exit pathways and prior employment histories.

Using retrospective data from the Survey of Health, Ageing and Retirement in Europe (SHARE), the study applies sequence analysis and cluster analysis to derive a typology of labour market exit pathways among 2,408 Belgian respondents age 65 and over in Wave 9 (2021/22). Then, the study applies multinomial logistic regression to estimate to what extent the types of exit pathways are associated with various characteristics of the respondents' employment histories.

The preliminary findings reveal substantial heterogeneity in exit patterns. Five types of pathways to labour market exit between age 50 and 65 were found, which can be labelled as follows: (1) on-time retirement or 'later' early retirement, (2) early retirement around age 60, (3) social security exit, (4) mostly inactive throughout, and (5) part-time work throughout. The findings show that the prior career leaves a lasting mark, as labour market patterns before age 50 largely appear to persist in the final years of the career. Furthermore, differences by industry and by gender are found. The study underscores the importance of adopting a life course perspective to understand the processes that shape labour market exit and the socioeconomic inequalities embedded within exit pathways.

TALK 3: Lone Mothers' Welfare Exits Via Employment: The Role of Stepping-Stone Jobs

Presenter: Cordula Zabel, Institute for Employment Research - IAB

Co-authors: Zein Kasrin, Institute for Employment Research - IAB; Michaela Kreyenfeld, Hertie School

In Germany, lone mothers' economic situation is more difficult than for other family types, reflected in high dependency rates on basic income support. While their employment rates are high, earnings are often low, resulting in benefit dependency even when employed. Against this background, this paper adopts a longer-term perspective on lone mothers' benefit and employment trajectories by studying the impact of stepping-stone jobs. We ask whether taking up a first job while remaining on benefits facilitates benefit exit in the long term. In this context, we also look into the role of further factors such as child support payments and job-center counseling for lone mothers' employment entry and benefit exit rates. From a policy perspective, results can indicate the relevance of a longer-term approach for policies for lone parents. Our analyses are based on large-scale administrative data, to which we employ a timing-of-events approach. First findings indicate strong immediate positive effects and also substantial long-term effects of taking up a first job on exiting benefit receipt even over four years later. Moreover, the quality of employment is important. Socially insured part-time and full-time jobs have substantially stronger effects on exiting benefits in the short and long term than do uninsured mini jobs. While finding a job with sufficient earnings right away is ideal, this may not always be possible, for instance when working part-time due to childcare responsibilities.

Our findings show that in such cases, a first job nonetheless enhances opportunities for benefit exit in the long-term. Thus, while lone parents may require longer-term economic support, their employment situation is dynamic and benefit dependency is not indefinite.

TALK 4: Uncertain Times, Uncertain Transitions? Between Career Aspirations and Reality

Presenter: Stefan Hofherr, German Youth Institute - DJI

Schools play a key role in providing career guidance for students. Career guidance is a long-term, two-sided process in which adolescents develop their own interests, skills, and preferences while also orienting themselves toward labor market demands. This article addresses three questions:

- Do students develop concrete career aspirations during school?
- Can they begin to realize these aspirations after leaving school?
- Differs subjective career satisfaction between graduates who realize their aspirations from graduates with alternative School-to-Work Transitions (SWT)?

The study is grounded in happenstance theory (Krumboltz 2009), which assumes that career aspirations and interests change over time due to planned and unplanned events. Success in SWT is therefore assessed through subjective satisfaction rather than objective outcomes like income. Data source is the German Youth Institute's survey Growing Up in Germany: Everyday Worlds (Kuger u.a. 2024). The present subsample comprises n=596 students from the 2019 survey year who left school for the first time by the subsequent survey years 2021 or 2023. For these school leavers, monthly data on their further educational and employment trajectories are available. 51% (n=307) had as students in 2019 already a specific career aspiration (most often in the occupational field of health, social services and education (n=112)). In the first years after leaving school, 35% (n=106) of young people begin to realize their aspiration by starting vocational education or training (VET) or studying in their desired occupational field. Linear random-effects panel regressions show that career satisfaction is higher for graduates who are currently in VET or studies in their desired occupational field than in alternative fields, but also for graduates who feel little time pressure to advance their career quickly and attach great importance in taking responsibility for themselves and others. Results show that not only realizing aspirations but also interests and preferences matter for career satisfaction.

2E STREAM: EDUCATION

INDIVIDUAL EDUCATION & HEALTH PAPERS

TALK 1: Educational Attainment and Multiple Dimensions of Cognitive Health Among Older Adults: Do Associations Differ Across European Nations and Regions?

Presenter: Deborah Carr, Boston University

Co-authors: Alina Schmitz, TU Dortmund University; Leping Wang, Vanderbilt University

Cognitive functioning is a core component of older adults' health and well-being. Understanding social and structural influences on older adults' cognitive functioning and impairment is of critical importance, against the backdrop of rapid population worldwide and the costs imposed by dementia and dementia caregiving. Educational attainment is a well-established predictor of cognitive health, although its protective effects may differ across cognitive domains and sociocultural contexts. Using data from 27 countries from wave 9 of the Survey of Health, Ageing and Retirement in Europe (SHARE), this study documents cross-national variation in the education-cognition relationship among individuals ages 50 and older (n=64,858) across three domains: verbal recall, numeracy, and self-reported memory. OLS regression models were estimated separately for each nation, and sociodemographic and health covariates were adjusted.

Supplemental moderation analyses identified significantly different educational effects across geographic contexts. Episodic memory and numeracy scores are consistently highest in nations with greater proportions of college graduates (e.g., Scandinavia and Western Europe). Self-rated memory varies modestly across regions, with poorer assessment in the Baltic nations. Education was a strong correlate of cognitive health in nearly all European

nations, with consistent effects for episodic memory and numeracy. Self-rated memory had less consistent associations with education, reflecting the subjective nature of these appraisals. Higher education (tertiary or higher) offered little cognitive advantage beyond medium education (upper secondary or vocational) in several Eastern and Southern European nations, suggesting a threshold effect in relatively lower-income European nations.

Public investments in expanding secondary and higher education could enhance objective dimensions of cognitive health among older adults decades later. However, broader health and economic investments also are needed, as education alone accounted for only modest levels (2 to 17%) of variance in cognitive health across nations.

TALK 2: The Long-Term Effects of Expanding Access to Secondary Education on Biological Ageing

Presenter: Stergiani Tsoli, London School of Economics and Political Science

Co-authors: Siobhan Scarlett, Rose Anne Kenny, Cathal McCrory, Trinity College Dublin; Pavithra Manoj, Emilie Courtin, London School of Economics and Political Science

We examine the causal impact of expanding access to secondary education on biological ageing in Ireland. Using data from the Irish Longitudinal Study of Ageing (TILDA), we exploit the exogenous variation in access to secondary education induced by the 1967 “Free Education Scheme” that eliminated fees for secondary education. Using a fuzzy Regression Discontinuity Design (RDD), we assess the impact of the reform on four validated measures of biological ageing: Biological Risk Score (BRS), Klemere-Doubal Method (KDM), PhenoAge and Homeostatic Dysregulation (HD). We find that the reform increased average years of schooling only among participants from disadvantaged families.

While eligibility for the reform had no effect on participants’ biological ageing profiles overall, sex-specific analysis suggests a less favourable impact on men and no effect among women. There is some evidence that eligibility to the reform is linked to increases in cystatin C and Resting Heart Rate among participants from advantaged families. Taken together, these results indicate that the reform did not translate into improvements in the overall biological ageing even decades after its implementation.

TALK 3: Adolescent Educational Context and Biological Risk Factors of Alzheimer’s Disease and Other Related Dementias (ADRD) Among Early Midlife Americans

Presenter: Taylor Hargrove, University of Maryland, College Park

Co-authors: Heming Pei, Chantel Martin, University of North Carolina at Chapel Hill

Background: Educational attainment strongly predicts later life cognition and mediates Black-White disparities in ADRD, yet little is known about the types of environments that shape the quality of education and educational attainment. Historical and contemporary processes of structural racism may differentiate the educational contexts of Black and White students, creating unequal educational pathways to ADRD risk. We examine the relationship between adolescent educational contexts and biological risk factors for ADRD among Black and White early midlife adults.

Methods: Using Waves I (1994-95) and V (2016-18) of the National Longitudinal Study of Adolescent to Adult Health, we developed two indices of adolescent educational context: 1) a contextual disadvantage index (CDI), reflecting differences in resources/opportunities between schools, and 2) a structural racism index (SRI), capturing Black-White inequities across resources/opportunities within schools. Indicators spanned student background characteristics, school characteristics, academic performance, academic selectivity, school connectedness, and perceived life chances. Outcomes (Wave V) included three epigenetic clocks (PhenoAge, GrimAge2, DunedinPACE) and 4 inflammatory markers (C-reactive protein (CRP); IL-6; IL-10; tumor necrosis factor-alpha (TNF-a)). Multivariate regression models assessed associations between each index and the outcomes, plus their interaction.

Results: Attending schools with more disadvantages (e.g., higher CDI) was associated with faster epigenetic aging and higher IL-6 among Black and White respondents, and higher CRP and TNF-a among White respondents. Attending schools with greater Black-White inequities (e.g., higher SRI) was linked to decelerated epigenetic aging and lower CRP. Significant CDIxSRI interactions indicated faster epigenetic aging among those who attended contextually disadvantaged schools with lower Black-White inequities.

Discussion: Adolescent educational context predicted several biological risk factors for ADRD for both Black and White respondents. Interventions that reduce unequal early life contexts may help mitigate the progression of ADRD. Future work should assess how educational contexts and individual educational attainment jointly shape pathways to ADRD.

TALK 4: Family and School Social Capital and Bullying in South Korea

Presenter: Jonathan Jarvis, Brigham Young University

Co-authors: Esther Bae, Mikaela J. Dufur, Brigham Young University; Shana Pribesh, Old Dominion University

In South Korea, where intense academic competition and highly structured family and school environments shape students' daily lives, bullying remains a significant social and public health concern for school-aged children. Despite growing public attention, and government preventative efforts, reports of bullying victimization and perpetration persist. Research on bullying victims suggests that bullying can take various forms and affect adolescent mental health, academic adjustment, and well-being. Less is known about the students engaging in acts of bullying. Social capital theory has been applied to a variety of adolescent outcomes. Previous research finds that both family and school social capital can help adolescents in a variety of ways. These forms of social capital are associated with positive outcomes, such as greater academic achievement, while also reducing delinquency and behavior problems. Research on social capital in East-Asian countries like Japan and South Korea, similarly suggests that social capital can act as a protective factor for students in these contexts, helping to insulate them from both the negative aspects of the school life, such as academic stress, and acting out in ways that affect other students, such as external behavioral problems. Interestingly, this past research also suggests that the effects of school social capital, may work differently in more intense and structured educational environments than it does in high-income western nations. To expand the scope of this research, we use the Korean Children and Youth Panel Survey (2018) to examine how family and school social capital affects adolescent participation in various forms of bullying in South Korea. Examining social capital in non-Western settings allows for unique insights into how social capital works under varying conditions, helping to consider the generalizability of past research that has predominantly focused on Western settings.

2F STREAM: YOUTH / FAMILY

INDIVIDUAL PARENTHOOD PAPERS

TALK 1: Do Children of Birds of a Feather Thrive Better? Effects of Parental Value Congruence on Children's Well-being

Presenter: Markus Vogelbacher, Leibniz Institute for Educational Trajectories

Co-author: Elena Wittmann, Leibniz Institute for Educational Trajectories

Value congruence—the similarity between individual and group values—is known to enhance individual wellbeing and smooth interpersonal relations. While research has found evidence that value similarity in romantic couples can increase marital satisfaction (Laikas et al., 2018; From et al., 2025), it remains unclear if this positive effect "spills over" to benefit children. This study investigates whether parental congruence in universal human values (Schwartz, 1992) relates to children's subjective well-being and its developmental trajectory between ages 9 and 11. Using longitudinal data from Starting Cohort 1 of the German National Educational Panel Study (NEPS), we analysed 577 parent-parent-child triads with complete from three waves (2021–2023). Parents' values were measured with the Portrait Values Questionnaire (PVQ; Schwartz et al., 2001) and children's life satisfaction with an age-appropriate self-report. We employed Polynomial Regression and Response Surface Analysis (RSA; Shanock et al., 2010) to model the joint (in)congruence effects of both parents' value scores on children's well-being, controlling for household income, parental education, migration background, and religiosity.

Cross-sectional results at 10 years of age showed that parental congruence in achievement values was positively associated with children's life satisfaction. In contrast, for self-direction, conformity, and security, greater parental incongruence — rather than congruence — was associated with higher child wellbeing. Longitudinally, parental

similarity in the low endorsement of security values predicted a more positive trajectory of children's life satisfaction from age 9 to 11.

These findings suggest that while value similarity can support couple functioning, its implications for child development depend on the value domain, suggesting that value diversity within the household may sometimes be more functional for children than strict consensus. Future analyses will test mediating pathways (e.g., parents' satisfaction with family life, parental conflict, and parenting quality) to clarify these intergenerational spillover mechanisms.

TALK 2: Barriers to Involved Fathering in Early Parenthood: Evidence from Hungarian Birth Cohort Data

Presenter: Zsuzsanna Veroszta, Hungarian Demographic Research Institute

Co-author: Zsuzsanna Makay, Hungarian Demographic Research Institute

Background: Fathers' involvement in early childcare is recognised as beneficial for children's development and family wellbeing. The transition to fatherhood, however, often represents a critical life course turning point characterised by competing expectations related to caregiving and breadwinning. In Hungary, this transition takes place in a context of economic pressures, long working hours, and relatively traditional gender norms. This study examines barriers to involved fathering in early childhood, focusing on how fathers' workload and gender role attitudes shape patterns of paternal involvement.

Data and methods: The analysis draws on data from the third wave of the Cohort '18 – Growing Up in Hungary Study, following children born in 2018 from pregnancy onwards. The father survey module was administered when children were 18 months old (N = 1,783), with fathers' responses linked to those of their partners. Paternal involvement is measured by the number of childcare tasks shared with the mother, distinguishing between weekdays and weekends. Key explanatory factors include fathers' work–family conflict, weekly working hours, and parental role attitudes, alongside socioeconomic controls.

Results: Fathers' involvement in childcare is substantially higher on weekends than on weekdays. High levels of work–family conflict and long working hours are consistently associated with lower paternal involvement at both time points. Temporal patterns emerge: while the absolute reduction in shared tasks associated with work–family conflict is slightly larger on weekends, its proportional impact is stronger on weekdays, when baseline involvement is lower.

Conclusions: The findings suggest that early fathering is shaped by the interaction of individual orientations and structural constraints. Persistent work-related pressures limit fathers' capacity for involvement in everyday caregiving, especially during the working week. Egalitarian attitudes toward fatherhood are linked to greater paternal engagement on weekdays, suggesting that attitudinal resources are most consequential where time constraints are most binding.

TALK 3: Do Established Predictors of Parental Stress and Family Climate Generalize Across Family Constellations? Evidence from Germany

Presenter: Claudia Recksiedler, German Youth Institute

Co-author: Diana Schacht, University of Applied Sciences Munich

A substantial body of research identified key predictors of parental stress and family climate, including socioeconomic disadvantage, child characteristics, and social support. However, much of this empirical evidence is derived from two-parent families, implicitly assuming that mechanisms identified in this dominant constellation generalize to other family constellations. Given the increasing diversification of families (e.g., a growing and increasingly diverse share of postseparation families), this assumption warrants empirical scrutiny. This study examines whether established predictors of parental stress and family climate operate similarly across single-parent families, two-parent families, and stepfamilies. We draw on three waves of the German panel study Growing up in Germany (Waves 2019, 2021, 2023), analyzing a population-based sample of N = 10,749 parents, including 1,089 single parents (10.1%), 8,855 two-parent families (82.4%), and 805 stepfamilies (7.5%). Parental stress is measured using a validated short scale, and family climate captures the relationship quality and emotional

cohesion within the household. Descriptive results reveal systematic differences across family constellations. Single parents report higher mean levels of parental stress ($M = 2.29$) than parents in two-parent families ($M = 2.16$) and stepfamilies ($M = 2.14$). Family climate is also less favorable among single parents ($M = 5.55$) compared to two-parent families ($M = 5.64$) and stepfamilies ($M = 5.59$). To assess whether established predictors operate similarly across family forms, we estimate multivariate random-effect panel models and formally test interaction effects between family constellation and key predictors (e.g., income, education, number and age of children). Across both outcomes, we find no statistically significant differences in predictor effects between family constellations. By explicitly comparing explanatory structures across diverse family constellations, the findings indicate that widely established predictors of parental stress and family climate operate similarly across family constellations, providing empirical support for constellation-independent mechanisms in contemporary research on parental stress and family climate.

TALK 4: Assessing the Impact of Australia's ParentsNext Program on Parental Economic Engagement and Child Development Outcomes

Presenter: Guyonne Kalb, University of Melbourne

Co-authors: Esperanza Vera-Toscano, Consejo Superior de Investigaciones Científicas; Mary-Alice Doyle, NESTA

This paper evaluates the 2016–2017 ParentsNext pilot program, an Australian government initiative which targeted parents with a child under six years old who receive Parenting Payments and which aimed to develop the parents' skills to support workforce reengagement. The analysis uses linked administrative data on welfare histories, employment and income, supplemented with tax records and child development measures at school-entry. Program impacts are identified using the staged geographic rollout in a difference-in-differences design, with robustness assessed via a triple-differences specification that accounts for time-constant differences between treatment and control groups.

The results show that ParentsNext substantially increases educational upgrading and that these findings are robust to alternative specifications. By contrast, there is little evidence of short-run improvements in sustained employment or earnings. Estimated impacts on employment are generally close to zero, and for tax-based income measures, they are modest and imprecise. In the welfare domain, modest reductions in reliance on Parenting Payment are observed, but there is no reduction in reliance on income support overall, indicating people moved to other payments. Finally, the child-outcome analysis provides no evidence of improved school-entry development measures for young children; estimates across Australian Early Development Census (AEDC) domains are generally negative and should be interpreted cautiously given outcomes are observed only once at school entry.

Overall, the findings suggest ParentsNext was effective at increasing structured engagement in education and training, but that these changes did not translate into detectable short-run gains in employment or earnings over the follow-up period, and they highlight the importance of monitoring broader family impacts alongside participant outcomes.

2G STREAM: HEALTH / WELLBEING 3

INDIVIDUAL AGEING 1

PAPERS

TALK 1: Marital Status, Epigenetic Aging, and Health in an East Asian Context: Evidence from Taiwan Biobank

Presenter: Meng-Jung Lin, National Taiwan University

Marital status and transitions are associated with the accumulation of health advantages and disadvantages over the life course. While recent work highlights epigenetic clocks as indicators of cumulative physiological wear, evidence relies heavily on Western populations. Building on biological embedding perspectives that emphasize how lived conditions shape physiological profiles, this study extends beyond Western contexts to examine how marital status, epigenetic aging, and health intersect in an East Asian setting. Using data from the Taiwan Biobank with repeated questionnaire measures and a DNA methylation subsample, we analyze $N = 1,406$ adults and evaluate main associations and moderation patterns by recorded sex. Results indicate three key findings. First, baseline

marital status and socioeconomic position show modest associations with epigenetic aging, with baseline widowhood linked to lower values on selected clocks relative to married respondents. Second, social gradients strongly predict subsequent health, with widowhood and socioeconomic disadvantage consistently associated with higher depressive symptoms at follow up, while women have higher odds of reporting pain symptoms. Third, epigenetic aging moderates the association between marital status change and later health in gendered ways. Among women, the mental health benefit associated with union formation is more pronounced at higher levels of epigenetic aging. Among men, higher epigenetic age is linked to less favorable correlates of marital change, with the depressive symptom advantage associated with union formation becoming smaller at higher levels of epigenetic aging, and higher odds of pain following union dissolution. This study contributes to the field by extending epigenetic aging research to an East Asian cohort and showing how gendered marriage dynamics help clarify when biological aging shapes vulnerability to, or protection from, the health consequences of life course transitions.

TALK 2: Listening to Longevity in Critical Times: Older Women's Life Stories as Sites of Structure, Change, and Learning Across the Life Course

Presenter: Francesca Romana Loberto, University of Milano Bicocca

In the current critical context, characterized by demographic aging, territorial inequalities, and the reconfiguration of welfare and care systems, old age emerges as a crucial area where long-term structural conditions and individual agency intersect. This article explores how the life stories of older women illuminate the dynamic relationship between structure and change throughout the life course, with particular attention to learning, health, and perspectives on longevity.

Based on a qualitative study conducted within the Italian AGE-IT program, the research is based on in-depth biographical interviews with older women residing in rural and mountainous areas. The analysis is guided by the Listening Guide (Gilligan), a voice-centered method that allows for multi-level readings of narratives, and is informed by complexity theory (Bateson) and narrative-ecological perspectives on learning in later life. Rather than treating aging as a terminal phase or a simple consequence of pre-existing conditions, the article conceptualizes old age as a relational and emergent process, shaped by cumulative structures (gendered work trajectories, care responsibilities, welfare systems, territorial marginality) and continuous micro-transformations in daily practices.

The results show how moments of crisis – health changes, retirement, widowhood, digitalization, and reduction of services – are narrated not only as losses, but also as thresholds that activate processes of learning, unlearning, and reorientation. The women's voices reveal often subtle and contextualized forms of agency: reorganization of daily rhythms, negotiation of care, redefinition of autonomy, and recalibration of expectations for the future. These processes challenge functionalist and linear models of aging and underline how learning continues to operate as an adaptive and meaning-making process throughout the entire life course. From a methodological perspective, the article argues that qualitative approaches centered on individual voices can complement longitudinal and cohort studies, making visible how structural forces are experienced, interpreted, and transformed over time. In this way, it contributes to life course research, placing old age at the center of attention as a critical, formative, and epistemologically rich phase, rather than as a residual category.

TALK 3: Socioeconomic Position and the Onset of Multimorbidity: A Comparative Longitudinal Analysis of Ageing Cohorts in the UK, South Korea, and China

Presenter: Min Kyung Shin, University College London

Co-authors: Hynek Pikhart, Baowen Xue, University College London

Background: Despite the global rise in multimorbidity, evidence on the longitudinal association between socioeconomic position (SEP) and the onset of multimorbidity remains limited, particularly regarding cross-national comparisons. This study investigates the impact of SEP, measured by education, household income, and occupation, on the incidence of multimorbidity among older (50+) adults in the high income countries (United Kingdom, South Korea), and the upper-middle income country (China).

Methods: Longitudinal data from English Longitudinal Study of Ageing ELSA (UK; N=4,148), Korean Longitudinal Study of Ageing KLoSA (South Korea; N=5,748), and China Health and Retirement Longitudinal Study CHARLS (China; N=6,405) were harmonised. Participants aged ≥ 50 with < 2 chronic conditions at baseline were followed for up to 16 years. Cox proportional hazards models estimated hazard ratios (HRs) for incident multimorbidity (≥ 2 conditions), adjusting for age, sex, BMI, and residence. Multiple imputation addressed missing covariates.

Results: SEP-health associations varied by country. In the UK (ELSA), household income was the primary predictor (Highest vs Lowest quartile: HR=0.53). In China (CHARLS), rural residence (HR=1.14) and low education predicted earlier onset, while income effects were inconsistent. In South Korea (KLoSA), current employment was a significant risk factor (HR=0.89); education and income associations attenuated after adjusting for economic activity. Older age and higher BMI were consistent risk factors across all cohorts.

Conclusion: Socioeconomic disadvantage accelerates multimorbidity onset, but the SEP dimensions are context-specific. Prevention strategies must prioritise different levers, income support in the UK, structural infrastructure in China, and employment stability in South Korea, to mitigate late-life health inequalities.

TALK 4: Early Life, Lasting Impact? Early Life Roots of Biological Aging and Lifelong Health – The Next Phase of the Zurich Longitudinal Studies

Presenter: Nadine Jait, University of Zurich

Co-authors: Céline Zeller, Jessica Fervença Ramos, Oskar Jenni, Flavia Wehrle, University Children's Hospital Zurich

Objective: Developmental scientists are increasingly calling for a shift in aging research toward the early decades of life and for the adoption of a lifespan perspective on health and aging. However, long-term longitudinal studies remain rare, limiting insights into these processes. Therefore, this research project aims to extend the Zurich Longitudinal Studies (ZLS) by conducting a second assessment wave in adulthood to investigate long-term developmental trajectories from birth to late adulthood.

Sample: The ZLS consist of three cohorts born two decades apart: ZLS-1 included 409 healthy infants born between 1954-1961, ZLS-2 enrolled 258 preterm and term-born infants born between 1974-1979, and ZLS-3 comprised 295 children of ZLS-1 participants born between 1973-2002. All cohorts were recruited at birth and assessed up to 19 times from infancy through young adulthood. To establish a lifespan dataset, a first adult assessment wave was conducted between 2019 and 2021 of ZLS-1 (n = 202, age range 58 to 67 years) and ZLS-2 (n = 106, age range 40 to 47 years). The second assessment wave in adulthood, initiated 7 years later in 2026, aims to re-recruit 80% of the first-wave participants: ZLS-1: n = 162, age range 64 to 71 years; ZLS-2: n = 85, age range 46 to 51 years. The first adult assessment wave of ZLS-3 began in 2025 and is currently ongoing (age range 23 to 55 years).

Measures: A comprehensive test battery will be used to ensure longitudinal comparability across developmental phases. These assessments cover physical, motor, cognitive, psychological and social domains of health and development (e.g., hand X-ray, blood sample, Zurich Neuromotor Assessment-2, WAIS-IV, Ryff Scale). For the first time, brain MRI will be included to assess structural and functional properties of the brain during the second wave.

Research Focus: With this project, we aim to understand how early childhood factors are linked to health, wellbeing, and biological ageing later in life.

3A STREAM: MIGRATION SYMPOSIUM

Refugee Health: Insights from the SLLS Refugee Across the Life Course Interest Group

Chair: Andreas Ette, Federal Institute for Population Research – BIB

This symposium, convened by the Refugees across the Life Course interest group, brings together three papers that illuminate how health and well-being evolve during forced migration and resettlement. Together, the contributions connect micro-level trajectories (within-person change), meso-level contexts (regional opportunity structures), and the limits of existing public-health evidence bases for refugees.

Ette and colleagues use six-wave longitudinal panel data (2022–2025) on Ukrainian refugees in Germany to test whether return migration functions as a turning point for life satisfaction and self-rated health. By contrasting returnees with those who remain in Germany, the study foregrounds heterogeneity in trajectories and the role of “linked lives,” especially household reunification and proximity to partners/children, alongside anticipatory dynamics prior to return.

Dietrich examines happiness among refugees in Germany (SOEP refugee samples, 2016–2019), focusing on the joint contributions of health, perceived discrimination, regional conditions, and country of origin. Combining cross-sectional and fixed-effects analyses, it highlights improvement over time in core life domains while showing that origin-based differences persist even after extensive controls—pointing to unresolved explanatory gaps.

Buholzer-Merciera evaluates how well existing reviews on migrant cancer screening uptake actually speak to refugees. Despite frequent mention of refugees, refugee-specific results are rare, with limited quantitative evidence and scant attention to life-course, family roles, and longitudinal dynamics.

Overall, the symposium advances a life-course perspective on refugee health by identifying when and why trajectories diverge, and by specifying priority gaps for future longitudinal, refugee-specific research.

TALK 1: Return as a Turning Point? Life Satisfaction and Health Trajectories Among Ukrainian Refugees

Presenter: Andreas Ette, Federal Institute for Population Research - BIB

Co-authors: Andreas Genoni, Heiko Rüger, Nico Stawarz, Federal Institute for Population Research (BIB)

The mass displacement of Ukrainians following the Russian invasion in 2022 has generated highly dynamic migration trajectories, including prolonged residence in Germany and selective return to Ukraine. While previous research documents low levels of life satisfaction and impaired health among refugees shortly after arrival, less is known about how these outcomes develop over time and whether return constitutes a turning point in individual well-being. This study examines trajectories of life satisfaction and self-rated health among Ukrainian refugees, comparing dynamics before and after return with those of refugees who remain in Germany. The analysis draws on six-wave longitudinal panel data from the BiB/FReDA study collected between 2022 and 2025 covering 5,292 individuals and 927 return migration events. As methodological approach, fixed-effects panel regression models are employed to identify within-person changes but also explicitly addressing heterogeneity in wellbeing dynamics. It is expected that among refugees who remain in Germany, life satisfaction and health improve when settlement conditions stabilize, but follow divergent trajectories under persistent uncertainty. Return migration to Ukraine, however, is anticipated to be associated with heterogeneous changes rather than uniform effects. In particular, improvements in life satisfaction are more likely when return coincides with household reunification or proximity to close family members, such as partners or children who remained in Ukraine during displacement. Health trajectories are expected to be especially sensitive to these household configurations, reflecting both caregiving demands and stress related to family obligations. Furthermore, trajectories of returnees are assumed to diverge

from those of stayers even prior to return, reflecting anticipatory dynamics and selective mobility. Overall, the study provides novel evidence on how family-linked lives shape well-being trajectories during and after forced migration.

TALK 2: Health, Discrimination, and Other Confounder: Differences in Refugees' Happiness by Country of Origin

Presenter: Hans Dietrich, Institute for Employment Research - IAB

Still, little is known regarding the happiness of refugees in western societies in general and in Germany in specific. However, the scant literature indicates heterogeneity within refugee groups within receiving societies. This paper explores the association of refugee's wellbeing (here happiness) and individual characteristics including health and subjective experience of discrimination, but also regional characteristics and country of origin. Besides cross-sectional analyses fixed effects models explore the dynamic of happiness covering four years of observation (2016-2019) starting closely after arriving in Germany in 2015 or 2016.

In contrast to labor migrants, refugees have to manage a broad set of challenges: Receiving a safe refugee status, recovering health, learning language, organizing family reunion, solving housing problems, getting a job and earnings are multi-fold challenges and maybe competing goals. Given that multidimensional goals neither classical outcome-measures like status or income are able to address both group heterogeneity and goal heterogeneity, whilst the concept of happiness as a universal measure of utility is able to integrated these diverse aspects.

Lindenberg (1996) and Ormel, Lindenberg, Steverink & Verbrugge (1999) introduced the social production function, based on a Cobb-Douglas production function (Ormel et al. 1999:72), where lower- level means of production activities and endowments, as second order means of production, contribute to first order instrumental goals, here subjective wellbeing or happiness (Lindenberg 1996:175ff; Ormel et a. 1999: 73ff.).

Data are derived from the German Socio-Economic Panel V36 (IAB-BAMF-SOEP Surveys of refugees) for the period 2016-2019. Individual level data, amounting to 5,742 individuals with 13,339 observations, enriched by NUTS2-mesodata from various sources.

First results indicate variations in happiness between country groups under control of individual variation but also improvements of happiness based on individuals' developments in core life domains over time and regional variation. However, country differences in happiness still remain unexplained.

TALK 3: Assessing the Evidence on Refugees in Research on Migrant Cancer Screening Uptake

Presenter: Fabienne Buholzer-Mercier, University of Fribourg

Co-authors: Sarah Derveeuw, Ghent University; Bernadette Van der Linden, Stéphane Cullati, University of Fribourg; Vladimir Jolidon, Sorana Toma, Harvard T.H. Chan School of Public Health

Background: Access to prevention and early detection strategies varies between majority and migrant populations. Research on migrant groups is growing, including reviews on cancer screening uptake and associated factors. However, migrants are a heterogeneous group whose experiences vary substantially according to their legal status upon arrival in the host country. Refugees represent a particularly vulnerable subgroup, experiencing barriers to healthcare access that evolve across their resettlement trajectory. We evaluate the level of evidence available in existing reviews regarding cancer screening uptake and associated factors specifically for refugees.

Methods: This study is a secondary analysis of an existing umbrella review of cancer screening uptake and associated factors in migrant populations. For the present analysis, we synthesised the evidence concerning refugees specifically.

Results: Twenty-one reviews were included, representing 439 primary studies. Notably, 14 reviews mentioned refugees in their titles yet provided no refugee-specific results. Only one review reported screening (colorectal cancer) uptake among refugees, based on 10 primary studies: 38.5% among Somali refugees in the US. Among Cambodian, Somali and Vietnamese refugees, screening uptake increased significantly with duration of US residence: 39% higher odds of colonoscopy/sigmoidoscopy for every five years (OR 1.39, 95% CI 1.21-1.61) and 7%

higher odds of FOBT annually (OR 1.07, 95% CI 1.01-1.13). One primary study within a review addressed refugees in camps, identifying language barriers and navigating complex health systems as key obstacles. Another review acknowledged the special needs and restricted entitlements of refugees but excluded relevant studies due to unmet inclusion criteria. Across the included reviews, key barriers commonly identified included low socioeconomic status, language difficulties, cultural beliefs, limited cancer knowledge, and healthcare system complexity.

Conclusion: The lack of refugee-specific evidence reveals major research gaps, particularly the absence of age-stratified data and analyses of family roles specific to refugees, and underscores the need for longitudinal data.

Discussant: Ben Edwards, Australian National University

3B STREAM: HEALTH / WELLBEING 1 SYMPOSIUM

EQUALISE - ESRC Centre for Lifecourse Health Equity: Learning & Care Across the Lifecourse

Chair: Anne McMunn, University College London

Care and learning go hand in hand throughout the lifecourse in complex ways. High quality formal, informal and home-based early learning environments are all known to be crucial in supporting growth and development but unequal access to these environments has changed over time, often for the worse. Access to affordable, quality childcare can counteract the persistent motherhood penalty experienced by women in the UK and elsewhere but may exacerbate other inequities if not available to all. And sometimes children themselves become the carers rather than the cared for, due to the growing number of adults with mental and physical health conditions, with potential consequences for the learning and employment trajectories of these young carers. Equalise: ESRC Centre for Lifecourse Health Equity was established in 2025 to use interdisciplinary, cross-sectoral approaches to identify evidence-based solutions to the persistent problem of intersectional health inequity in the UK, across the lifecourse themes of 'learning', 'work', 'care' and 'place'. This symposium will present initial Equalise research at the intersection of our Learning and Care themes with contributions focused on the impact of being a young carer on education and employment outcomes, the impact of the home learning environment in the early years on inequalities in youth mental health as well as using quasi-experimental methods to assess the impact on parental health and divisions of labour of extending childcare subsidies in the UK.

TALK 1: Potential to Mitigate Inequalities in Child/Adolescent Mental Health: The Role of the Home Learning Environment

Presenter: Yvonne Kelly, University College London

Co-authors: Andy Ross, Katie Harron, Peter Martin, University College London; Rebecca Lacey, City St. George's University of London

The home learning environment is a major area for policy development as it influences educational attainment, and consequently life chances. Additionally, the promotion of adolescent wellbeing and prevention of mental ill health is a critically important focus for public policy. Stark socioeconomic inequalities in early child development are evident. Most prior research has focused on the role of the home learning environment in supporting school readiness and educational attainments, as well as mitigating inequalities in these throughout childhood and adolescence. Far less attention has been paid to the potential for the home learning environment to mitigate socioeconomic inequalities in child and adolescent mental health. Key aspects of the home learning environment include parental mental health, parental numeracy and literacy skills, and reading to children in the early years. We investigate the extent to which socioeconomic inequalities in child socioemotional difficulties and adolescent mental health could be reduced in a range of policy scenarios such as universal proportionalism, and/or interventions targeted at particular sub-groups, e.g. families living in poverty. Data from the Millennium Cohort Study, a nationally representative UK cohort of 9-month-olds followed from infancy into adolescence are used. We examine socioemotional difficulties assessed (using the Strengths and Difficulties Questionnaire) at ages 5 and 11, and depressive symptoms measured (using the Kessler-6) at age 17. Socioeconomic circumstances will be

assessed using a measure of household income. Measures of parent's mental health, their literacy/numeracy skills and reading to their children are from infancy and at age 3 years. Potential reductions in socioeconomic inequalities in child/adolescent outcomes are estimated through the application of marginal structural models.

TALK 2: Young Caring and Inequalities in Post-16 Educational Attainment in England

Presenter: Rebecca Lacey, City St. George's University of London

Co-authors: Alejandra Letelier, Anglia Ruskin University; Andy McGowan, Carers Trust; Krista Cartlidge, MY TIME Young Carers; Anne McMunn, University College London

Introduction: Young carers are frequently "hidden in plain sight" and evidence to date on educational effects has focused on younger school stages. This study examined how self-reported caring at ages 17/18 impacts post-16 (Key Stage 5) educational attainment in England.

Methods: We used linked data from Understanding Society and the National Pupil Database. We analysed 3,306 students, comparing qualification routes, pass counts and point scores through various regression models, comparing young carers to non-carers.

Results: Young carers made up 8% of the sample and faced significant socioeconomic disadvantages. Even after adjusting for these socioeconomic factors, young caring was linked to:

12% fewer A-level or equivalent passes; 34% less likely to achieve the equivalent of three Alevels; 40% more likely to pursue vocational rather than academic routes; An average of 44.6 points lower on A-level combined qualification.

Conclusion: Caring responsibilities at age 17/18 are an important driver of educational inequality that socioeconomic factors alone cannot explain. The findings highlight an urgent need for educational institutions to identify young carers and provide targeted support to reduce the post-16 attainment gap.

TALK 3: Young Caring and Transitions Out of Full-Time Education and Into Work

Presenter: Alison Nicoll, City St. George's University of London

Co-authors: Rebecca Lacey, City St. George's University of London; Alejandra Letelier, Anglia Ruskin University; Anne McMunn, University College London

In the UK, a substantial minority of young people provide unpaid care to family members or others, yet the long-term educational and employment consequences of caring during school years remain under-researched. This study investigates the impact of being a young carer during school (ages 10-16 years) on trajectories of post-16 education, training, and employment pathways in the UK from ages 16/17 to 24/25 years. This study also examines whether inequalities vary by care intensity and intersecting social positions (gender, ethnicity, socio-economic circumstances, and household composition). Data come from 2212 participants of the UK Household Longitudinal Study (UKHLS), a nationally representative panel which surveys youth (10-15) and adults (16+) annually. Young caring is assessed prior to exit from compulsory education at ages 15-16 years. Education/employment/training (EET) activity is measured across nine subsequent waves to ages 24-25.

Our analytic approach applies sequence analysis with optimal matching and cluster analysis to derive a typology of EET trajectories (full-time study or training, full-time or part-time employment, family care, not in education, employment or training (NEET), other). We then estimate associations between young caring (including intensity, <10 vs ≥10 hours/week) and trajectory membership using multinomial logistic regression, testing moderation by gender, ethnicity, socio-economic indicators and household composition.

The transition from school to the labour market is a critical life-course period shaping long-term socio-economic and health outcomes. By characterising the impact on caregiving on these pathways, this research aims to inform policy to improve long term outcomes for young carers and to identify subgroups requiring targeted support.

TALK 4: Expansion of Childcare Subsidies and Mothers' and Fathers' Health Outcomes: Findings from a Natural Experiment in England

Presenter: Verena Schneider, University College London

Co-authors: Enrico Pfeifer, Baowen Xue, Anne McMunn, University College London; Birgitta Rabe, University of Essex

Background: Parenthood has been shown to reinforce traditional gender roles, contributing to gender inequalities in social determinants of health, such as unpaid labour, participation in (full-time) employment, and income over the life course. In the UK, high childcare costs and unequal parental leave policies likely reinforce traditional gender roles among parents with young children. In 2017, England expanded funded childcare for working parents of 3- to 4-year-olds from 15 to 30 hours per week, aiming to increase labour supply. While evidence shows that this policy boosted labour force participation, its effects on the health of mothers and fathers remain unclear. Aims: This study will use quasi-experimental methods to evaluate the impact of the 2017 childcare expansion on mothers' and fathers' mental health, self-rated health, and physical functioning.

Methods: This study will use longitudinal data from mothers and fathers of young children in the UK Household Longitudinal Study (waves 1-15; 2009-2025). Policy exposure in relation to the policy implementation will be defined using children's dates of birth. A difference-in-difference design will be used to compare mental health (General Health Questionnaire-12; SF-12 Mental Component Summary), physical health (SF-12 Physical Component Summary), and self-rated health between parents exposed to the policy and a comparable unexposed control group. Results across alternative control groups and quasi-experimental approaches will be triangulated in sensitivity analyses. Subgroup analyses will explore heterogeneity by pre-policy employment status and the birth order of the index child. Discussion: Findings will be interpreted in light of the strengths and limitations of each analytical approach and put into context with what is already known from policy changes in other countries. Implications will be considered in relation to the wider policy landscape, the context of more recent childcare reforms, and future research priorities.

TALK 5: Assessing the Impact of Expanding Subsidised Childcare on the Division of Household Labour Within Couples in England

Presenter: Enrico Pfeifer, University College London

Co-authors: Verena Schneider, Baowen Xue, Yvonne Kelly, Anne McMunn, University College London; Rebecca Lacey, City St. George's University of London

Background: Publicly funded childcare is often framed as a labour-market intervention, yet it may also influence how paid and unpaid work are organised within households. In September 2017, England doubled the entitlement to subsidised childcare for working parents of three- and four-year-olds from 15 to 30 hours per week. By expanding subsidised childcare during early parenthood, the reform may have influenced how paid and unpaid work are organised within couples with young children. However, little is known about whether expanded childcare provision translates into more equal divisions of labour within households in England.

Aim: This study examines whether England's 2017 childcare expansion affected the gender division of paid and unpaid labour among couple households with young children, and whether associations vary by household income at baseline, ethnicity and disability.

Data and methods: Using longitudinal data from the UK Household Longitudinal Study (Wave 1-15; 2009-2024), we follow parents of three- to four-year-old children before and after the 2017 expansion of subsidised childcare entitlements. The exposure of interest is the eligibility for the additional hours of childcare. Outcomes of interest are dyadic divisions of paid employment, childcare responsibilities and housework tasks within couple households. Analyses exploit the policy change as a natural experiment and apply difference-in-differences, with subgroup and interaction analyses to assess whether associations differ by household income, ethnicity and parental disability.

Results: This study will provide new longitudinal evidence on whether expanding subsidised childcare impacts the gender division of labour within couples. The findings will inform debates on childcare policy as a lever for gender equality across the lifecourse.

3C STREAM: HEALTH / WELLBEING 2 SYMPOSIUM

Tracking Mental Health Over Time: Attrition, Trajectories, and Social Determinants in the BELHEALTH Cohort

Chair: Camille Duveau, Sciensano

This symposium presents longitudinal data from the Belgian Health and Wellbeing (BELHEALTH) cohort collected between 2020 and 2025. This cohort was set up to monitor mental health over time. Across four complementary studies, we address methodological challenges, long-term symptom trajectories, and migration- and work-related wellbeing. First, we investigate attrition patterns in BELHEALTH, showing that it is socially patterned by age, education, and region, underscoring the need for targeted retention strategies to reduce potential bias in longitudinal research. Second, we identify distinct anxiety and depression trajectories over four years following the COVID-19 outbreak. While most adults maintained mild symptoms, a substantial minority experienced worsening mental health, particularly younger individuals, women and those facing financial difficulties. Social support and life satisfaction emerged as protective factors, though their influence evolved over time. Third, focusing on wellbeing among migrant groups, we found that perceived ethnic discrimination, rather than migration status itself, predicted lower life satisfaction across groups. Finally, we examine the impact of work transitions on mental health, showing that unemployment and retirement increase the risk of subsequent depression, with financial strain and limited social support exacerbating vulnerability. Together, these findings highlight persistent mental health inequalities and the importance of structurally informed long-term public health strategies.

TALK 1: Attrition in the Belgian Health and Wellbeing Cohort

Presenter: Lize Hermans, Sciensano

Co-authors: Camille Duveau, Rana Charafeddine, Stefaan Demarest, Lydia Gisle, Sciensano

One methodological challenge in longitudinal surveys is attrition whereby participants no longer respond in follow-up waves. Attrition reduces statistical power and may bias estimates if certain population subgroups are more likely to remain in the study than others. The aim of this study was to investigate whether attrition patterns are associated with sociodemographic factors and mental health in the Belgian Health and Wellbeing (BELHEALTH) cohort.

Based on the cohort members' behavior between March 2024 and November 2025 (waves 5 to 9), three groups were defined: those who explicitly opted out of the cohort (active attrition), those who remained enrolled but stopped participating during this period (passive attrition) and those who participated at least once (active participation). Baseline mental health was assessed as having anxiety (GAD-7) or depression (PHQ-9) at least once between October 2022 to December 2023 (waves 1 to 4).

Attrition differed significantly by age, education, and region, but not by sex. Younger adults were overrepresented in the passive attrition group, while older adults were underrepresented. In contrast, in the active attrition group, individuals aged 65+ were overrepresented. Participants living in Flanders were overrepresented in both the active participation and active attrition groups, while those living in Wallonia were overrepresented in the passive attrition group. Lower educational attainment was associated with higher levels of both active and passive attrition. Lastly, baseline anxiety and depression did not differ across groups.

These findings indicate that attrition in the BELHEALTH cohort is socially patterned, while it is independent of anxiety and depression, key indicators of this cohort. This highlights the need for targeted retention strategies to ensure continued participation across all sociodemographic groups and to minimize the risk of attrition-related bias.

TALK 2: A Longitudinal Study of Anxiety and Depression in Belgium During and After the COVID-19 Pandemic

Presenter: Camille Duveau, Sciensano

Co-authors: Thanh Thuy Bui, Guido Van Hal, University of Antwerp; Stefaan Demarest, Lize Hermans, Sciensano

The COVID-19 pandemic, alongside concurrent social instabilities, has raised concerns about long-term population mental health. While existing studies have focused on the acute phase, less is known about how anxiety and depression have evolved during prolonged societal disruption. This study aimed to identify distinct anxiety and depression symptom trajectories and to determine individual, relational, and societal protective and risk factors influencing symptom levels among Belgian adults from 2020 to 2024.

We analyzed longitudinal data from five waves of the COVID-19 Health Surveys and the BELHEALTH study (n = 10,063) among Belgian adults, collected between April 2020 and June 2024. Anxiety and depression were assessed using the Generalized Anxiety Disorder-7 and the Patient Health Questionnaire-9. Covariates, selected using a social-ecological framework, included time-invariant and time-varying factors. Latent class linear mixed models identified subgroups with distinct trajectories. Multilevel linear mixed-effects models examined associations between symptom severity and predictors across individual, relational, and societal levels.

Four depression and five anxiety trajectories were identified. Most participants maintained stable mild symptoms, yet 11.3% experienced increasing depression and 8.4% showed increasing anxiety. Women, younger adults, and individuals facing financial difficulty were overrepresented in moderate and severe trajectories. Protective factors included social support, satisfying social contact, and life satisfaction. Over time, life satisfaction became increasingly protective, while the effect of social contact weakened. Risk factors included financial strain, job-loss worry, loneliness, psychotropic medication use, and mental health stigma.

These findings reveal persistent heterogeneity, with many adults experiencing worsening symptoms years after pandemic onset. Public mental health strategies should extend beyond short-term responses, address long-term risks, and strengthen resilience.

TALK 3: The Association Between Migration Status, Perceived Discrimination and Life Satisfaction Over Time in Belgium

Presenter: Camille Duveau, Sciensano

Co-authors: Lize Hermans, Lydia Gisle, Rana Charafeddine, Stefaan Demarest, Sciensano

Background: Research shows that migrants report lower levels of life satisfaction than the native majority population. Differences are explained by both migration-specific factors and contextual characteristics of the host society, such as discrimination. However, little research has explored how life satisfaction evolves the last couple of years among migrant groups in Belgium. This study investigates disparities in life satisfaction between first- and second-generation immigrants, with attention towards the role of perceived discrimination and the setting in which discrimination is experienced.

Methods: We used data from four waves of the BELHEALTH cohort, collected between September 2022 and October 2025, among 7,353 Belgian residents aged 18+. Participants were classified into five categories: native Belgians, European (Eu) migrants, non-Eu migrants, second-generation Eu migrants and second-generation non-Eu migrants. Life satisfaction was measured using the Cantril ladder, ranging from 0 (not at all satisfied) to 10 (fully satisfied). Respondents also reported whether they experienced ethnic discrimination and the settings in which this occurred. Mixed linear models were used to compare life satisfaction across categories over 2022–2025 period.

Results: No significant differences were observed in the trajectory of life satisfaction by migration status over the period ($F = 0.99, p = 0.41$), after controlling for age, sex and education. In contrast, perceived ethnic discrimination was strongly associated with lower life satisfaction over time ($F = 50.36, p < .0001$). This association was observed across all migrant groups, regardless of origin. Participants most frequently reported experiences of ethnic discrimination in public spaces, educational and professional environments.

Conclusions: Perceived discrimination was a stronger predictor of declining life satisfaction than migration status. Addressing discrimination is essential to improving life satisfaction in the population in Belgium.

TALK 4: Mental Health in Relation to Work Transitions: Results from a Belgian Cohort Study

Presenter: Kirsten A. Verhaegen, Sciensano

Co-authors: Camille Duvéau, Lize Hermans, Sciensano

Going through a change in employment status can be a significant period in which one's life is suddenly and substantially changed. This can have a significant impact on mental health. Indeed, some studies have linked mental health problems such as depression and anxiety to work transitions such as becoming unemployed and starting retirement, whereas others have observed an increase in life satisfaction under certain conditions. However, few studies have included different types of work transitions in one longitudinal study while including various mental health outcomes.

The current study investigated the relation between different types of work transitions (i.e., becoming unemployed, starting employment after graduation and starting retirement) and mental health, looking at the effects from one wave to another. This was done using longitudinal data from the first eight waves (October 2022 – March 2025) of the Belgian Health and Wellbeing Cohort (BELHEALTH) (N = 4982). Logistic regression was performed to evaluate whether current wave depression and anxiety were predicted by work transitions in the previous wave. The results showed different patterns for each work transition. Becoming unemployed significantly predicted later feelings of depression, as well as generalized anxiety. Retiring significantly predicted feelings of depression, but not anxiety. Starting first employment after graduation was not associated with any of the mental health outcomes. Stratified analyses within those who experienced any work transition showed that financial discomfort and poor social support significantly predicted anxiety and depression. However, follow-up research is needed to identify the mechanisms of acute mental health problems after a work transition, in order to determine effective interventions.

3D STREAM: WORK

INDIVIDUAL WORK INEQUALITIES PAPERS

TALK 1: Beyond the Last Move: Life-Course Geographic Mobility Trajectories and Occupational Inequality

Presenter: Sergi Vidal, Autonomous University of Barcelona

Geographic mobility is widely regarded as a mechanism shaping social stratification, with migration often associated with improved occupational outcomes. Yet most empirical research conceptualizes mobility as a one-time event or focuses on the most recent move, thereby ignoring its cumulative and age-specific nature across the life course. This omission may obscure how earlier moves shape later outcomes and misattribute their effects to more recent mobility. At the same time, simply controlling for prior moves or related characteristics can introduce bias, because earlier mobility influences time-varying factors—such as education, employment, and family status—that both affect subsequent mobility and mediate its long-term consequences. As a result, conventional approaches may either overestimate or underestimate the effects of geographic mobility on occupational attainment.

This study examines how repeat interregional mobility shapes occupational outcomes by midlife while addressing methodological challenges posed by time-varying confounding. Using retrospective life history data from the Survey of Health, Ageing and Retirement in Europe (SHARE), I analyze occupational attainment at age 45 among individuals born between 1950 and 1968. Interregional mobility is common, with one quarter of individuals moving at least once and half of movers experiencing repeat moves. Descriptive patterns reveal substantial heterogeneity, with repeat movers more likely to attain upper-class occupations than one-time movers or non-movers.

To obtain unbiased estimates, I compare conventional regression models with regression-with-residuals (RWR), which adjusts for time-varying confounders affected by prior mobility. Conventional models suggest that mobility during early adulthood is most strongly associated with higher occupational attainment. However, after addressing

time-varying confounding using RWR, mobility before adulthood becomes more strongly associated with upper occupational attainment, while the apparent advantages of adult mobility are substantially attenuated. These findings highlight the importance of conceptualizing mobility as a life-course trajectory and using appropriate causal methods to capture its cumulative and age-specific effects.

TALK 2: Linked French Administrative Data for Researching Social Inequalities in Work and Health? The Challenges of Designing the WORTH-IT Cohort

Presenter: Léna Silberzan, Ined - French Institute for Demographic Studies

Co-authors: Emilie Counil, Elodie Baril, Ined - French Institute for Demographic Studies

To study the processes by which work and health interplay to shape social inequalities across adulthood, population health research needs to integrate an intersectional and lifecourse perspective. However, translating this conceptual framework into quantitative empirical work requires high-resolution databases covering large populations followed-up over time. Assembling retrospective cohorts based on administrative data linkage has provided valuable input, as shown in countries with linked registers, accessible to researchers under strict data protection agreements.

In France, the legal system limits such population-wide record-linkage, with the notable exception of a new, representative source of data. EDP-Santé builds on the Permanent Demographic Sample, linked to the National Health Data System for around 3.1 million people. It combines detailed information about individuals' demographic (including migration background, an information seldom available in French datasets), socioeconomic, and work characteristics with health and social care consumption, and causes of death, over a 12-year period.

In this communication, we reflect on the initial stages of data discovering and shaping, and the challenges of assembling a new retrospective WORK, healTH, inequalITies (WORTH-IT) cohort from EDP-Santé. We emphasize the necessity to turn administrative data that lack prior adequate structuring and content; sometimes, even comprehensive documentation, into fit-for-research material. We also highlight the processes of how and why these data were collected, reflecting individuals' (or their employers') interactions with administrative systems. Understanding these processes is central to assessing their qualities and sustainability for health inequalities research, in addition to identifying selection and information bias.

In the next steps, we plan to document the depletion of the WORTH-IT cohort as we make specific analytical decisions, creating gaps in the data that translate into blind spots in the measure of work-health relationships, and their inequalities across adulthood.

TALK 3: When Does Economic Power Reduce Women's Housework? Earnings, Bargaining, and Occupational Gender Context

Presenter: Mengxuan (Suri) Li, The University of Queensland

Co-authors: Janeen Baxter, Tomasz Zajac, The University of Queensland

Despite substantial increases in women's education and labour market participation, women continue to shoulder a disproportionate share of unpaid domestic labour, with important implications for gender equality and social sustainability. Sociological research has long emphasised the role of women's earnings in reshaping household labour divisions, yet existing studies often conflate different dimensions of economic resources and rely on survey data that limit the examination of rare but theoretically important household configurations. This paper advances feminist analyses of labour markets and work-family relations by disentangling three conceptually distinct dimensions of women's economic power - hourly wages, women's share of household earnings, and absolute earnings position - and examining how each relates to women's unpaid domestic labour. These dimensions correspond to different theoretical traditions, including opportunity cost, bargaining, and economic autonomy, allowing a more precise test of how economic resources are translated into everyday gendered practices within households.

Using population-wide census data from Australia, this study extends prior survey-based research by capturing the full earnings distribution and household configurations that are central to theories of gender inequality. We theorise

that the relationship between women's economic power and unpaid work is nonlinear, characterised by diminishing returns or a ceiling beyond which additional economic gains yield limited reductions in women's housework. We further argue that the effectiveness of women's economic resources is socially conditioned by occupational gender context. Drawing on insights from doing gender and gender display perspectives, we examine whether associations between women's economic position and housework vary across gender-segregated occupational contexts.

TALK 4: From Single Motherhood to Later-Life Financial Strain: A Sequence Analysis of Partnership and Employment Trajectories

Presenter: Daria Frost, University Mannheim

Population ageing and increasingly diverse family trajectories have intensified concern about women's later-life economic vulnerability in Europe. Previous research documents elevated risks of later-life poverty among single mothers, but has paid limited attention to heterogeneity in single motherhood experiences across the life course. This study examines heterogeneity within women who experienced single motherhood and asks which employment-partnership pathways are most strongly associated with perceived economic hardship later in life.

Guided by cumulative disadvantage theory, we view later-life economic hardship as the outcome of early- and mid-life exposures to structural risks and unequal resources that compound over time, generating increasing heterogeneity. We focus on three linked processes: selection, whereby early disadvantage (low parental socioeconomic status and limited education) increases the likelihood of entering single motherhood; exposure, whereby the timing and duration of non-partnered motherhood intersect with constrained employment opportunities; and reinforcement, whereby employment instability and prolonged periods without a partner sustain resource constraints across adulthood. We use Waves 2–9 of the Survey of Health, Ageing, and Retirement in Europe (SHARE) and retrospective Waves 3 and 7 of SHARELIFE, covering 24 European countries. Single motherhood is defined as spending at least one year raising a child under age 18 while neither married nor living with a partner. Annual employment and partnership/marital histories are reconstructed from ages 18–60 and analyzed using sequence analysis to identify typical trajectories, capturing timing, duration, and ordering central to cumulative disadvantage theory. We then use logistic regression to relate trajectories and background characteristics to later-life perceived financial strain—households' ability to make ends meet—while including country fixed effects to account for time-invariant cross-national differences. This approach allows us to identify life-course pathways linked to later-life disadvantage among former single mothers across diverse European contexts.

3E STREAM: EDUCATION

INDIVIDUAL EDUCATIONAL INEQUALITIES 1 PAPERS

TALK 1: Explaining Increasing School Absence Post-Pandemic: A Cross-Cohort Analysis

Presenter: Emer Smyth, Economic and Social Research Institute (Ireland)

Co-author: Anna Moya, Economic and Social Research Institute (Ireland)

A number of countries have seen rising rates of school absence in the wake of the pandemic, but few studies have tried to account for this increase. This study compares two cohorts from the Growing Up in Ireland study – those born in 1998 and those born in 2008 – to assess continuity and change in the drivers of school attendance at 9 and 13 years of age. Data from the two cohorts are pooled to assess overall differences in attendance, and interactions between individual, family, school and neighbourhood factors and cohort membership are estimated to capture potential diverging patterns.

Nine-year-olds in the two cohorts, observed a decade apart, show similar levels of attendance. However, among 13-year-olds, a higher proportion of students in the 2008 cohort miss 11 or more days of school compared to their counterparts in the 1998 cohort. Higher social class and higher levels of maternal education are associated with better attendance, in line with previous research (Klein et al., 2020). In contrast, adverse childhood experiences and maternal depression are linked to lower attendance. These patterns are consistent across both cohorts. However, important differences emerge between the cohorts. Absence levels have increased over time to a greater extent for

those with higher levels of emotional, conduct, hyperactivity and peer difficulties. They have also increased more for those with negative attitudes to school and those who attend schools where students are less involved in school decision-making.

These findings suggest that mental health may now be more closely linked to school attendance problems than in the past. Alternatively, they may reflect greater parental willingness to allow children experiencing emotional difficulties to stay at home in a context of more democratic parent-child relations in general.

TALK 2: From University to Work: Health Consequences of Educational and Employment Transitions and the Role of Psychosocial Resources

Presenter: Julia Fritzsche, University of Rostock

The transition from higher education to employment represents a critical life-course phase in young adulthood. It entails substantial changes in social roles, institutional contexts, and daily routines and is widely regarded as a turning point with potential long-term consequences for social inequality. Transitional periods are often characterized by uncertainty, performance pressure, and demands for adaptation, which may adversely affect health. However, empirical research focusing specifically on the higher-education-to-work transition remains limited and rarely captures its dynamic and processual nature or the role of psychosocial resources.

This study pursues two objectives. First, it examines whether and to what extent the transition to the labor market is associated with changes in young adults' subjective health, distinguishing between pretransition, transition, and post-transition phases. Second, it investigates whether psychosocial resources moderate this association. External resources are operationalized as social belonging, while internal resources are captured by the Big Five personality traits.

The analyses draw on longitudinal data from Starting Cohort 5 of the German National Educational Panel Study (NEPS), comprising 73,095 observations from 7,183 individuals aged 35 or younger. The outcome variable is measured annually using respondents' self-rated health. Random-effects panel regression models with interaction terms are estimated to assess changes across transition phases.

The findings indicate a significant decline in subjective health during the transition to employment, with health deterioration becoming more pronounced after labor market entry. Social belonging emerges as a key protective factor, substantially buffering declines in health, particularly during the post-transition phase. Conscientiousness and agreeableness also show moderating effects after labor market entry, whereas neuroticism is generally associated with poorer health but does not specifically amplify transition-related health risks.

Overall, the results highlight that entering employment constitutes a health-sensitive life-course phase and that psychosocial resources play a crucial role in fostering resilience during this critical transition.

TALK 3: Exploring the Link Between Comparative and Noncomparative Study Effort and Later Academic Transitions, Empathy, and Aggressive Behaviour

Presenter: Yvonne Oberholzer, University of Zurich

Co-author: Doris Hanappi, University of Zurich

Understanding how early motivational orientations shape later educational trajectories is important for life course research. This study examines how distinct dimensions of study effort at age 12 predict academic transitions at age 18, drawing on longitudinal data from COCON – The Swiss Survey on Children and Youth (N = 1,038 at age 12; N = 793 at age 18).

Study effort can stem from different motivational orientations that may differentially influence educational transitions. In this exploratory study, we distinguish between self-focused (non-comparative) study effort (e.g., “I try hard in school or at work”) and comparative study effort (e.g., “When I am doing something, I am trying to do better than everyone else”). Using Bayesian logistic regression, we analyse how these orientations relate to later academic outcomes.

Based on social comparison theory, we hypothesized that a focus on personal growth would yield consistent and positive outcomes and a focus on performance relative to others would yield less consistent outcomes. While social comparison can motivate improvement when individuals compare themselves to higher performing peers, it may also lead to stagnation when comparisons are made with lower-performing peers, fostering complacency.

Our results reveal that self-focused study effort credibly predicts later academic transitions (i.e. academic track, vocational school), whereas comparative study effort does not. These results align with prior research linking self-focused motivation to stable academic progression, while relative performance-oriented motivations appear more context-dependent.

Importantly, self-focused study effort was positively associated with empathy and negatively associated with aggressive behaviour, net of gender. These associations resonate with developmental research suggesting that self-focused orientations co-occur with prosocial dispositions and lower aggression, which may in turn facilitate smoother institutional transitions by supporting positive peer relations and teacher evaluations.

TALK 4: Does School Infrastructure Protect Girls from Early Marriage? Longitudinal Evidence from India

Presenter: Pintu Paul, Indian Social Institute

Early marriage remains a persistent development challenge in India, with adverse consequences for girls' education, health, and long-term well-being. While girls' schooling is widely recognised as a key protective factor against early marriage, less is known about how school environments shape marriage timing through educational pathways. Using longitudinal data from the Understanding the Lives of Adolescents and Young Adults (UDAYA) survey in Uttar Pradesh and Bihar, this study examines whether school infrastructure delays marriage among adolescent girls by supporting continued school participation. Employing a mediation framework estimated through generalised structural equation modelling, we assess the indirect and direct effects of school infrastructure on marriage timing via school attendance and retention.

The results show that access to basic school infrastructure, particularly gender-segregated sanitation facilities and school libraries, is associated with a significantly lower likelihood of early marriage, primarily through sustained schooling. Across specifications, the indirect effect through school attendance accounts for the majority of the total association, while direct effects are smaller and, in most cases, statistically modest. Robustness checks using alternative measures of schooling continuity yield consistent findings.

These results highlight school infrastructure as a structural determinant of marriage timing and underscore the broader social returns to investments in school quality. Integrating infrastructure provision with policies aimed at keeping girls in school may represent a scalable and cost-effective strategy for delaying early marriage and advancing gender equality in low-resource settings.

3F STREAM: YOUTH / FAMILY

INDIVIDUAL FAMILY WELLBEING
PAPERS

TALK 1: Childhood Experience of Family Disruption and Adverse Early Adult Outcomes

Presenter: Hanna Remes, University of Helsinki

Co-authors: Liina Junna, Pekka Martikainen, University of Helsinki; Michael Murphy, London School of Economics

Prior extensive but scattered evidence suggests family disruption to associate with poorer offspring outcomes, yet a comprehensive assessment of early adult socioeconomic, demographic and health outcomes stratified by offspring sex and family socioeconomic background is still lacking. Socioeconomic resources may mitigate possible harms of family disruption, while associations may also depend on the overall likelihood of adverse early adult outcomes that tend to differ by sex and socioeconomic background.

We use longitudinal register data on Finnish cohorts 1987–1992 living with both biological parents at age one. With age at first experience of not living with both parents at ages 1–14 as the main exposure of interest, we compare the magnitude of associations by maternal education. We fit a series of generalised additive logistic regression models on 1) mental disorders (any inpatient/specialized outpatient care episode for mental disorders), 2) high-risk health behaviours (any care episode due to interpersonal violence, self-harm, substance use, or poisoning), 3) abortion (females only), 4) NEET (not in employment, education, or training for two years), 5) no secondary degree by age 24, and 6) having a child at ages 15–19 or 20–24. The first four outcomes were measured between ages 15–24.

Preliminary findings show that around two in five children experienced family disruption before age 15. Children of lower educated mothers were more likely to experience family disruption and adverse early adult outcomes, but family disruption associated with a higher likelihood of adverse outcomes across all levels of maternal education. Associations were also largely similar for males and females. The likelihood of adverse outcomes and the educational differences tended to slightly decline the later the first exposure. However, overall, the timing of family disruption made little difference for a broad range of early adult outcomes compared with whether or not the child ever experienced disruption.

TALK 2: The Relationship of Family Structure and Child Outcomes: A Propensity Score Matching Analysis Across Three Countries

Presenter: Ashley Weisman, Old Dominion University

Co-authors: Shana Pribesh, Old Dominion University; Micah Harmon, Kayla Mean, Scott Sais, Jonathan A. Jarvis, Mikaela J. Dufur, Brigham Young University

Family structure is a critical context shaping children's access to relational, emotional, and informational resources within the home. Understanding how different household compositions—living with two biological parents, a single parent, or cohabiting parents—shape levels of family social capital is essential for informing policies that support children's development. Family social capital encompasses parent-child relationship quality, parental involvement, shared activities, communication patterns, and the broader home learning environment. Despite extensive research on family structure, cross-national evidence that isolates its effects on family social capital remains limited. This proposed study employs propensity score matching (PSM) to estimate the association between family structure and family social capital using three large, nationally representative longitudinal birth-cohort datasets: Australia's Longitudinal Study of Australian Children (LSAC), the United Kingdom's Millennium Cohort Study (MCS), and the United States' Early Childhood Longitudinal Study (ECLS). The analysis focuses on children aged 8 to 10, a period characterized by increasing autonomy, evolving parent-child dynamics, and heightened importance of homebased relational supports. Within each dataset, PSM will be used to construct balanced comparison groups across the three household types. Matching variables will include socioeconomic characteristics, parental mental health, neighborhood context, and early childhood developmental markers. This approach reduces selection bias and enhances the ability to approximate causal estimates of the relationship between household composition and family social capital. By harmonizing constructs and aligning analytic procedures across LSAC, MCS, and ECLS, the project will provide robust, comparable insights into how family structure influences the relational resources available to children across different policy and cultural environments. This work aims to inform international policy discussions on strengthening family supports and promoting equitable access to social capital for children growing up in diverse family structures.

TALK 3: Family Social and Economic Position, Adolescent Relationships and the Experience of Loneliness: A Longitudinal Assessment

Presenter: Richard Layte, Trinity College Dublin

Co-authors: Gerry Redmond, Bright Ahinkorah, Flinders University

Purpose: There is consistent evidence of a positive association between child and adolescent social and economic position (SEP) and the average quality of social relationships. Low quality social relationships are a well-established risk factor for adolescent loneliness, yet findings from meta-analyses are inconsistent on the association of loneliness with SEP. No studies to date have explored the effect of the conjoint distribution of adolescent relationships for the experience of loneliness, i.e. can relationships in one domain compensate for worse relationships in another.

Methods: Quality of social relationships with parents, peers and teachers was measured at age 14/5 along with family SEP and confounding factors using data from 3806 children from the longitudinal Study of Australian Children. Structural equation models estimate the direct effects of SEP on loneliness at age 16 and 20 and the indirect effect of SEP on loneliness via quality of social relationships.

Results: There is no direct effect of SEP on loneliness. Lower SEP adolescents report social relationships which are between 0.25 and 0.4 effect sizes worse than their advantaged peers, leading to significant indirect effects of SEP on loneliness. High quality relationships in one domain can compensate for poor relationships in others, but not child-teacher relationships.

Conclusion: The quality of social relationships in adolescence has important consequences for the experience of loneliness. Inequalities in the quality of relationships between SEP may contribute to differentials in mental and physical health.

TALK 4: Life-Course Predictors of Family Discussions About Sexual Harassment: Three-Generation Evidence from 1988–2020

Presenter: Yuka Temmyo, University of Zurich

The Me Too movement, which began in late 2017, has encouraged discussions about sexual harassment and increased awareness of—and changes in—social behaviors throughout society. However, tendencies to focus on reporting behavior have left important gaps in the literature. Research has not adequately explored what parental life-course factors, beyond personal experiences with harassment, predict harassment discussions with children during socialization. Presuming that parents' attitudes toward discussing harassment in a family reflect their accumulated cultural resources (e.g., values), this study explores how the attitudes of second-generation (G2) individuals who reached their mid-forties by 2019 have been shaped. It uses longitudinal, three-generation data from the Youth Development Study (1988–2020; N = 375 triads). Given that at least 12% of G2 participants experienced workplace sexual harassment as teenagers, being in both the socialization process and early stages of the status attainment process, this study explores multiple predictors of family discussions considering such processes. These predictors include G2's adolescent family environments (e.g., relationships with parents [G1]), agency, and relationships with children in adulthood. Preliminary results from multivariate logistic regressions indicate that parent–child relationship quality during G2's adolescence may be more strongly associated with future harassment discussions than their agency or educational level by 2019. Furthermore, despite discrepancies between G1's actual expectations for their child's educational attainment (in 1988) and G2's perceptions of these expectations, the findings indicate that G2's perceptions of expectations, rather than G1's actual expectations, are positively linked to harassment discussions. These findings imply the enduring significance of trust and perceived values in parent–child relationships during the adolescent socialization process, along with the complexity of this process, which should be examined in further research. They also suggest that family cultural resources can be transmitted intergenerationally through socialization in various forms, even as times and social contexts change.

3G STREAM: HEALTH / WELLBEING 3

INDIVIDUAL COVID PAPERS

TALK 1: Young Adulthood, Social Withdrawal, and Prescription Drug Misuse Across the COVID-19 Pandemic

Presenter: Brian Kelly, Indiana University

Co-authors: Mike Vuolo, Olivia DeCrane, The Ohio State University

Young adulthood is increasingly a time of managing mental health challenges. Experiences of social withdrawal may potentially lead to misuse of prescription drugs to manage negative feelings. Social withdrawal among young adults has increased over time, and was exacerbated within the context of the COVID-19 pandemic. We examine trajectories of social withdrawal and prescription drug misuse among U.S. young adults across the years spanning the pre- and post pandemic period. Using nationally-representative National Survey on Drug Use and Health data from 2017–2023, we conducted logistic regression models to examine the relationship between social withdrawal

and prescription drug misuse, net of mental health, across a period spanning the COVID-19 pandemic. We assess any misuse of prescription drugs as well as four specific classes of prescription drugs – opioids, tranquilizers, stimulants, and sedatives. We also examine the temporal trend to see whether and how the pandemic period brought on changes among young adults, including trends in prescription drug misuse by experiences of social withdrawal. Time trends indicated a general declining pattern of prescription drug misuse among young adults. Accounting for covariates, a one-unit increase in social withdrawal was associated with higher odds of any misuse (AOR=1.024), as well as misuse of opioids (AOR=1.030), tranquilizers (AOR=1.033), and sedatives (AOR=1.110), but not stimulants. Across all forms of misuse except stimulants, the gap between socially withdrawn and non-withdrawn young adults shrinks over time. A decline in misuse of all substances occurred, starting prior to the pandemic onset and stabilizing afterwards.

Overall, prescription drug misuse declined among young adults across the pandemic period. Although, an association exists between social withdrawal and prescription drug misuse among young adults, this relationship diminished after the onset of the pandemic. The pandemic's disruption of social routines may have made non-withdrawn young adults, at least temporarily, more like their socially withdrawn peers.

TALK 2: Socioeconomic Inequalities in Loneliness Among Adolescents (2021/22): The Role of Covid-19 Policy Stringency Across 25 Countries in Europe

Presenter: Emma Holmberg, Université Libre de Bruxelles

Co-authors: Karen Schrijvers, Benedicte Deforche, Maxim Dierckens, Ghent University; Katia Castetbon, Université Libre de Bruxelles

Introduction: Ensuring good mental health and social wellbeing during adolescence is key for healthy development into adulthood. During the pandemic, limited direct social interactions may have increased loneliness in adolescents. The pandemic may also have exacerbated socioeconomic inequalities in mental health and social wellbeing, although its impact on adolescent loneliness remains underexplored. The aim of our study was to identify the socioeconomic inequalities in loneliness and whether Covid-19 policies modified these inequalities.

Methods: Individual level data was derived from the 2021/22 Health Behaviour in School-aged Children (HBSC) study across 25 European countries (n = 126,724) and included ages 11, 13 and 15. Following a standardised protocol, socioeconomic status was assessed using the 6-item measure Family Affluence Scale (FAS). Loneliness was measured using a single item. Country level indicators included the Oxford Covid-19 Stringency Index (2021-2022), OECD public spending (2021), and Gini income inequality (2021) (all continuous). Multilevel logistic regressions were used to examine the socioeconomic inequalities in adolescent loneliness, including an interaction term to assess whether these inequalities varied according to covid-19 policies.

Results: In total, 17.0% of adolescents declared feeling lonely “most of the time” or “always”. Compared to adolescents with high FAS, those with medium FAS (OR=1.17, 95%CI=1.13-1.22) and low FAS (OR=1.45, 95%CI=1.38-1.53) were more likely to report feeling lonely. Covid-19 stringency was not associated to loneliness (OR=1.01, 95%CI: 0.99-1.03) and the interaction term was not statistically significant (low FAS x covid: OR=1.00, 95%CI=0.99-1.01; medium FAS x covid: OR=1.00, 95%CI=0.99-1.01).

Conclusions: These findings highlight the socioeconomic inequalities in adolescent loneliness in Europe. However, Covid-19 policies did not modify these inequalities. Considering that socioeconomic adversity in adolescence is associated with poorer health during adolescence up until adulthood, specific initiatives focusing on less affluent adolescents are needed to improve adolescent loneliness and ensure mental health and social wellbeing equity.

TALK 3: The Mental Health of Young People Before, During, and After COVID-19: Evidence from Growing Up in Ireland

Presenter: Anne Nolan, Economic and Social Research Institute (ESRI - Ireland)

Co-authors: Emer Smyth, Economic and Social Research Institute (ESRI - Ireland); Michael Vallely, University of Strathclyde

The COVID-19 pandemic and public health measures resulted in widespread and lengthy closures of schools, colleges and workplaces, and reduced social interaction. Data from Ireland and other countries shows that young people experienced large increases in mental health difficulties, including depressive symptoms, during the pandemic. However, there is a lack of evidence on how young people have fared in the post-pandemic period.

Data from the '98 Cohort of Growing Up in Ireland (GUI) at ages 20 (2018), 22 (2020) and 25 (2023) are used to examine change in depressive symptoms prior, during and after the COVID-19 pandemic. Mixed effects models are employed to assess the change in depressive symptoms over time, and the factors associated with these changes. In GUI, depressive symptoms are measured using the 8-item Center for Epidemiological Studies depression scale (CES-D).

The data show a significant increase in depressive symptoms during COVID (from 26 per cent pre-COVID to 49 per cent in December 2020), and partial recovery post-pandemic (to 33 per cent). Young women had higher scores than young men before COVID, experienced a greater increase during COVID and a similar recovery post-pandemic. Other factors associated with depressive symptoms include economic status (unemployed or disabled/long-term illness, experiencing economic strain) and living arrangements (still living in the parental home).

Numerous mechanisms have been put forward to explain increase in mental health difficulties during the pandemic. In the initial stages of the pandemic, the focus was on fear of infection, unemployment/financial situation and social distancing. With longer follow-up, other mechanisms become more important (e.g., scarring effects of repeated disruptions to education and employment; loss of social capital). The findings of this research have important implications for the development of policy and practice in relation to mental health and wellbeing among young people in the post-pandemic period.

TALK 4: Challenges in Sustaining Pandemic Preparedness: Findings from the “Bern, Get Ready” (BEready) Population-Based Household Cohort

Presenter: Eva Maria Hodel, University of Bern

Co-authors: Franziska Iff, Lydia Braunack-Mayer, Simone Schuller, Nicola Low, University of Bern; Gilles Wandeler, University Hospital of Bern

Background: Early in the COVID-19 pandemic, sparse population-based epidemiological data hindered evidence-based public health decisions, prompting calls for cohort studies that could generate data on emerging infectious diseases more quickly. We established “Bern, get ready” (BEready), an innovative OneHealth pandemic preparedness cohort study in Switzerland. This study aimed to assess BEready participants' first views on pandemic preparedness.

Methods: Between April 2024 and January 2026, we selected households in the canton of Bern at random and invited adults, children and pets. After an in-person visit including venepuncture, participants filled in an online questionnaire. We asked adults when they expect the next pandemic and about perceived challenges to pandemic preparedness. We used logistic regression with robust standard errors to examine factors associated with expecting a pandemic in <9 vs. ≥9 years, adjusting for pre-specified characteristics: gender, nationality, urban/rural location, education and socioeconomic position.

Results: Of 135,774 households invited, 1,569 enrolled. We analysed responses from 1,565/1,793 (87%) of adults with data available (11.02.2026). 828 (53%) participants expected the next pandemic in ≥9 years, 737 (47%) expected it earlier. People aged 65+ years (versus younger age groups, likelihood ratio test $p=0.006$) and women (versus men, adjusted odds ratio 1.2, 95% confidence interval 1.0–1.5) were more likely to expect a pandemic earlier. Other characteristics were not associated with expecting a pandemic earlier. The most frequently mentioned

challenges were combating misinformation (74%), maintaining public pandemic awareness (71%), and sustaining government commitment (58%).

Conclusion: Starting BEready after the post-COVID-19 emergency was challenging. Participants in this novel cohort study are likely to be people most interested in pandemic-related research. Even so, more than half thought the next pandemic may be far in the future. Concerns about misinformation, limited public awareness and lack of government commitment highlight the need for greater community engagement in pandemic preparedness research.

POSTER SESSION

1. Investigating the Use of Standardised Scales in Longitudinal Research

Presenter: Claudia Alioto, University College London

Co-authors: Rebecca Oldroyd, Jon Johnson, Reika Oba, University College London

Standardised scales are a group of related questions rigorously developed using statistical analyses to ensure that the questions in the scale collectively measure the desired underlying concept (i.e. to ensure their validity). They can also be piloted with a sample that represents the intended audience to ensure the understandability of the questions and identify potential issues such as response bias. When used as intended, standardised scales are a powerful research tool that enhance the reliability and comparability of research.

However, modified versions of scales, where some items are missing, altered, or have been added, are sometimes used due to time constraints, questionnaire length restrictions, or a lack of best practice guidance, potentially compromising the validity of the resulting data. CLOSER - the UK's interdisciplinary partnership of leading social and biomedical longitudinal population studies (LPS) - has gathered and documented up-to-date, comprehensive information (or metadata) on the standardised scales used in the CLOSER Discovery studies. Users can find information on the name, citation, question items (both the original and other versions), concepts measured, and their usage in the CLOSER Discovery studies for 20 standardised scales, enabling researchers to identify where scales are used both within and across studies.

In compiling this metadata, we observed that many of the CLOSER Discovery studies do not use the original versions of the standardised scales, and instead often use partial or modified versions. This raises important questions about the validity and reliability of the measures used in longitudinal research and their comparability. To generate empirical evidence on the implementation of standardised scales, we will analyse metadata from CLOSER Discovery to identify how frequently the original versions of the scales are used compared with other modified versions. This poster will present the results of the analysis and the implications for LPS research.

2. Can Municipalities Mitigate the Effects of Parental Job Losses on Children's Mental Health? Valid Test When Using Machine Learning Methods

Presenter: Natalia Andreeva, Umeå University

Co-authors: Anna Baranowska-Rataj, Xavier de Luna, Umeå University

This study investigates whether municipal-level investments in schooling can moderate the adverse effects of parental job loss on children's mental health. Drawing on comprehensive Swedish register data and employing a matched design, we examine children aged 7-10 years whose parents experienced job displacement due to plant closures. Mental health outcomes are proxied by prescriptions for anxiety and depression medications. To identify causal effect heterogeneity across municipalities, we apply causal forest algorithms and doubly robust estimation techniques, accounting for clustering and matching design. Our findings reveal that higher municipal spending on elementary schools significantly reduces the negative mental health impacts of parental job loss. Additionally, the effects of maternal job loss are milder in municipalities with a higher

proportion of qualified teachers. These results underscore the importance of mesolevel institutional contexts in shaping resilience to socioeconomic shocks and demonstrate the utility of machine learning methods for causal inference in sociological research.

3. The Influence of Interviewer Involvement on Adolescents' Reporting of Victimization Experiences and Reduced Mental Well-Being and the Association of Victimization with Mental Well-Being

Presenter: Katrina Blindow, German Youth Institute

Background: Experiences of violence are known to be associated with diminished mental health in adolescents. However, most studies rely on self-reports of both victimization experiences and mental health outcomes, rendering findings susceptible to reporting bias. While interviewer-administered surveys may support comprehension and participation, interviewer presence can also influence responses to sensitive questions related to violence and mental health, which are prone to stigmatization. Using data from a mixed-mode survey, we examined whether prevalence estimates of victimization experiences and reduced mental well-being differ by survey mode and whether interviewer involvement moderates the association between victimization and mental well-being.

Methods: We analyzed data from a probability sample of 1,908 adolescents aged 12 to 17 years who participated in the 2023 wave of the study Growing Up in Germany. To estimate differences in the prevalence of physical violence, bullying, cyberbullying, and reduced mental well-being (WHO-5) between interviewer-administered (face-to-face or telephone) and self-administered (web-based or on-site) survey modes, multivariate logistic regression models were used, adjusting for individual and household characteristics related to both outcomes and survey mode selection. Effect modification by survey mode was examined with interaction terms.

Results: Adjusted prevalence estimates of all victimization experiences and reduced mental wellbeing were higher in self-administered compared to interviewer-administered survey modes. Victimization experiences were consistently associated with reduced mental well-being, with adjusted odds ratios ranging from 1.96 to 2.21. Additionally adjusting for survey mode did not attenuate these associations noteworthy. While associations tended to be stronger without interviewer involvement, interaction analyses provided no evidence that survey mode moderated the associations between victimization experiences and reduced mental well-being.

Conclusion: Adolescents reported higher levels of victimization and reduced mental well-being when surveyed without interviewer involvement. At the same time, associations between victimization experiences and mental well-being were largely robust across survey modes.

4. A Two-Way Street: Reciprocal Dynamics of Maternal and Child Well-Being Across the COVID-19 Pandemic

Presenter: Sophia Chabursky, German Youth Institute

Co-authors: Christine Entleitner-Phleps, Inga Simm, Anja Linberg, Alexandra Langmeyer, Susanne Kuger, German Youth Institute

The COVID-19 pandemic represented a critical societal disruption with potential implications for developmental trajectories within families. To better understand these dynamics during that time, we examined reciprocal associations between maternal and child well-being in early childhood.

We used three-wave panel data from the nationally representative German AID:A study (2019 pre-pandemic, 2021 during, 2023 post-pandemic), including children aged 0 – 4 in 2019 and their mothers (N = 360 in the contextual model; N = 808 in robustness model). Child well-being was assessed via affect-based indicators; maternal well-being was measured using the WHO-5. Family climate was included as a contextual factor during and after the acute crisis phase. Cross-lagged panel models (MLR estimation, FIML for missing data, clustering by household) were estimated to assess stability, cross-domain spillover, and contextual effects.

Results indicate high rank-order stability in child wellbeing from 2021 to 2023 and moderate stability in maternal well-being. A temporally ordered reciprocal pattern emerged: maternal pre-pandemic well-being predicted child well-being during the pandemic ($\beta = .21, p < .05$), and child well-being in 2021 predicted maternal well-being in 2023 ($\beta = .25, p < .01$). Family climate in 2021 operated as a concurrent protective factor for both mothers and children, whereas contextual indicators such as younger siblings and school transition were not associated with later outcomes in this specification. These core reciprocal effects were replicated in the larger robustness model, excluding contextual covariates.

The findings highlight dynamic interdependence within family systems during critical societal disruptions and underscore the life-course relevance of early family resources for post-crisis adaptation. Understanding these reciprocal dynamics provides insight into how early family processes shape well-being trajectories in times of societal crisis and beyond. Ongoing analyses will extend the models using multiple imputation to further address structural missingness in contextual measures.

5. Early-Life Body Mass Index Growth and Depressive Symptoms in Adolescence: A Cross-Cohort Comparison

Presenter: Ling-Yin Chang, National Taiwan University

Co-authors: Hsin-Yi Wu, Hsi-Ping Nieh, National Taiwan University

Background: Childhood body mass index (BMI) growth follows a non-linear developmental pattern and may have long-term implications for mental health. However, whether patterns of BMI growth differ across birth cohorts and whether period-specific BMI growth rates are differentially associated with later depressive symptoms across cohorts remain unclear.

Objectives: To (1) compare period-specific childhood BMI growth rates between two Taiwanese birth cohorts and (2) examine whether associations between BMI growth rates during specific developmental periods and subsequent depressive symptoms differed across cohorts.

Methods: Data were drawn from the Taiwan Birth Cohort Study (TBCS; $n = 18,815$), which followed children born in 2005, and Kids in Taiwan: National Longitudinal Study of Child Development & Care (KIT; $n = 3,843$), representing a more recent birth cohort. In both cohorts, piecewise growth modeling was used to estimate age- and sex-standardized BMI (zBMI) growth rates across distinct developmental periods. Multivariable linear regression models examined associations between period-specific zBMI growth rates and depressive symptoms in late childhood (age 10 in KIT; age 12 in TBCS), adjusting for sociodemographic covariates.

Results: In the KIT cohort, zBMI growth was characterized by four developmental periods: infancy (0–12 months), toddlerhood (12–36 months), early to middle childhood (36–72 months), and late childhood (72–108 months). Only zBMI growth during late childhood was positively associated with depressive symptoms at age 10. In contrast, although four comparable growth periods were identified in the TBCS cohort (with early to middle childhood spanning 36–84 months), zBMI growth rates during none of these periods were associated with depressive symptoms at age 12.

Conclusions: Associations between childhood BMI growth rates and later depressive symptoms differed across birth cohorts. These findings suggest that the mental health implications of BMI growth are cohort and developmentally specific, highlighting the importance of cross-cohort comparisons in life-course research.

6. The Relationship Between Childhood Socioeconomic Status and Health in Emerging Adulthood: The Mediating Role of Adverse Childhood Experiences

Presenter: Wan-Lin Chiang, University of Taipei

Background: Adverse childhood experiences (ACEs) have been shown to have a profound impact on the physical and mental health of individuals during adulthood. Understanding the socioeconomic factors associated with ACEs can help to identify high-risk groups and potential preventive measures. However, little is known about how childhood socioeconomic status (SES) affects later health through ACEs. This study aims to examine the relationship between childhood SES and health outcomes in emerging adulthood and the mediating effect of ACEs.

Methods: A random cluster sampling method was used to select college students aged ≥ 18 from selected universities in Taiwan. We undertook a cross-sectional online survey, where participants were asked to self-report their childhood SES, ACEs, and current health status. An ACEs measuring tool was developed by translating and revising an expanded ACEs questionnaire, which includes 31 ACEs. The outcomes of this study include self-rated health, chronic diseases, and psychological issues related to emerging adulthood. Regression models were employed to assess the correlation between childhood SES and outcomes, and the mediation effect of ACEs was verified.

Results: Our results showed a substantial proportion of the sample (77.7%) reported experiencing ACEs, with a mean of 3.74 events. Notably, 20.7% had experienced 4–6 ACEs and 19.5% reported 7 or more. Participants from families with low SES were at significantly greater risk of both experiencing ACEs and accumulating a higher number of events. These individuals demonstrated poorer health outcomes during emerging adulthood, including a higher prevalence of fair/poor self-rated health, increased rates of chronic disease, more physically and mentally unhealthy days, and lower psychological development scores. Mediation analyses further indicated ACEs accounting for a substantial proportion of the childhood SES–health association.

Conclusion: The findings of this study could guide policies aimed at preventing ACEs and early-life interventions promoting health across the life course.

7. Childcare Attendance and Early BMI Trajectories: A Comparative Study of France and the United Kingdom

Presenter: Laura Ciavarella, University of Lausanne

Childhood overweight and obesity remain major public health concerns. Evidence indicates that differences in weight status emerge early in life, making early childhood a critical period for weight trajectory development. Childcare attendance represents an important component of children's early experiences, yet cross-national longitudinal evidence describing weight trajectories according to childcare exposure remains limited.

This descriptive comparative study draws on longitudinal data from two nationally representative birth cohorts: ELFE (France) and the Millennium Cohort Study (United Kingdom). The analytic sample comprises children with repeated BMI measurements in early childhood. Children were classified into two groups: attendance in formal childcare and no childcare. Harmonized variables were used to ensure comparability across cohorts. Country-specific longitudinal growth models, alongside descriptive statistics, were employed to characterize BMI levels and growth patterns within and between countries. BMI trajectories are presented by childcare attendance within each country. Variations in baseline BMI and subsequent growth patterns are examined across early childhood, with cross-national comparisons between France and the United Kingdom.

By documenting early-life BMI trajectories in two nationally comparable cohorts, this study provides descriptive cross-national evidence on patterns of weight development during a critical stage of the life course.

8. Institutional Legacies and Contemporary Mobility: Examining Historical Covenants and Access to Parks in the Twin Cities

Presenter: Sierra Clark, University of Minnesota

The “Minnesota Paradox” is a phenomenon whereby, on aggregate, the state outperforms most others on various health and economic indicators, while simultaneously demonstrating some of the starkest racial inequalities in the United States; this case demonstrates the persistence of racial stratification processes across generations. These disparities are partially explained by decades of structural decisions that concentrated resources in white neighborhoods, with racial covenants being an institutional mechanism through which this dynamic was achieved in Minnesota. Racial covenants are clauses in property deeds that forbade non-white buyers from acquiring said property, effectively linking racial exclusivity to property value. Racial covenants became unenforceable in 1968, but their effects persist; scholars have documented links between historical racial covenants and contemporary intergenerational mobility, tree canopy, and health.

This research has documented the ways in which people who reside in previously covenanted areas still experience a wide range of benefits, while those who reside in non-covenanted areas still experience structured disadvantages. This paper extends this line of inquiry to examine the relationship between the racialized organization of space established by racial covenants and how people move through space today, particularly, how they encounter public parks. Using covenant data from Mapping Prejudice and 2018-2022 cell-phone mobility data from SafeGraph, I examine the impact that historical racial covenants had on contemporary mobility in the Twin Cities. Here, I estimate how historical covenant concentration in the area surrounding parks is associated with the monthly park-level visit counts. Further, I estimate this association separately for visitors who originate from Black versus White sending census-block groups. I use Bayesian multilevel regression models to estimate the counterfactual quantities needed for this approach. This paper illuminates how historical, spatial legacies of racial covenants shape contemporary access to public space.

9. Generational Caregiving and Health-Related Quality of Life: A Cross-Sectional Study Using Data from the MIRAiGEN Study

Presenter: Vanessa De Rubeis, McMaster University

Co-authors: Andrea Gonzalez, Divya Joshi, Meghan Kenny, Louise Lafortune, Parminder Raina, McMaster University

Introduction: As populations age, multiple generations are living at once, giving rise to complex caregiving responsibilities. The objectives of this study were to describe generational caregiving and to explore the association between generational caregiving and health-related quality of life.

Methods: Baseline data from the MIRA-intergenerational (MIRA-iGEN) study, a longitudinal intergenerational research platform, were used for this cross-sectional study. Participants reported on caregiving they provided, and health-related quality of life was assessed using the 12-Item Short Form Health Survey (SF-12), which captures both physical and mental health components. Descriptive statistics were used to describe caregiving, and linear regression was used to estimate beta coefficients and 95% confidence intervals.

Results: In total, 3,040 participants aged 45 years and older were included. Of these, 26% reported providing intergenerational caregiving, and 3% reported providing bidirectional caregiving, defined as care provided to both parents/grandparents and children/grandchildren. Most types of caregiving were associated with worse mental health-related quality of life, with the strongest association for those who provided bidirectional care ($\beta = -3.43$; 95% CI: -5.26, -1.61). Caregiving was not found to be associated with physical-health related quality of life.

Discussion: Intergenerational caregiving and the associated demands will become an increasing determinant of well-being throughout the aging process. These findings underscore the need for targeted policies and interventions to support caregiver mental health, particularly among adults navigating caregiving across multiple generations.

10. Understanding if a Woman's Intention to Breastfeed Translates to Practice: A Qualitative Longitudinal Research Study in the Northwest of England

Presenter: Seóna Dunne, University of Chester

Co-authors: Kate Knight, Paul Bissell, University of Chester

This qualitative longitudinal study investigated the intentions of 15 women aged 18 – 40 years living in North West (NW) England to breastfeed. It explored factors, including personal and social, through semi-structured interviews, that motivated and encouraged these women to continue to breastfeed their child; looking at how their intention translated to practice. These women were interviewed at three time points, 28 & 36 weeks gestation & eight to ten weeks post-partum via MS Teams.

This study follows a qualitative research design using an interpretative paradigm including the Interpretative Phenomenological Approach (IPA), which in qualitative methodology, allows researchers to explore participant's experiences and understandings and for that data to uncover participant's reality; adding a novel and unique insight to understanding a phenomenon. Highlighting the suitability of this approach to understanding meanings and experiences of breastfeeding to women and mothers in this study. Noting that there is limited guidance in the literature using IPA over a period of time (known as Longitudinal IPA (LIPA)) to capture participant's experiences and meanings (Farr & Nizza, 2019); thus providing an opportunity for this study to contribute to the limited literature base.

Data from the 2023/2024 year, shows 62% of babies in the NW of England received breastmilk as their first feed in comparison to 72% of babies nationally (NHS England, 2025). At the six-to-eight-week health check, only 46% of these babies received breastmilk versus the England average of 53% (NHS England, 2025). Data collection commenced in March 2025 with anticipated completion in March 2026. Data is currently being transcribed and following an IPA method of analysis. Thus, adding to the limited evidence base. Following this study any recommendations aim to provide further understanding of the infant feeding needs of pregnant and post-natal women and how they can be appropriately supported.

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11. Life-Course Determinants of Educational Attainment: Cognition, Family Background, and Genetic Propensity

Presenter: Malin Ericsson, Karolinska Institutet

Co-author: Miriam Mosing, Karolinska Institutet

Background: Educational attainment is a key determinant of lifecourse social and health outcomes. However, there remain uncertainties regarding the relative importance of cognitive ability, family socioeconomic background, and genetic propensity for education, as well as how these influences may vary across birth cohorts characterized by expanding educational opportunities.

Methods: Using data from the Swedish Twin Registry, we examined predictors of educational attainment across birth cohorts. First, we analyzed conscription-based cognitive ability and attained education among men born between 1935 and 1958 (n = 13,801). Second, we used data from the Screening Across the Lifespan of Twins (SALT) study (birth years 1886–1958, n = 44,919) to examine correlations between a polygenic index for educational attainment (PGIEdu) and attained education across parental social class and sex. Additional analyses evaluated concordance and discordance between PGIEdu and parental social class in relation to educational attainment.

Results: The association between cognitive ability and educational attainment declined across birth cohorts. When stratified by parental social class, these associations attenuated over time, with the steepest decline observed among individuals from higher social class backgrounds. In the SALT cohort, correlations between PGIEdu and attained education were similar across parental social class groups among men, whereas among women, correlations were strongest in higher social class groups and weakest in lower social class groups. Analyses of concordance and discordance between PGIEdu and parental social class indicated that higher genetic propensity for education was associated with higher educational attainment regardless of family social class.

Conclusions: These findings suggest that the relative contributions of cognitive ability, family background, and genetic propensity to educational attainment have shifted across cohorts. As educational opportunities expanded, genetic propensity for education appears to have become increasingly important for educational attainment, while the influence of family social background has weakened.

12. Follow-Up of Long-Term Outcomes and Well-Being After Different Early-Life Conditions (FLOW): Protocol of a Prospective Cohort Study

Presenter: Jessica Fervença Ramos, University Children's Hospital Zurich

Co-authors: Céline J. Zeller, Nadine Jait, Cornelia F. Hagmann, Beatrice Latal, Oskar Jenni, Flavia M. Wehrle, University Children's Hospital Zurich

Background: Advances in medical care have led to a growing number of survivors of neonatal critical illness, including individuals born very preterm and individuals with complex congenital heart disease. Existing literature indicates that both child and adult survivors of such critical early-life conditions face a high risk for neurodevelopmental sequelae. However, to date, few longitudinal studies have examined developmental trajectories from childhood into adulthood in this population.

Objectives: The FLOW Study addresses this critical research gap by bridging different developmental periods from childhood to young adulthood. With that, the project aims to better understand the long-term development of survivors of neonatal critical illness.

Methods: The FLOW Study extends two established cohort studies of individuals with critical early-life conditions who have been assessed repeatedly from birth through school age. The current assessment wave will recruit 200 individuals born very preterm, 100 individuals with complex congenital heart disease, and 250 healthy controls who will be assessed between 14 and 22 years of age. A comprehensive assessment battery will be used to evaluate physical, motor, cognitive, and social domains of health and development (e.g., brain MRI, Zurich Neuromotor Assessment, Wechsler Child/Adult Intelligence Scale, Strengths and Difficulties Questionnaire). Linear mixed models and other statistical approaches will be used to investigate individual developmental trajectories and differences in development between groups from birth into young adulthood.

Discussion: This research project enables the investigation of the crucial transition phase from adolescence to young adulthood and may identify targets for interventions that support the long-term development in survivors of critical early-life conditions.

13. Era-Specific Patterns of Lifelong Singlehood: Evidence from Occupational Life Histories in Hungary

Presenter: Ágoston Horváth, Hungarian Demographic Research Institute

Co-authors: Zsuzsanna Makay, Zsuzsanna Veroszta, Hungarian Demographic Research Institute

Aim of the study: Previous research on the prevalence and consequences of lifelong singlehood suggests that the causes, social meanings, and labour market implications of singlehood have changed substantially over time, with different patterns observed for women and men across educational and occupational groups. This study examines era-specific patterns of lifelong singlehood in Hungary over the past 100 years, focusing on how remaining single throughout adulthood is associated with occupational trajectories for men and women across different historical periods.

Data and methods: The analysis draws on three data sources. Two largescale historical datasets originate from occupational mobility surveys conducted by the Hungarian Central Statistical Office in 1963 and 1983, while the third source is the Hungarian Generations and Gender Survey, a longitudinal database comprising 5 waves of data collection. From each database, we select individuals aged 45 and over who have never married, have no co-resident partner, and have no children. The historical surveys provide long retrospective occupational histories reaching back to the early twentieth century (survey of 1963: $N \approx 300$) and to the post-war period (survey of 1983: $N \approx 450$), while the GGS captures later life course stages in a longitudinal framework after the regime change (2001-2017, $N \approx 200$). Given the small size of the analytical subsamples, the study applies descriptive, pattern-oriented analytical approaches.

Expected outcomes: Drawing on the comparative life course design, the analyses are expected to reveal era-specific and gendered patterns in lifelong singlehood. Earlier cohorts, which have lived during the socialist era are expected to display relatively stable occupational pathways, whereas later cohorts may be characterised by greater heterogeneity and increased intensity of occupational mobility. Indeed, shifts in the post-2000s economic landscape and the broader acceleration of social life may have transformed the professional lives of lifelong singles, resulting in career paths marked by increased mobility and rapid transition.

14. Internet Addiction and Well-being Among Taiwanese i - Generation Adolescents: Digital Parenting Profiles as Contextual Moderators

Presenter: Tzu-Shen Lin, Academic Sinica

In the rapidly evolving digital era, the "i-Generation" adolescents face unprecedented challenges related to problematic technology use and its impact on their long-term well-being. Drawing on a robust three-wave prospective design from the Taiwan i-Generation Panel Study ($N = 6,507$), this research investigated the longitudinal associations between multidimensional internet addiction and subsequent psychological adjustment, specifically depressive symptoms and life satisfaction. Moving beyond traditional variable-centered approaches, this study employed a one-step mixture modeling framework to identify latent digital parenting profiles at Wave 2 and examine their roles as contextual moderators between Wave 1 internet addiction and Wave 3 well-being outcomes. Latent profile analysis identified four distinct digital parenting environments: Active Engagement, Share and Encourage, Less Involvement, and Restrict and Oppose.

The results underscored the "dimensional specificity" of both addiction and parental moderation. While internet-related functional problems were robust longitudinal predictors of declined life satisfaction, tolerance—often associated with the sheer intensity of use—showed no significant impact across all profiles, suggesting that functional dysfunction rather than usage frequency is the critical driver of poor psychological outcomes. Crucially, a "double-edged sword" effect was observed within the Active Engagement profile: high parental vigilance and involvement buffered the negative impact of compulsive symptoms on life satisfaction but paradoxically exacerbated the decline in well-being when adolescents faced severe internet-related functional impairments. Conversely, the Share and Encourage profile served as a consistent protective buffer against depressive symptoms, whereas the Less Involvement profile left adolescents most vulnerable to psychological distress. These findings challenge the assumption that intensive parental regulation is universally beneficial and highlight the need for autonomy-supportive and participatory digital parenting to safeguard adolescent quality of life in a digitalized society.

15. The Impact of Longer Schooling on Brain Ageing: Evidence from a Quasi-Experiment in the UK Biobank

Presenter: Pavithra Manoj, London School of Economics and Political Science

Co-authors: Mengyao Wang, Yale University; Stella Tsoli, Emilie Courtin, London School of Economics and Political Science; James Cole, University College London

A vast body of research has examined the relationship between educational attainment, cognitive ageing, and brain health. These studies suggest that education might contribute to cognitive reserve. However, most evidence remains correlational and susceptible to selection bias and reverse causality. To address these limitations, we propose using the 1972 Raising of the School Leaving Age (ROSLA) reform in Great Britain, which in school leaving from 15 to 16 for individuals born since 1st September 1957, as a natural experiment to estimate the causal effect of education on brain ageing.

By exploiting the policy-induced variation in schooling duration using data from UK Biobank (UKB), we aim to isolate the effects of education on brain ageing from confounding factors. Brain ageing will be measured using innovative Brain Age estimates derived from pretrained neural network models-DeepBrainNet and MIDI which uses brain scans as input. We will compute the Brain Age Difference (predicted brain age minus chronological age) as our primary outcome, where a smaller difference indicates healthier brain ageing. To estimate causal effects, we will implement a Regression Discontinuity Design (RDD), comparing individuals born just before and after the reform threshold. We will report both the impact of being eligible to and of taking up longer schooling on brain ageing. We will further describe subgroup differences and employ distributional analyses to understand who might benefit the most from longer schooling. This study aims to provide robust causal evidence on how extended education may shape brain health across the life course.

16. Family Structure and Children's Mental Health: The Mediating Role of Parent-Child Relationship Quality

Presenter: Claire Mariano, University of Lausanne

Co-authors: Dawid Gondek, Laura Bernardi, University of Lausanne; Marieke Voorpostel, FORS - University of Lausanne

Family structures in the UK have become increasingly diverse, with notable growth in cohabiting and single-parent households. Evidence consistently shows that children's mental health and wellbeing differ across family structures, with those in stable two-parent families generally experiencing better outcomes than children in single-parent or stepfamily contexts. However, family structure offers only a partial explanation; incorporating relationship quality is essential to understanding variations in children's wellbeing.

By linking family structure with parent-child relationship quality, this study aims to clarify how intact versus non-intact family structures shape children's mental health. Existing research tends to rely on cross-sectional designs and retrospective assessments, restricting causal inference. Addressing these gaps is essential for informing effective clinical and preventive interventions.

Using longitudinal data from Understanding Society's youth questionnaire, this study examines whether family structure (intact vs. non-intact) influences children's mental health and whether parent-child relationship quality mediates this effect. Family structure is observed at T1, relationship quality at T2 (frequency of quarrels and frequency of talking about important matters with mother/father), and mental health at T3 using the Strengths and Difficulties Questionnaire (SDQ). Mediation will be tested using causal mediation analysis with mixed-effects models. Grounded in family stress and family systems theories, we expect that children in non-intact families experience less favorable family climates following parental separation, which may affect their mental health through lower quality parent-child relationships.

Preliminary analyses suggest that both the frequency of quarrels and father-child communication about important matters may mediate the association between family structure and children's mental health. No comparable mediating effects were observed for mother-child relationships. Final results will provide evidence to inform more targeted family-based interventions aimed at promoting children's mental health across diverse family contexts.

17. Hypertension a Marker of the Micro-Epidemiologic Transition in Aging HIV Populations in East Africa (AFRICOS, 2013–2023)

Presenter: Denis Mayambala, Centre Suisse de Recherches Scientifiques (Côte d'Ivoire)

Co-authors: Stephen Ojjambo Wandera, Charlese Lwanga, Hannah Kibuuka, Makerere University; Dan Haydon, University of Glasgow; Bassirou Bonfoh, Sayoki G. Mfinanga, Francis Sena Nuvey, Centre Suisse de Recherches Scientifiques (Côte d'Ivoire)

Although mortality among people living with HIV (PLHIV) in sub-Saharan Africa has decreased markedly with the scale-up of antiretroviral therapy (ART), the demographic consequences of this success remain underexamined. Using ten years of longitudinal data from the African Cohort Study (AFRICOS; 2013–2023) in Kenya, Tanzania, and Uganda, we estimated the contribution of hypertension to all-cause mortality among adults aged 40 years and older. We combine descriptive decremental life-table analysis with discrete-time logistic regression, applying both lagged and exponentially weighted moving-average (EWMA) exposure models to capture cumulative risk. Hypertension was highly prevalent in the cohort affecting 60% of participants during follow-up, and was independently associated with higher mortality (adjusted odds ratio \approx 2–3 across models). Life-table estimates indicated a cumulative excess probability of death of about 4% for hypertensive participants after nine years, rising to 8% among men and 11% among those in the underweight strata. Mortality differentials by age, sex, and body-mass index revealed selective survival, with frailer, underweight, and virally unsuppressed individuals dying early, leaving a progressively older, heavier, and more female cohort over time. Cross-national comparison showed Tanzania furthest along and Uganda earliest in the transition toward chronic disease-related mortality.

These findings highlight a demographic transformation of the HIV epidemic in East Africa, where mortality among PLHIV increasingly reflects a growing influence of chronic diseases in addition to infection control. Hypertension has become a key driver of excess mortality and a demographic indicator of the region's compressed health transition.

18. Educational Stratification and the "Black Box" of Private High Schools: A Longitudinal Analysis of Students' Allocation in Japan

Presenters: Hiroki Nakanishi, Momoyama Gakuin University (Aka St. Andrew's University); Haruka Okubo, Osaka Metropolitan University

The Japanese high school education system is traditionally characterized by public school dominance. In most regions, highly selective public schools occupy the top of the institutional hierarchy. Consequently, private schools—excluding a small number of elite institutions—have historically functioned as a "safety net" for lower-achieving students who failed public school entrance exams. Therefore, Japanese educational sociology has consistently noted that students in the private sector tend to have lower academic achievement and lower socioeconomic status (SES) compared to their public-school counterparts. Recently, however, this structure has become increasingly complex. As the number of students experiencing school refusal (*futoko*) in primary and lower secondary education reaches record highs, private correspondence high schools (and their affiliated "support schools") have rapidly expanded as the primary alternative.

The most significant academic challenge is that this growing student population remains a "black box" in sociological terms. Because these students do not commute to physical campuses daily, they are extremely difficult to capture through traditional school-based sampling. It remains unclear whether this sector serves as a new pocket of disadvantage for low-SES groups or an alternative strategy for diverse learners.

This study addresses this gap by utilizing longitudinal panel data tracking students from primary and lower secondary school. By analyzing these trajectories, I aim to clarify how school refusal experiences and family background dictate the transition to correspondence education. This approach will visualize the hierarchical background of these "invisible students" and reevaluate the mechanisms of educational inequality and social reproduction in contemporary Japan.

19. Young Adults on Childhood Experiences of Induced Minor Earthquakes: The Impact of Chronic Human-Made Disaster in the Netherlands

Presenter: Vera Nomden, University of Groningen

Co-authors: Elianne Zijlstra, Wendy J. Post, University of Groningen; Ingrid D.C. van Balkom, University Medical Centre Groningen

Insufficiently managed human-made hazards can evolve into chronic disasters, whose consequences, though not immediately destructive, may significantly destabilise the living environment of communities, including those of children. This study explores the long-term impact of childhood exposure to the consequences of chronic human-made hazards. This is accomplished by analysing the lived experiences of 18 young adults (aged 18-30, M=22.34) who, from childhood onwards, have been subjected to the consequences of minor induced earthquakes in Groningen, the Netherlands. Qualitative analysis of episodic interviews led to establishing four main themes: 1) unstable living conditions, 2) management efforts, 3) social responses and 4) meaning making. Findings showed that an unstable wider social and physical environment was experienced by all participants and that perceived unjust situations, related to collective disadvantage, contributed to ongoing institutional distrust. Some participants additionally experienced an unstable home environment, in which parents had to raise them under stressful circumstances related to prolonged and frustrating home repair procedures. This impact generally decreased as participants moved out of their parental homes, however some young adults still struggle with their well-being. This study proposes that chronic disaster impact can remain hidden if assessment does not include young people's views on disaster management. It highlights the need for monitoring the effects of disaster management to avoid long-term consequences and promote citizenship. (This is part of a larger longitudinal study on children (between 7 and 16) experiencing the consequences of the earthquakes in Groningen).

20. Childhood BMI and Educational Outcomes in Japan: Evidence from the Japan Child Panel Survey

Presenter: Kayo Nozaki, Osaka University of Economics

Childhood obesity continues to rise worldwide. In Japan, the prevalence of overweight and obesity among elementary and junior high school students increased sharply in 2020 during the COVID-19 pandemic and has remained elevated. While many studies document the health risks of excess weight, fewer examine whether children's weight status is related to educational outcomes.

This study investigates the association between children's BMI and educational outcomes, considering potential mechanisms through physical health, mental health (e.g., stigma and self-esteem), and time use (e.g., reduced outdoor activity). Using longitudinal data that follow children from 2010 onward, we analyze the relationship between BMI and (i) mathematics and Japanese-language test scores and (ii) subjective wellbeing.

We use the Japan Child Panel Survey (JCPS) conducted by Keio University. We estimate ordinary least squares models and individual fixed-effects models to account for time-invariant unobserved heterogeneity. In baseline specifications, BMI is negatively correlated with test scores. However, after controlling for family socioeconomic background, including parental income and education, the association largely disappears. In fixed-effects models, the relationship is largely absent. We obtain similar results when using subjective wellbeing (and related measures such as self-esteem) as outcomes.

Overall, the findings suggest that the observed cross-sectional link between higher BMI and lower academic performance or well-being is largely explained by family background and unobserved individual characteristics rather than a direct effect of BMI. The results highlight the importance of accounting for socioeconomic conditions when interpreting associations between child health and educational outcomes.

21. Mapping Early Mid-Life Trajectories and Ultimate Childlessness: A Multichannel Sequence Analysis in Finland and Belgium

Presenter: Alice Yolann Rees, University of Louvain

Co-author: Marika Jalovaara, University of Turku

Background: The transition to adulthood has become increasingly diverse, with delays in residential independence, changing partnerships, and economic uncertainty contributing to varied life course trajectories including the entry into parenthood. Yet, little is known about how these multidimensional trajectories relate to ultimate childlessness across different institutional contexts.

Objective: This paper identifies typical early mid-life trajectories of partnership, income, and residential independence among men and women in two contrasting welfare regimes: Finland and Belgium, and explores how these are associated with remaining childless.

Methods: Using linked register and census data for cohorts born in 1974–75, followed from their early 30s to mid-40s, we apply multichannel sequence and cluster analysis to identify typical life course patterns across three domains. We then use linear regression models to assess how remaining childless, education and place of residence are associated with the degree of alignment with each trajectory type, as measured by representativeness scores (Helske et al., 2024).

Results: Five trajectory types were identified in each country, including patterns of early and stable partnerships and others marked by delayed transitions. Remaining childless was mostly associated with later residential independence and the near absence of partnership formation. In Finland, a distinct cluster highlights how being single after a separation is also associated with childlessness. In contrast, stable marriage pathways were strongly associated with parenthood.

Contribution: The study demonstrates how the interplay of partnership, residential independence and income trajectories, shaped by education and institutional context, produces distinct pathways associated with childlessness in early mid-life.

22. Mental Health Trajectories of Children and Adolescents Up to Five Years After the Onset of the COVID-19 Pandemic: A Longitudinal Study

Presenter: Viviane Richard, Geneva University Hospitals

Co-authors: Elsa Lorthe, HES-SO Geneva; Roxane Dumont, Nicolas Bovio, Natalia Fernandez, Mayssam Nehme, Rémy P. Barbe, Klara M. Posfay-Barbe, Idris Guessous; Silvia Stringhini, The University of British Columbia

Background: The COVID-19 pandemic had heterogeneous effects on the mental health of children and adolescents according to individual experiences, with some consequences persisting beyond the lifting of restrictions. We aimed to examine whether the perceived impact of the COVID-19 pandemic was associated with 2022-2025 trajectories of mental health difficulties in children and adolescents, and to identify associated risk and protective factors.

Methods: Data was drawn from the population-based SEROCovKIDS cohort study conducted in Geneva, Switzerland. The multidimensional perceived impact of the pandemic, as well as potential socio-demographic, health, family, social, and behavioral risk and protective factors were parent-reported at baseline, in 2022. Mental health difficulties were collected annually between 2022 and 2025. Generalized mixed effects models were used to estimate mental health trajectories by pandemic impact, and to assess risk and protective factors.

Results: Of 1907 children aged 2-17 years, 9.3% and 7.9% had experienced a negative and positive pandemic impact, respectively. Compared to their unaffected peers, negatively impacted children had more mental health difficulties in 2022 (incidence rate ratio [IRR]: 1.51; 95% confidence interval [CI]: 1.34-1.70) and improving trends between 2022 and 2025 (IRR: 0.97; 95% CI: 0.95-1.01). An average-to-poor financial situation was related to a milder mental health response to a negative impact in 2022 (IRR: 0.64; 95% CI: 0.46-0.89). A positive pandemic impact tended to be associated with higher difficulties in 7-12 years old children only (IRR: 1.36; 95% CI: 0.98-1.89) in 2022, with stable trends over time.

Conclusion: About five years after the onset of COVID-19, the lasting mental health difficulties presented by negatively impacted children had largely improved. Although globally reassuring, these findings call for proactive measures to prevent such long-term consequences on youth mental health in the event of future crises.

23. The Impact of Teenage Dating Violence on Developmental Trajectories of Depression

Presenter: Catriona Ross, Ulster University

Co-authors: Orla McBride, Ellen Henderson, Gary Adamson, Ulster University

Objectives: 1) Determine the developmental trajectories of depression across adolescence, emerging adulthood and adulthood, 2) Explore the impact of teenage dating violence (TDV) on these developmental trajectories of depression.

Design: Secondary data analysis was performed on the National Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative U.S. sample. Longitudinal data allowed investigation into the factors influencing the heterogeneity of depression across the developmental stages of adolescence, emerging adulthood and adulthood.

Methods: The sample (N=6116) was inclusive of both males and females (54.6%), aged between 12 and 32 years. Data for depression were present at waves 1-4. Five TDV responses were collected in Wave 2 during adolescence. Growth mixture modelling and multinomial logistic regression were performed to establish depression trajectories and determine the impact (if any) of TDV.

Results: Results indicated five substantially different and novel trajectories of depression across the life course. The largest group (minimal; 66%) presented low and stable levels of depression. The other four groups had elevated levels of depression, with emerging adulthood highlighting trajectory variation. Compared to being in the minimal group being publicly disrespected increased the risk of being in the Emerging Adulthood trough (OR=2.177), the moderate (OR=1.463) and the persistently high (OR=2.080) groups. Being sworn at increased the risk of being in the moderate group (OR=2.606), and being threatened with violence increased the risk of being in the persistently high (OR=2.315) group.

Conclusion: The trajectories demonstrate the heterogeneity of depression across the life course and identify aspects of TDV associated with them. Emotional, or psychological, abuse in the form of being publicly disrespected, being sworn at and being threatened with violence, is most concerning for an elevated risk of depression. The impact of psychological abuse in teenage relationships raises concern and warrants increased awareness and prevention to ensure mental well-being.

24. Structured Reconfigurations of Occupational Engagement in Later Life: Profile Transitions and Quality of Life in the French Sample of SHARE

Presenter: Muriel Sahraoui, University Paris-Est Créteil

Co-authors: Meoin Hagege, Marie Laurent, University Paris-Est Creteil; Emmanuelle Cambois, Institut National D'Études Démographiques – France; Florence Canouï-Poitaine, Hôpitaux de Paris

Healthy ageing involves maintaining meaningful engagement in everyday occupations, not merely avoiding disease. While prior research has linked specific activities to healthy ageing, less is known about how configurations of occupational engagement evolve over time and how transitions between profiles affect quality of life. Drawing on occupational science and lifecourse perspectives, this study examines whether changes in occupational profiles reflect decline or adaptive reconfiguration, and whether their consequences depend on initial health status.

We used longitudinal data from the French sample of the Survey of Health, Ageing and Retirement in Europe (SHARE), waves 5–9 (2013–2023). Occupational profiles were identified at wave 5 (n = 4,505) using Partitioning Around Medoids clustering based on diversity and frequency of engagement across social, family, cognitive and physical activity domains. Individuals were followed over ten years to track transitions between profiles. Changes in quality of life were measured using the CASP-12 score (Δ CASP between consecutive waves). Linear panel regressions with clustered standard errors examined associations between profile transitions and changes in CASP, with attention to baseline self-rated health. Five occupational profiles were identified, ranging from home-centered engagement to highly diversified and socially active configurations. Transitions differed substantially according to their direction. Moves toward family-centered or less diversified profiles were associated with significant declines in CASP, whereas transitions toward socially diversified or community-oriented profiles were neutral or protective. Stability within highly engaged profiles was linked to more favorable quality-of-life trajectories. Baseline health strongly structured outcomes: individuals in poorer health experienced declines in quality of life regardless of transition type, while those in good health maintained or improved CASP in several pathways. Occupational engagement in later life reflects structured yet dynamic reconfigurations rather than linear withdrawal. The impact of change depends on the direction of transitions and initial health status, highlighting the value of integrating occupational science within life-course analyses of ageing.

25. Profiles and Progress Reports of JNIOOSH Cohort Study and Findings of Preliminary Analyses

Presenter: Yuki Sato, National Institute of Occupational Safety and Health Japan

Co-authors: Masaya Takahashi, Tomoaki Matsuo, Takeshi Sasaki, National Institute of Occupational Safety and Health Japan; Kenji Fukasawa, Advantage Risk Management Co., Ltd., Japan

The National Institute of Occupational Safety and Health (JNIOOSH) Occupational Cohort Study aims to epidemiologically clarify the relationship between occupational factors and karoshi, overworked-related diseases (such as brain disorders, heart disease, and mental disorders) from both cross-sectional and longitudinal perspectives through a large-scale cohort study of workers. The final goal is to contribute the findings from this study to the health management and working conditions of workers, to prevent death from overwork. The cohort study started in earnest in 2017 and has conducted surveys every year, collecting data of working conditions (monthly working hours, holidays, etc.), health check-ups and workplace stress checks required by laws, and complimentary questionnaires.

The workers involved in the survey are employed by Japanese companies, workers of various backgrounds participated, not limited by gender, age, employment status, or occupation. The survey will close in March 2025, with the cumulative number of participants reaching approximately 500,000. This presentation will introduce the detailed content of the cohort study, outline cohort's progress and participant characteristics. Findings from preliminary data analysis, effects of long working hours on mental and physical health, and the relationship between stress changes and physical outcomes based on longitudinal data, will also be presented.

26. Predictors and Criminal Outcomes of Neighborhood Residential Instability Sequences:

A 30-year Longitudinal Study

Presenter: Dale M. Stack, Concordia University

Co-authors: Marie-Pier Paré-Ruel, Lisa A. Serbin, Concordia University

Past results indicate that exposure to neighborhood residential instability increases the likelihood of criminal conviction across the lifespan. To address gaps in our knowledge on the aforementioned association, our team examined the order (sequencing) in which changes in neighborhood circumstances occurred across the lifespan. Specifically, we uncovered longitudinal sequences of exposure to residential instability in 4110 participants (50.1% boys) from Montreal (Canada) assessed at 5-year intervals between childhood and middle adulthood. Residential instability quintiles were estimated using census data and entered as time-specific states into an optimal matching analysis to obtain intra-individual sequences. These sequences were integrated into a cluster analysis that uncovered four common sequences experienced by participants. Clusters 1 (40.1%) and 2 (26.4%) captured participants who remained in unstable neighborhoods (>80th and 60th–80th percentiles, respectively) throughout their lifespan. Clusters 3 (17.9%) and 4 (15.6%) included participants who spent their childhood and adolescence in unstable neighborhoods but had moved into moderately or extremely stable neighborhoods (20th–60th and < 20th percentiles, respectively) by their forties. Multinomial regression analyses with sex, childhood aggression, and childhood social withdrawal framed as predictors of cluster membership revealed that boys, aggressive children, and socially withdrawn children belonged more often to clusters characterized by a lack of social mobility. We compared conviction rates across clusters using Zero-inflated Poisson regression analyses. A lack of betterment in neighborhood circumstances predicted increased conviction rates. In contrast, moderate improvements in neighborhood circumstances were linked to decreased conviction rates, more so than drastic improvements were. Given that moderate improvements occurred about 5 years earlier than drastic improvements, the timing of the changes experienced in neighborhood circumstances seemed more important in determining criminal outcomes than the degree of betterment. These results emphasize the need for neighborhood-directed policies designed to help Canadian youth with personal vulnerabilities who live in precarious situations.

27. How Do Disadvantages Cluster Among Older Europeans? Evidence from SHARE

Presenter: Wouter Van de Moer, University of Antwerp

Co-author: Koen Decancq, University of Antwerp

This poster is based on a research paper co-authored for the European Commission. It begins with the observation that most empirical research on cumulative disadvantage is limited to the effects of socio-economic background on unidimensional health outcomes. By contrast, the literature on multidimensional well-being in later life with frameworks such as successful ageing, offers a complete multidimensional well-being view. However, it lacks the dynamic perspective offered by cumulative disadvantage.

To address this gap, the study broadens the concept of cumulative disadvantage. The outcome of cumulative disadvantage is defined as individuals consistently ranking in the bottom group across well-being dimensions at the same time. This is referred to as clustered disadvantage. The analysis uses panel data from the Survey of Health, Ageing and Retirement in Europe, covering 27 European countries across four waves (2011-2022). The aim of the analysis is twofold: (1) measuring how widespread clustered disadvantage is among people aged 65 and over, and (2) disentangling the confounding characteristics defining clustered disadvantage.

Around 24% of older Europeans fall below the median across all assessed well-being dimensions, thus facing clustered disadvantage. The level of clustering increased steadily until COVID, after which it dropped markedly. Contrary to the hypothesis that the pandemic would intensify clustering, our evidence suggests it operated more as a random shock. At the individual level, once older people enter clustered disadvantage, it is rare for them to transition out of it, and they also face substantially higher mortality risks. Based on these results, the research subsequently isolates the relevant socio-demographic characteristics in the life course linked to clustered disadvantage in later life using quantile regression. This reveals spurious correlations where some higher-risk groups (e.g. women) experience clustered disadvantage despite, rather than because of their group characteristic.

28. Studying the End-of-Life Trajectories of Older People: Inclusion and Retention in Longitudinal Research in the Final Life Course Stage

Presenter: Casper Van den Bossche, Vrije Universiteit Brussel

Co-authors: Joran Geeraerts, Aline De Vleminck, Lieve Van den Block, Lara Pivodic, Vrije Universiteit Brussel

Introduction: A growing number of people die in old age and from serious chronic diseases. Towards death, many experience fluctuations in health and well-being, which are still poorly understood. However, longitudinal studies with people at the end of life are challenged by prognostic uncertainty, declining health, and difficult recruitment and retention. We describe the methods and feasibility indicators of an innovative longitudinal study designed to investigate older people's well-being in end-of-life trajectories.

Methods: The ERC-funded project TRAJECT developed a longitudinal observational study measuring patient-reported well-being (covering physical, psychological, social and existential domains). From clinical settings in Belgium, we will include 280 participants aged 70+ who are nearing the end-of-life with chronic illnesses. Assessments are done at baseline and every two months over 12 months or until death. Relatives of deceased participants complete a mortality follow-back survey covering the last three months of the deceased's life. We implemented several procedures to enhance feasibility and retention, such as administering questionnaires in structured interviews and using questionnaire short-forms.

Results: Recruitment started in April 2025. The study has an enrolment rate of 79% (89 enrolled out of 113 invited eligible patients) and counts 257 completed assessments. By February 2026, nine participants died and nine dropped out. The average time to complete the questionnaire was 53 minutes. At only 4 assessments, the researcher needed to interrupt the questionnaire and resume later due to participant burden. Common reasons for refusal to participate or drop-out were lack of time and worsening health. All invited bereaved relatives agreed to participate in the mortality follow-back survey.

Conclusion: Despite many methodology-related challenges and risks, our longitudinal study of older people's end-of-life trajectories has showed good feasibility and acceptability. It will allow a unique, fine-grained prospective examination of changes in well-being in the last phase of life as reported by older people.

KEYNOTE PRESENTATION**The Life Course and Socially Constructed Bodies: Understanding Health Inequalities Through Intersectionality and Embodiment**

Presenter: Michelle Kelly-Irving, Inserm Research Director, Equity team, CERPOP, University of Toulouse

Embodiment is one of the most fundamental processes that underlies the production of health inequalities over the life course, yet tends to be overlooked, or misunderstood by scientists and health professionals. Understanding how our social world is embodied from early life onwards provides insights into the persistent nature of systemic health inequities, and how to reduce them. This presentation will address two important facets relating to research on health inequalities. First, the relevance of an intersectional framework of analysis to considering the co-constructed nature of social positions, formed at the crossroads of structural systems such as gender, social class and race/ethnicity (etc), and affecting embodied experiences at each stage of life. Second, while our understanding of physiological responses to the socially structured external environment has been aided by the increasing availability of biological data at deeper layers, we also need to examine the social differences in the lived-experience of these internalised responses. Evidence across disciplines suggests that bodily sensations are felt, interpreted, acted upon (or not), and outwardly expressed differently across social groups. This relation to the body is formed through socially situated life course processes. Placing an intersectional lens on our examination of socially patterned bodily responses alongside the socially produced relationship with the body may provide important knowledge on the genesis of health inequalities over the life course.

4A STREAM: CHILD / YOUTH DEVELOPMENT SYMPOSIUM

Adverse Childhood Experiences Across the Life Course: Reserves, Resilience, and Intergenerational Pathways

Chair: Kristjana Einarsdottir, Curtin University

This symposium brings together four complementary studies examining adverse childhood experiences (ACEs) from life course and intergenerational perspectives, highlighting how early adversity shapes health, resilience, and development from pregnancy through childhood into later life.

The symposium begins with the ORIGINS Longitudinal Birth Cohort, one of Australia's largest pregnancy and birth cohorts, outlining its prospective design and value for ACEs research. Building on this, the second presentation investigates intergenerational effects of maternal ACEs and positive childhood experiences on pregnancy, birth, and early childhood outcomes, using linked ORIGINS and administrative data to assess pathways of risk and resilience and the feasibility of universal antenatal ACE screening. The symposium then turns to childhood processes of resilience in the presence of ACEs with an empirical study examining health reserves during childhood and adolescence, using the UK's National Child Development Study. A scoping review complements this by comprehensively assessing the concepts and measures of reserves, as an emerging life course concept and highlighting research gaps to advance this concept in ACEs research. Together, these papers demonstrate integrating early life, childhood, and intergenerational perspectives to advance life course research on adversity and resilience and inform trauma-informed policy and practice.

TALK 1: The ORIGINS Longitudinal Birth Cohort: Advancing Research on Adverse Childhood Experiences

Presenter: Kristjana Einarsdottir, The Kids Research Institute Australia

Co-authors: Jackie Davis, Wesley Billingham, Sarah Whalan, Lisa Gibson, Susan Prescott, Desiree Silva, The Kids Research Institute Australia

Background: ORIGINS is one of the largest contemporary longitudinal pregnancy and birth cohort studies in Australia. Established in 2016, the cohort provides a unique platform to investigate how early-life exposures shape health and development across the life course, including exposure to adverse childhood experiences (ACEs).

Methods and cohort description: ORIGINS is a prospective cohort following families who planned to give birth at Joondalup Health Campus in Perth, Western Australia, between 2016 and 2024. Recruitment was completed in 2024, resulting in a final study population of 22,908 participants, comprising 10,270 mothers, 2,631 partners, and 10,007 children. Data collection spans pregnancy and early childhood and includes repeated questionnaires, biological samples, and clinic assessments capturing pregnancy and delivery outcomes, maternal and child medical conditions, nutrition, environmental exposures, infant feeding practices, and child development.

Opportunities for ACEs research: The breadth and longitudinal nature of ORIGINS data make it particularly well suited to studying ACEs and their developmental origins. Detailed pregnancy, health, and lifestyle questionnaires provide rich information on parental mental health, stress, socioeconomic circumstances, family structure, health behaviours, and environmental exposures, which can be operationalised as early indicators or precursors of childhood adversity. Linkage with perinatal, clinical, and developmental data enables examination of pathways through which early adversity influences physical, cognitive, and psychosocial outcomes across childhood.

Conclusions: ORIGINS represents a powerful resource for life course epidemiology and ACEs research. By enabling detailed, prospective investigation of early-life adversity and resilience, the cohort offers substantial potential to inform prevention strategies and policies aimed at improving child health trajectories and reducing the long-term burden of chronic disease.

TALK 2: Intergenerational Effects of Adverse Childhood Experiences: The Feasibility of Antenatal Screening

Presenter: Kristjana Einarsdottir, The Kids Research Institute Australia

Co-authors: Dana Hince, Desiree Silva, Sarah Whalan, David Lawrence, Rosa Alati, Sharmani Barnard, Gizachew Tessema, Jackie Davis, Lisa Gibson, The Kids Research Institute Australia

Background: Emerging evidence suggests that maternal Adverse childhood experiences ACEs may influence pregnancy, birth outcomes, and child health, while positive childhood experiences (PCEs) may mitigate these risks. Despite growing interest, routine antenatal screening for maternal ACEs is not universally implemented, partly due to limited evidence on intergenerational pathways and modifiable protective factors.

Aim: This study aims to examine the impact of maternal ACEs and PCEs on pregnancy, birth, and early childhood outcomes, and to generate evidence to inform universal antenatal screening and support strategies.

Methods: We will use data from the ORIGINS birth cohort linked with pregnancy and delivery records from the Western Australian Midwives Notification System to investigate associations between maternal ACEs and PCEs and a range of maternal, pregnancy, and child health outcomes. We will assess whether observed effects are mediated by postnatal depression and whether social support moderates or mitigates intergenerational risk.

Expected Outcomes: The project will provide detailed insight into how maternal ACEs and PCEs influence pregnancy and child outcomes, identify key mediating and protective factors, and clarify intergenerational mechanisms of risk and resilience. Findings will be translated into practical, evidence-based guidance for health professionals, supporting the integration of ACE screening into standard antenatal care.

Conclusion: By strengthening the evidence base for universal antenatal ACE screening, this research has the potential to inform early intervention strategies, enhance maternal and child wellbeing, and contribute to breaking cycles of intergenerational disadvantage.

TALK 3: Exploring the Relationship Between Early Childhood Adversities and Health Reserve in Childhood

Presenter: Camille Joannès, CERPOP - University of Toulouse

Co-author: Fé-e Santos, CERPOP - University of Toulouse

Background: The detrimental effects of adverse childhood experiences (ACEs) on subsequent health are now well established. One proposed explanatory pathway involves resource deprivation, conceptualised within the framework of health reserves. Health reserves refer to accumulated resources that enable individuals to adapt to and cope with social, physical, emotional, and cognitive challenges. To date, the short- and medium-term impact of ACEs on the development of health reserves during childhood remains insufficiently explored. This ongoing study aims (i) to construct indicators of physical, socio-emotional, physiological, and cognitive health reserves in childhood and (ii) to examine the association between ACEs and each dimension of these reserves.

Methods: Data will draw from 18,558 participants in the National Child Development Study. Health reserve indicators will be constructed using information collected at ages 11 and 16 based on a glossary of health reserves during childhood. ACEs will be identified based on parental and teacher questionnaires administered at age 7, covering six domains: being in care, physical neglect, contact with probation services, parental separation, family mental illness, and alcohol abuse. These exposures will be summarised into a cumulative ACEs variable (none; one; two or more). Associations between ACEs and health reserve indicators will be explored using descriptive, factorial, and bivariate analyses, followed by multivariable logistic or linear regression models, as appropriate, examining the effect of ACEs on each reserve dimension separately and jointly.

Conclusion: By documenting the early impact of ACEs on the development of health reserves, this study aims to inform the identification of key domains for early health preventive interventions for children who experienced ACEs.

TALK 4: The Use of the Life Course Concept of Reserves in Understanding Resilience Following Adverse Childhood Experiences: A Scoping Review

Presenter: Jeongeun Park, University of Sussex

Co-author: Camille Joannès, CERPOP - University of Toulouse

Background: The life-course concept of reserves, defined as reservoirs of accumulated resources, has received growing attention as one promising explanation for why adverse childhood experiences create health disparities. The conceptual and methodological application of reserves in the context of adverse childhood experiences remains sparse. Hence, this scoping review maps how reserves are (i) conceptualised and (ii) measured within populations with adverse childhood experiences.

Methods: The scoping review was conducted, following the PRISMA-ScR guidelines. The literature retrieved from the eight databases (ASSIA, PubMed, PsycInfo, CINHALL, Social Science Database, Web of Science, ERIC, and Scopus) from inception to July 2025 was screened and assessed according to the exclusion and inclusion criteria. Descriptive and qualitative thematic analysis were employed to analyse the data extracted from the eligible studies.

Results: Out of 436 initially identified papers, 12 studies met the eligibility criteria for analysis. Whilst commonly defined as cumulative capacities or means that mitigate the impact of age related deterioration or adverse life events, reserves were primarily studied in cognitive terms, such as cognitive function mitigating neurological deterioration (46%), along with socioemotional, relational, socio-economic, and physical dimensions. They were largely hypothesised to be depleted in the context of ACEs, shaping poorer ageing-related physical or mental conditions in later life. Except for three studies, reserves were measured in early or middle adulthood, using proxies such as cognitive test results, socioeconomic status, and counts of mental health disorders.

Conclusion: Whilst diverse forms of reserves have been increasingly explored, more research is needed on their short-, medium- and long-term roles in enhancing health outcomes across the life course following adverse childhood experiences, especially their development in childhood and adolescence.

4B STREAM: METHODS / DATA SYMPOSIUM

Building Cross-National Life Course Research from Belgian Registers

Chair: Joan Damiens, University of Helsinki

Comparative life-course and population health research increasingly relies on administrative registers, yet the practical work required to build cross-national studies, such as data harmonisation, access and management, remains implicit. This symposium brings together four papers that place Belgian register data at the centre of international collaborations, spanning Belgium-Finland comparisons and wider multi-country designs.

Substantively, the papers address major life-course and population health questions: changing suicide mortality by sex, age and education; early mid-life trajectories and ultimate childlessness; socioeconomic inequalities in cancer mortality; and differences in lifespan inequality between migrants and natives.

Methodologically, the symposium demonstrates what harmonised register infrastructures make possible, including decomposition approaches that separate compositional change from within-group risk, linkage of population registers to cancer incidence and survival, and life table measures that capture heterogeneity in ages at death. Across contributions, speakers reflect on the realities of cross-national work: data access and approvals, secure analysis environments, and strategies for aligning populations, exposures and outcomes across register systems.

The session will also include a researcher-led Q&A on typical pathways to access Belgian register data and to set up collaborations responsibly, with pointers to official resources. The symposium concludes with a discussion on shared challenges and offers concrete recommendations for building sustainable comparative research using Belgian registers.

TALK 1: Decomposing and Understanding the Suicide Trends in Belgium and Finland

Presenter: Joan Damiens, University of Helsinki

Co-authors: Joachim Gotink, Sylvie Gadeyne, Vrije Universiteit Brussel; Lasse Tarkiainen, Pekka Martikainen, University of Helsinki

Suicide mortality has declined across Europe since the early 1990s, but the pace and drivers differ between countries. We investigate why Finland began the period with higher rates than Belgium yet experienced a faster decline. Using a common decomposition framework, we show how cross-national register data can move beyond trend comparisons to identify the sources of change.

Using population registers for Belgium and Finland, we analyse residents aged 25+ in three periods (1992-96, 2002-06, 2011-15). Outcomes are deaths by suicide and person-years aggregated by sex, age group, and education (primary/secondary vs. higher), with yearly time-varying covariates. We adapt a Retherford-Cho midpoint decomposition to separate period changes into within-education risk change and composition (educational expansion and ageing), allocating contributions by age and sex. Negative binomial models with exposure offsets provide adjusted rates by sex within education across periods. This design relies on harmonised definitions of population, follow-up, education and cause-specific mortality across the two register systems.

Finland's decline exceeds that of Belgium for both men and women. Among men, Finnish reductions are concentrated among those aged 35-64, driven mainly by declines in risk among low-educated men;

educational expansion contributes too. In Belgium, risk declines are smaller and partly offset by ageing at older male ages. Among women, Finnish rates decline modestly at midlife; Belgian trends remain near-stable. The gap between the sexes narrows within educational groups, primarily due to larger absolute declines among males. By separating behaviour from composition, the study explains how two similar welfare states diverged: Finland's fall reflects within-group risk reduction and composition change; Belgium's progress is composition-sensitive.

Methodologically, the paper illustrates the added value of register-based decompositions for comparative life-course mortality research. Policy should prioritise education-sensitive prevention for low-educated men aged 35-64 and strengthen late-life suicide prevention in ageing populations.

TALK 2: Mapping Early Mid-Life Trajectories and Ultimate Childlessness: A Multichannel Sequence Analysis in Finland and Belgium

Presenter: Alice Rees, Université Catholique de Louvain

Co-author: Marika Jalovaara, University of Turku

The transition to adulthood has become increasingly diverse, with delays in residential independence, changing partnerships, and economic uncertainty contributing to varied life course trajectories including the entry into parenthood. Yet, little is known about how these multidimensional trajectories relate to ultimate childlessness across different institutional contexts. By combining linked Belgian and Finnish data with a shared analytic approach, this paper shows how cross-national register-based collaboration can illuminate life-course pathways.

This paper identifies typical early mid-life trajectories of partnership, income, and residential independence among men and women in two contrasting welfare regimes: Finland and Belgium, and explores how these are associated with remaining childless. Using linked register and census data for cohorts born in 1974-75, followed from their early 30s to mid-40s, we apply multichannel sequence and cluster analysis to identify typical life course patterns across three domains. We then use linear regression models to assess how remaining childless, education and place of residence are associated with the degree of alignment with each trajectory type, as measured by representativeness scores. A key comparative task is aligning the measurement of partnership, income and residential independence across two register contexts. Five trajectory types were identified in each country, including patterns of early and stable partnerships and others marked by delayed transitions. Remaining childless was mostly associated with later residential independence and the near absence of partnership formation. In Finland, a distinct cluster highlights how being single after a separation is also associated with childlessness. In contrast, stable marriage pathways were strongly associated with parenthood.

The study demonstrates how the interplay of partnership, residential independence and income trajectories, shaped by education and institutional context, produces distinct pathways associated with childlessness in early mid-life. The contribution is both substantive (cross-national patterns of childlessness) and methodological (a harmonised multichannel life-course typology built from administrative data).

TALK 3: Comparative Insights into Socioeconomic Inequalities in Cancer Mortality: The Added Value of Population-Based Register Data

Presenter: Joachim Gotink, Vrije Universiteit Brussels

Co-authors: Riina Peltonen, Pekka Martikainen, University of Helsinki; Freija Verdoodt, Stichting Kankerregister Ghent; Sylvie Gadeyne, Vrije Universiteit Brussels

Socioeconomic inequalities in cancer mortality are well documented, but their underlying drivers may differ substantially across national contexts. Population-based register data offer a unique opportunity to study these inequalities in a comparative perspective, allowing both comprehensive population coverage and detailed linkage of incidence, mortality, and socioeconomic information. This paper explicitly demonstrates what linked register infrastructures add to cross-national comparability and causal interpretation.

In this contribution, we compare educational inequalities in cancer mortality between Belgium and Finland using linked national cancer registry and population register data. For each country, we decompose mortality inequalities into an incidence component and a post-diagnosis survival component, thereby disentangling whether observed differences primarily reflect inequalities in cancer occurrence or disparities in outcomes after diagnosis. This approach enables us to identify cancer-specific and age-specific patterns, as well as cross-national similarities and contrasts in the relative importance of prevention versus survival. The analysis therefore links substantive inequality patterns to concrete, comparable components derived from harmonised register sources.

This study highlights the methodological value of register-based data for comparative health inequality research. We discuss how harmonized population registers make it possible to move beyond aggregate mortality comparisons and to examine mechanisms underlying inequalities in a consistent manner across countries. At the same time, we reflect on key challenges, including differences in data availability, staging completeness, and the interpretation of population-level versus post-diagnosis measures. By embedding a comparative decomposition analysis within a register-based framework, this contribution illustrates how administrative data can enrich both substantive and methodological debates on health inequalities. Such comparative insights are crucial for understanding how institutional and policy contexts shape socioeconomic disparities in cancer outcomes.

TALK 4: Beyond Averages: Lifespan Inequality Among Migrants and Natives in Belgium, England and Wales, Norway, and Sweden

Presenter: Marina Vergeles, Université Catholique de Louvain

Migrants have higher life expectancy than natives in most high-income countries, yet this point estimate masks potential differences in the variation of ages at death. Lifespan disparity ($e\ddagger$), calculated from the life table, measures the average number of life years lost due to death and reflects inequality in lifespans within a population. This paper shows how comparable life table measures can be implemented across countries using register and linked census–death data, and what this reveals about migrant mortality heterogeneity.

Using data from four high income countries, we compute life expectancy and lifespan disparity at age 20 for migrants and natives. Data sources vary by country: census-based population-at-risk and three-year death counts for England & Wales; annual population and death records from population registers for Sweden and Norway; and linked death, census, and migration data for Belgium. Migrants are grouped into European and non-European origin based on country of birth. The comparative design therefore depends on harmonising population-at-risk definitions and mortality measurement across heterogeneous data infrastructures.

Consistent with previous research migrants have higher life expectancy than native-born. However, we found that migrants, especially those of non-European origin, have higher lifespan disparity at the same level of life expectancy. There is more variation in age at death for migrants than there is for natives. Age-specific contributions to the native-migrant differences in lifespan disparity differ across countries, but a common feature is that lower mortality at older ages is responsible for higher migrant disparity of non-European migrants. This might be both due to genuine migrant mortality advantage as well as due to issues with properly registering population-at-risk and death counts of migrants at older ages. Ongoing data-quality assessments will help clarify these patterns. By focusing on lifespan disparity, the paper highlights an additional, policy-relevant dimension of inequality that complements life expectancy in cross-national register-based research.

4C STREAM: HEALTH / WELLBEING 4 SYMPOSIUM

New Developments in Social-to-Biological Transition Research

Chair: Meena Kumari, University of Essex

Social-to-biological transition research offers a way of answering questions about how the social becomes biological with a view providing insights into health inequities. To understand the dynamic relationships between our social and economic circumstances and our health, we need studies that combine theoretically derived social drivers of health with new developments and state-of-the-art biological information. This symposium will address theory and survey methodological considerations as it concerns the collection of biological information in the context of social science and surveys: firstly, Booker et al., addresses the conceptual and operationalisation overlaps between allostatic load, a biomarker of the wear and tear associated with chronic stress, and multimorbidity; secondly, Liang et al., reports methodological correlates of hair sample collection for the measurement of biomarkers of stress to find that participant led collection of these samples represent a reasonable approach; Tan et al., addresses a new definition of obesity published in 2025 to describe social and geographical associations with ‘pre-clinical’ and ‘clinical’ obesity. Finally, Ratcliff et al., reviews the literature to describe the lack of social data collected in the microbiome literature and provides results from an examination of measures of socio-economic circumstances and metagenomics.

TALK 1: Conceptual and Analytic Overlap Between Allostatic Load and Multimorbidity

Presenter: Cara Booker, University of Essex

Co-authors: Yunlong Liang, Angela Meadows, Anna Dearman, Evie Dilkes, Benedict Hignell, Gabriele Navyte, Meena Kumari, University of Essex; Owen Cranshaw, University of the West of England; Adisetu Joy Malih, Midlands Partnership NHS Foundation Trust

Allostatic load is conceptualised as a sub-clinical construct that reflects cumulative physiological wear associated with chronic environmental and psychosocial stress. However, marked heterogeneity in biomarker composition, threshold definition, and treatment of medication use raises concerns about the extent to which different allostatic load specifications consistently capture a distinct subclinical signal of physiological dysregulation. Unresolved questions remain regarding conceptual and analytic overlap with multimorbidity and related health constructs, particularly when medication use is incorporated into allostatic load specification. Here we synthesise methods used to operationalise allostatic load in population-based studies and to assess how these choices relate to its relationship with multimorbidity outcomes.

We conducted a PRISMA-guided systematic review of population-based studies indexed in Web of Science, PsycINFO, MEDLINE, and CINAHL Ultimate in 2022, using the terms “allostasis” and “allostatic load” in post-2010 papers. We then analysed data from four population-based studies to characterise the association between alternative allostatic load specifications and general and cardiometabolic multimorbidity using C-statistic-based measures. The systematic review identified 428 studies and demonstrated substantial heterogeneity in allostatic load operationalisation, particularly regarding biomarker composition, systems, threshold definitions, and medication handling. Empirical analyses showed moderate to high overlap between allostatic load and multimorbidity (C-statistics 0.68–0.86), with higher values for cardiometabolic phenotypes and following medication adjustment. Using different threshold definitions for allostatic load produced only minimal changes in these associations.

We conclude that allostatic load remains a useful construct for capturing multisystem physiological dysregulation. However, current operationalisations insufficiently reflect allostatic dynamics and often blur subclinical and clinical processes. Future research should prioritise longitudinal designs, more system-balanced biomarker coverage, and theoretically coherent, transparent approaches to threshold definition and medication adjustment. This would enable allostatic load measures to better capture multisystem physiological dynamics and clearly distinguish early regulatory shifts from established morbidity.

TALK 2: A Comparison of Self and Professionally Collected Hair Samples for the Assessment of Steroids

Presenter: Yunlong Liang, University of Essex

Co-authors: Alexandria Andrayas, Tarek Al Baghal, Meena Kumari, University of Essex

Hair has been used as a medium for the assessment of steroids, particularly cortisol but also cortisone, progesterone, testosterone and dehydroepiandrosterone (DHEA). However, measurements, particularly for testosterone, can be below detection. This is either due to biological variation or technical factors associated with adherence to collection protocols. Hair sampling is often conducted by trained personnel such as medical or non-medical interviewers but this can be costly and sample sizes may be small and/or selective. Research may be aided if protocols can be developed that enable participants to collect their own hair sample. Here we addressed two aims: (1) to test associations of collection mode (nurse, interviewer directed or web collection) with hair steroid concentrations, sample quality, and non-detection; and (2) to examine whether sample quality and non-detection vary by sociodemographic and hair characteristics. In a randomised study (n=804 UK Household Longitudinal Study (UKHLS) Innovation Panel participants), we observed that per-protocol adherence was 98.9% in nurse mode, 86.9% for the interviewer-administered arm, 73.0% for the web-based collection.

In analysis of steroid hormone levels, cortisol, cortisone, DHEA, progesterone, and testosterone concentrations did not differ significantly by mode of sample collection. Nurse-collected samples more often met prespecified high quality criteria. Lower-quality samples were associated with higher odds of DHEA non-detection and with lower DHEA levels. Age, female sex, retirement, poor mental health and summer collection were associated with higher odds of DHEA, progesterone, or testosterone non-detection.

We conclude that self-collection of hair is feasible for population-based survey and yields steroid profiles comparable to professional collection. Future work should improve sample quality in men, and better distinguish biological from procedural sources of non-detection.

TALK 3: The Burden of Pre-Clinical and Clinical Obesity and its Health and Social Effects Across the Life Course

Presenter: Laura Ai Sim Tan, University of Essex

Co-authors: Cara Booker, Meena Kumari, Maria Chiara di Cesare, University of Essex

Obesity, the existence of excessive body fat (adiposity), is a major public health issue that hinders social development and economic progress, as 878 million adults worldwide were living with obesity in 2022. Obesity is a risk factor for many chronic conditions (CVD, type-2 diabetes, several cancers and mental disorders), yet it is a disease itself. Excess adiposity is linked with clear pathogenic mechanisms (inflammation, hormonal and appetite regulation changes, insulin resistance), higher mortality risk, frequent relapse despite treatment, and numerous related health complications. The 2025 Lancet Commission has proposed a new definition and diagnostic criteria allowing the distinction between obesity as risk factor (preclinical obesity) and as a stand-alone illness (clinical obesity). The implications of these definitions and diagnostic criteria are unclear. Using the nationally representative UK Household Longitudinal Study (UKHLS) we: 1) estimate the prevalence of pre-clinical and clinical obesity (associated with altered metabolism profile, renal and liver function) and its geographical (regional/LSOAs level) distribution; 2) describe inequalities in the burden of pre-clinical and clinical obesity (age, sex, educational attainment, ethnicity); 3) explore how clinical obesity is associated with health (mental and physical) and social (retirement/employment) outcomes across the lifecourse. These analyses will be stratified to understand group specific impacts of pre-clinical and clinical obesity and the role of policy amenable mediators will be described.

TALK 4: Socio-economic Position and the Gut Microbiota

Presenter: Jasmine Ratcliff, University of Essex

Co-authors: Patrick Varga-Weisz, Rick 'O Gorman, Meena Kumari, University of Essex

The gut microbiome (GM) is increasingly recognised as a potential biological mechanism linking socioeconomic position (SEP) to health inequalities, yet the extent and consistency of this relationship remains poorly understood. We conducted a narrative systematic review searching PubMed, Web of Science, and Scopus up to November 2024, identifying 26 observational studies from 1,479 screened that examined associations between SEP and GM diversity, composition, or function across any age, ethnicity, or geographic setting. Associations were observed across multiple GM features, including alpha (α) and beta (β) diversity, taxonomic composition, and functional pathways. Higher α -diversity was observed in socioeconomically advantaged groups in high-income countries, but in disadvantaged groups in low- and middle-income countries, suggesting context-dependent directionality. Differences in β -diversity further indicate that advantaged and disadvantaged groups harbour compositionally distinct GM profiles. However, substantial heterogeneity in sampling, sequencing, and analytical approaches limits direct comparisons. These findings highlight the GM as a plausible target for interventions aimed at reducing health disparities, while underscoring the need for larger, more diverse cohorts, longitudinal designs, and rigorous covariate adjustment. To address key gaps identified in the review, we present novel evidence from Lifelines, a large population-based cohort from the northern Netherlands, examining associations between individual and neighbourhood-level SEP and GM features across life stages, and links between SEP, the GM, and health outcomes including systemic inflammation and mental health. In initial minimally adjusted models, higher education and income were consistently associated with greater prevalence and abundance of multiple gut microbial species. Among the strongest associations, higher education was positively linked to *Clostridium* sp. AF20_17LB ($\beta = 0.61$), *Oscillibacter* sp. ER4 ($\beta = 0.58$), and *Roseburia* sp. AM59_24XD ($\beta = 0.57$), and higher income to *Candidatus Cibionibacter quicibialis* ($\beta = 0.66$) and *Faecalibacterium* ($\beta = 0.53$) (all FDR < 0.01).

4D STREAM: WORK**INDIVIDUAL WORK, INCOME AND HEALTH 2 PAPERS****TALK 1: Married Women's Employment and Household Earnings Inequality in Japan, 1986–2022**

Presenter: Fang He, The Japan Institute for Labour Policy and Training

This paper examines how married women's employment and earnings shape inter-household earnings inequality in Japan using microdata from the Comprehensive Survey of Living Conditions (CSLC), 1986–2022. Against "critical times" marked by prolonged wage stagnation, rapid population ageing, and the COVID-19 period, we document structural change in assortative mating and the division of market earnings within couples across life-course stages. We first describe trends in spouse matching by education and earnings ranks, and in the association between husbands' earnings and wives' labour-force participation and earnings shares. We then assess whether wives' earnings widen or compress inequality by comparing the Gini coefficient and the p90/p10 ratio for husbands' earnings versus couples' total earnings and by tracking shifts in households' percentile ranks when wives' earnings are included.

Five findings emerge. (1) Spousal pairings polarise: high-education/high-earnings "power couples" become more common, while low-education/low-earnings couples decline. (2) Wives' employment rises across all husband-earnings groups, and the negative association between husbands' earnings and wives' employment weakens over time. (3) Wives' earnings shares increase in all husband-earnings groups, with higher levels and larger gains among households with low-earning husbands. (4) For couples with husbands aged 25–59, adding wives' earnings reduces inequality under both measures, with particularly pronounced effects when husbands are in their 40s and 50s. (5) Wives' earnings raise households' percentile positions and, in some cases, shift them into higher earnings groups. Overall, policies that support continuous employment and earnings progression for married women may mitigate inter-household inequality as well as expand labour supply in an ageing society.

TALK 2: Fathers' Paternity Leave-Taking and the Partner Earnings Gap in Germany

Presenter: Martina Dieckhoff, University of Rostock

Co-authors: Antje Mertens, Berlin School of Economics and Law; Laura Romeu-Gordo, German Centre of Gerontology

In the past years, the interest in the relative earnings of partnered heterosexual women has been growing quickly (e.g. Dieckhoff et al. 2019; Musick et al. 2020; Nylin et al. 2021) Our paper contributes to this literature by studying trajectories of German couples' earnings inequalities and how they evolve after child birth dependent on the duration of paternity leave. Germany's family policy has experienced a paradigm shift (Gülzau 2020) moving from a traditional male breadwinner model to a dual-earner/dual-care-taking model. One central policy change was the parental leave reform in 2007 and the implementation of two "daddy months" (i.e. two months exclusively reserved to one parent). While now more than 40 percent of young fathers take leave, the vast majority of these leaves does not exceed two months. We examine how trajectories of couple earnings inequalities vary with the male partner's leave and leave duration. The paper draws on longitudinal data from the German Socio- Economic Panel Study (SOEP) from 2007 to 2023. We use fixed effects panel models to analyze the effect child birth has on the earnings gap and its evolution. We find very little difference between the trajectories where he took no leave versus where he took a short leave (of two months and less), with both revealing a notable increase in earnings inequality post-birth which even 5 years after birth has not recovered to pre-birth levels. By contrast, a paternity leave of three months and more is associated with substantially more equal long-term earnings trajectories. Here childbirth only slightly increases inequality and 5 years post-birth the earnings gap is even moderately smaller than pre-birth. This suggests that the reform has the potential to reduce earnings inequalities between mothers and fathers, but only if more fathers take longer leaves. Stronger incentives for longer paternal leave taking may be necessary.

TALK 3: At the Intersection of Historical Shocks and Life-Stage Timing: Cohort Differentiation in Life Chances in Urban China

Presenter: Mengzhen Chai, University College London

This study investigates how macro-socioeconomic shifts intersect with individual life stages to shape life chances across birth cohorts in urban China—a society undergoing compressed transition from redistributive planning to market competition and, recently, from rapid growth to structural slowdown. Drawing on Elder's life course perspective, it argues that identical historical events affect cohorts differently because exposure occurs at distinct life stages; structural change exerts divergent impacts depending on whether exposure occurs at critical transitions such as labour market entry or household formation. Building on Chauvel's theory of generational stratification, the analysis contends that early dis/advantages generated by such differential exposure may accumulate over time and, in adverse circumstances, crystallise into scarring effects that persistently constrain particular cohorts' life chances.

The empirical analysis draws on harmonised repeated cross-sectional surveys from UHS (1988–2009) and CFPS (2010–2022). To isolate cohort effects from age and period, the study combines synthetic-cohort analysis with Age–Period–Cohort–Detrended (APCD) models. Life chances are operationalised as percentile ranks within the national income distribution, capturing cohort positioning within the economic hierarchy at comparable life stages. Life chances are captured in labour earnings before and after housing costs.

The findings reveal structured, uneven distribution of life chances across cohorts and domains. In labour market, at the same life stage, pre-1960 and post-1980 cohorts occupy higher income rank percentiles. In contrast, cohorts squeezed in between occupy a pronounced trough, as they were too young to fully benefit from the planned economy and too old to fully exploit emerging market opportunities. Housing opportunities exhibit a mirrored inverted-U distribution: middle-aged cohorts capitalised on housing privatisation windfalls, while Millennials faced peak commodification during household formation. When labour income is adjusted for housing costs, younger cohorts—in high-cost metropolitan areas—find their labour-market advantages eroded: earnings success no longer translates into asset accumulation.

TALK 4: The Long-term Impact of the Earned Income Tax Credit (EITC) Exposure in Childhood on Individual's Wealth Trajectory in Adulthood

Presenter: Shuyi Qiu, Duke University

Since its introduction in 1975, the Earned Income Tax Credit (EITC) has become one of the largest antipoverty programs for working families in the United States, with well-documented contemporaneous benefits for parental employment, income, and child health and development. However, less is known about whether exposure to the EITC during childhood shapes economic trajectories later in life. Adopting a life-course perspective, this study examines whether and how early-life exposure to the EITC influences individuals' wealth accumulation trajectories in adulthood. Wealth represents a critical but understudied dimension of stratification, capturing long-term economic security and resilience beyond short-term income flows. Using 44 waves of longitudinal data from the Panel Study of Income Dynamics (1968–2023), I link children's exposure to the EITC from birth through age 18 to their wealth outcomes observed from early to mid-adulthood. Childhood EITC exposure is measured using a simulated generosity index based on federal and state benefit schedules, which isolates exogenous variation in policy exposure and mitigates endogeneity concerns related to income and labor supply. To capture the dynamic nature of wealth accumulation, I estimate latent growth-curve models of net worth, allowing early-life policy exposure to shape both the level and rate of wealth growth across adulthood. I further assess whether the timing of exposure during early childhood, middle childhood, or adolescence heterogeneously influences later wealth trajectories.

This study makes three contributions. First, it provides the first evidence on how a childhood antipoverty policy affects long-term wealth accumulation rather than contemporaneous outcomes. Second, by modeling wealth trajectories, it reveals how early structural interventions can alter cumulative economic processes over the life course. Third, it offers new insights into when during childhood policy exposure matters most for promoting intergenerational economic mobility. Together, the findings highlight how early-life policy contexts can mitigate inequality across generations and promote lasting economic stability.

4E STREAM: WORK / EDUCATION

INDIVIDUAL EDUCATIONAL INEQUALITIES 2 PAPERS

TALK 1: Racial and Ethnic Differences in Midlife Cognitive Test Performance: The Role of Education

Presenter: John R. Warren, University of Minnesota

Co-authors: Michael J. Culbertson, Eric Grodsky, Soobin Kim, University of Wisconsin-Madison; Chandra Muller, Jordan Conwell, Christy L. Erving, University of Texas at Austin; Adam M. Brickman, Columbia University

Objective: To determine the shares of these differences that would be eliminated if we were to remove racial/ethnic inequities in the characteristics of secondary schools; in academic performance within those schools; in degree attainments; and in returns to education.

Design: Data are from the High School & Beyond (HS&B:80) cohort. Panelists were surveyed several times from adolescence through age ~60. Participants: Randomly selected people born mainly ~1962 and ~1964 who were sophomores or seniors in U.S. secondary schools in 1980 and who survived to age ~60 in 2021. In 1980, n=1,020 secondary schools were randomly selected; students (n=26,830) were randomly selected for follow-up data collections. The most recent data collection in 2021 included 13,980 respondents (a 58% participation rate).

Main Outcome(s) and Measure(s): The 2021 survey assessed (1) word recall; (2) forward and backward digit span; (3) letter fluency; (4) semantic fluency; (5) verbal paired associates; and (6) visual paired associates. We focus on a measure of general cognitive functioning derived from a hierarchical item response theory model that combines information from all sets of tasks.

Results: The analytic sample included 13,980 participants (mean age 58; 55% female; 57% White, 17% Black, and 21% Latinx). Differences in midlife cognitive test performance are large (Black–White = -0.98 ± 0.06 SDs; Latinx–White = -0.67 ± 0.06 SDs). Using a g formula causal estimation approach, and under the most conservative hypothetical interventions, most of these differences – 39% ($\pm 12\%$) of Black–White differences and 57% ($\pm 17\%$) of Latinx–White differences – are attributable to Racial/Ethnic inequities in school academic achievement (i.e., grades, achievement test scores, and course taking); other inequities in school attributes and degree attainment and differences in returns to education matter relatively little.

Conclusions and Relevance: Intervening to eliminate Racial/Ethnic inequities in secondary school academic achievements would eliminate almost half of midlife differences in cognitive test performance.

TALK 2: Socioeconomic Inequalities in Early Educational Development: Evidence from a Systematic Review of Pre-Primary Education Within the LEARN Project

Presenter: Neil Kaye, UCL Institute of Education

Co-authors: Daria Dodan, Babeş-Bolyai University; Epp Reiska, Tallinn University; Minna Tuominen, University of Turku

The LEARN (Longitudinal Educational Achievements: Reducing Inequalities) project is a Horizon Europe-funded programme examining how socioeconomic inequalities in educational achievement develop across key educational stages and transitions using longitudinal evidence. One of LEARN's key outputs is to undertake three coordinated systematic literature reviews spanning pre-primary, primary and secondary, and tertiary education, with the aim of identifying when inequalities emerge, how they evolve over time, and which contexts and mechanisms shape their development. This paper presents findings from the pre-primary review, focusing on early childhood as a critical period in the formation of educational inequalities.

The review synthesised longitudinal quantitative studies published since 2020 using European regional or national samples, measuring cognitive or early academic outcomes at two or more time points among children aged approximately 2–6 years. Six studies met inclusion criteria. Outcomes primarily concerned language development, executive functioning, and early numeracy skills, with socioeconomic status most often operationalised via parental education. Across studies, socioeconomic inequalities were evident in early developmental outcomes, but effects were rarely direct. Instead, associations were largely mediated by differences in home learning environments, parenting practices, and access to enrichment opportunities. Informal, interaction-based activities – such as shared reading and enriched classroom interactions – played a central role in shaping developmental trajectories, while evidence also pointed to developmental plasticity and compensatory effects in high-quality early education settings. Several studies showed partial catch-up among children from lower-SES or non-majority language backgrounds over time.

Situated within the wider LEARN programme, these findings highlight the pre-primary period as a foundational stage in the accumulation of educational inequalities, while also identifying early childhood contexts as promising sites for mitigating disadvantage before inequalities consolidate across later educational transitions.

TALK 3: The Role of International Educational Trajectories for Migrants' Labor Market Integration in the United States

Presenter: Tomas Bascolo Oudot, University of Luxembourg

We explore the relative value of foreign education for migrants in the United States by analyzing labor market penalties associated with holding one or multiple foreign degrees and the role of place of education. In the context of the race for global talent; this paper critically examines the economic outcomes of migrants based on their international educational trajectories. We utilize longitudinal data on 109,156 migrants from the New Survey of College Graduates (NSCG) from 2003 to 2021, to investigate how highly educated migrants' origin, level of education, and diversity of international educational trajectories are compensated in the U.S. labor market.

The present paper seeks to answer the following research questions. Is there a wage penalty associated with foreign education? Do migrants experience poorer labor market outcomes when they hold foreign degrees? When all else equal, does foreign education explain a wage differential between foreign educated and U.S. educated migrants? Do more diverse international educational trajectories – holding degrees from multiple countries- translate into an economic premium? We investigate whether and to what extent educational trajectories with increasing Western compared to non-Western educational degrees are systematically better compensated, and for whom this premium is most profitable by considering migrants' legal status and country of origin.

Preliminary results reveal significant earning penalties for both male and female migrants with foreign degrees. Whereas wage returns for male migrants with foreign degrees are about 17.3-point, the penalty increased to 30.1-point for female migrants. Furthermore, the wage penalty varied across region of degree acquisition, with female migrants with degrees from Latin America and the Caribbean experiencing the largest penalties of all groups.

TALK 4: Moving After Adverse Parental Life Events: Consequences for Children's Educational Outcomes in Germany

Presenter: Fiona Pashazadeh, University of Edinburgh

Co-author: Kristina Lindemann, University of Edinburgh

This paper explores how residential mobility due to family structure changes or parental job loss affects children's educational transitions and achievement in Germany. Previous research has shown that residential mobility in childhood is associated with lower educational outcomes and this may be due to the loss of social ties or changes in neighbourhood quality. However, research aiming to identify the effects of residential mobility has rarely examined mobility in the context of adverse life-course events, mainly due to data limitations. This gap matters as parents may lack the resources to avoid moving to a less prosperous neighbourhood or into lower-quality housing. Research also suggests that residential mobility is an important mechanism explaining lower outcomes of children from single-parent families. In addition, we examine whether the effects of such residential mobility vary by parental SES, and whether deterioration in the family's living environment helps to explain any negative effects. Recent research for Germany shows that moving several times during childhood is more common among disadvantaged families and is linked to lower life satisfaction among children.

We use data from the German Socioeconomic Panel (SOEP, v40.1eu) which is a large-scale longitudinal survey conducted annually since 1984 and includes over 32,000 individuals in approximately 22,000 private households. Our analysis includes three separate dependent variables representing educational outcomes: 1) attendance at academic secondary school (Gymnasium) as opposed to any other type of school, 2) grades in German and Mathematics at age 17, and 3) aspirations to attend university. We employ multilevel regression models to investigate the associations with the number of household moves during childhood, whether these moves were due to adverse parental lifecourse events, and any subsequent changes in the quality of the household living environment. We also include analysis of interactions with household income as well as parental education level.

4F STREAM: INEQUALITY

INDIVIDUAL DISABILITY PAPERS

TALK 1: Employment Pathways of Full and Partial Disability Pensioners in Finland: A Sequence Analysis

Presenter: Anu Polvinen, Finnish Centre for Pensions

Background: Low employment rates among people with reduced work capacity pose a significant challenge for social and labor market policies in many countries. In Finland, around 5% of the working-age population receives a disability pension. Although Finnish pension rules allow people to continue to work while receiving a disability pension, this remains relatively uncommon. There are many benefits to employment for both individuals and society. This study examines the employment pathways of full and partial disability pensioners in Finland and aims to identify factors associated with these pathways.

Methods: Register data were collected on 17,443 Finns aged 20–60 who received an earnings-related full or partial disability pension in 2018. Participants were observed for 60 months from the start of their disability pension. Sequence analysis combined with clustering was used to identify typical employment pathways while receiving a disability pension. Associations between individual-level factors and these pathways were also examined.

Results: Around 25% of the study population belonged to clusters where people received a partial disability pension and worked throughout their pension period. Only a small proportion received a partial disability pension and did not work. Over 60% belonged to clusters where people received a full disability pension and did not work, or worked for a brief initial period. Only very few full disability pensioners continued to work for more than 12 months. Many individual-level factors were associated with different pathways of work.

Conclusions: To effectively promote employment among individuals with partial work capacity, it is important to identify those who are both able and willing to work alongside their disability pension.

TALK 2: From Diagnosis to Disadvantage? Chronic Disease, Household Income, and Disability Pension in European Welfare States

Presenter: Nga Chau My Ha, University of Lucerne

Co-author: Diana Pacheco Barzallo, University of Lucerne

Background: Non-communicable diseases (NCDs) represent a growing economic burden in aging societies. However, less is known about how NCDs reshape the longitudinal economic trajectory of households across different socio-economic and institutional contexts. This study investigates the causal impact of NCD diagnoses on household income dynamics in Europe, focusing on relative income position and net household earnings.

Methods: We utilized longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE), covering 16 countries over seven waves, and employed a doubly robust difference-in-differences estimator, adjusting for selection bias and pre-existing health trends to isolate the dynamic treatment effect on household income deciles and log net household income.

Results: The analysis reveals a divergence in economic consequences conditional on baseline socio-economic status. High-income households experience a significant “health penalty”, characterized by an immediate and persistent decline in income rank (-0.7 deciles) and a contraction in absolute net income of approximately 20% following diagnosis. Downward mobility is most pronounced in Austria, Germany, the Netherlands, and Belgium. Conversely, low-income households exhibit a “safety net effect”, experiencing a relative improvement in income rank (+0.4 deciles) and stabilized absolute income post-diagnosis.

Conclusions: European welfare states provide effective support, stabilizing income for low- and middle-income households affected by chronic diseases. Conversely, following a diagnosis, high-income households

absorb declines in both absolute income and relative income position. These findings underscore the vital importance of maintaining robust welfare systems as an essential safety net for poverty prevention in the face of the growing global NCD crisis.

TALK 3: Associations of Parental Disability with Children's Educational Attainment: Evidence from Linked Survey Administrative Data

Presenter: Lijie Zeng, University of Edinburgh

Co-authors: Jasmin Wertz, Bonnie Auyeung, University of Edinburgh; Louise Marryat, University of Glasgow

Background: Little is known about how disability of one generation might affect the educational outcomes of the next generation. This research aims to examine the epidemiology of parental disability and its associations with children's educational attainment in England from early childhood to adolescence, using linked survey administrative data.

Methods: Data came from the UK National Pupil Database linked to the UK Millennium Cohort Study (MCS). This research included MCS families with singleton children born in 2000/01, followed up to age 16 years in England. Parental disability was measured by parental self-report of limiting longstanding illness at the 9-month, 5-year, 7-year, 11-year and 14-year survey sweeps. Child attainment was assessed based on test scores and national threshold levels in the Reception year, Year 2, Year 6 and Year 11. Longitudinal patterns of parental disability were identified using latent class analysis. We examined the associations between patterns of parental disability and child attainment over time using descriptive statistics and mixed-effects models, adjusting for individual, familial, socioeconomic and geographical confounders.

Findings: Approximately two out of five children in England had experienced parental disability at least once by age 14. Four longitudinal patterns of parental disability were identified: low, early-childhood, late-childhood and chronic parental disability. Children of disabled parents were more likely to experience worse attainment outcomes and health, socioeconomic and geographical disparities, compared with those of non-disabled parents, but the extent of such associations varied by longitudinal patterns.

Conclusions: A substantial proportion of children grow up with a disabled parent in England, and these families are at higher risk of multiple disparities. Parental disability may present in dynamic patterns rather than a fixed status and was negatively associated with children's educational attainment over time. Policies and services should adopt a whole-family approach to support this under-recognised population while considering disability dynamics and educational stages.

TALK 4: Student Engagement and Disability as Predictors of Post-Highschool Plans: A Three-year Longitudinal Study of Australian Students, 2022-2024

Presenter: Pedro Riquelme, Australian National University

Co-author: Ben Edwards, Australian National University

This study explores how students' academic engagement and feelings of belonging and disability trajectories predict post-high school aspirations for higher education within a cohort of Australian high school students ($n \approx 2,000$). By using three waves of data (2022-2024) from the GENERATION project, the most up-to-date longitudinal study of Australian youth, we analyse the complex interplay between disability, participation in academic activities, and feelings of belonging in predicting whether students shape further education plans before the end of Year 12. Each wave of data captures self-declared health status, along with school-related information about behaviours, involvement, and feelings of belonging.

We use multilevel logistic regression (longitudinal MLM) to account for the nested and repeated nature of the data, modelling the probability of aspiring to university as a function of intra-student change and between-student differences in engagement levels and disability status. Our hypothesis is that approaching graduation from high school lowers aspirations for university for certain groups of students, particularly those with multiple difficulties associated with their disability, while higher levels of student engagement buffer this negative association, but only for those with less difficulties experienced because of their disability.

Preliminary findings suggest significant heterogeneity within the disability group regarding their engagement levels and aspirations for higher education. By integrating longitudinal data with academic-related relevant behaviours and feelings, this study offers evidence on how academic engagement can foster aspirations of those with disability, compensating the hindering effect of the presence of disability. Findings will inform policy aiming at promoting the participation and success of students with disability in higher education settings and psychosocial interventions targeting disadvantaged groups in their aspirations to participate in university.

TALK 5: The Long-term Implications of Childhood Health for Aging: School Disability and Health and Cognition in Later Life

Presenter: Chandra Muller, University of Texas at Austin

Co-authors: Krittika Kashyap, University of Texas at Austin; Eric Grodsky, University of Wisconsin;

Rob Warren, University of Minnesota

It is well-recognized that childhood health is a major risk factor for lifelong health and well-being, yet we know much less about how to mitigate the risk. Education, which greatly reduces risk of early mortality, later life health conditions, and cognitive decline, may also have the capacity to attenuate the later life risks of people who have early life health conditions. However, having a disability as a student in school is itself a risk factor for accessing quality education. Even students attend classes with nondisabled peers do not necessarily receive the same education as their classmates.

We use newly available data from the High School and Beyond (HS&B:80/21), in which 1980 U.S. high school students have been followed and most recently interviewed around age 60, in 2021. The students in HS&B:80 came of age during the nation's nascent awareness of the risks from childhood health conditions for adult outcomes and the potential role that access to education could play in mitigating the risks. As such, the HS&B:80 survey collected vital information on the health conditions of youths and school practices to improve access to learning. The HS&B:80 cohort provides a unique opportunity. The students with a disability in HS&B:80 offer a window into the potential long-term impact of childhood health on later life health and well-being.

We address two research questions: (1) To what extent does having a physical and/or learning disability contribute to risks of early mortality, health conditions, and cognitive functioning at ~age 60? (2) What family resources and/or school practices reduce the risk? Our results show that having a disability is strongly associated with risks of early mortality, health conditions that are preventable, and lower cognitive functioning at midlife, even after taking account of early life achievements and attainment. Some childhood contexts exacerbate these risks.

4G STREAM: HEALTH / WELLBEING 5

INDIVIDUAL LIFESTYLE 1 PAPERS

TALK 1: Cross-Country Differences in Sleep Quality in Later Life: Exploring the Link Between Lifestyle and Sleep

Presenter: Katharina Loter, Tilburg University

Co-author: Claudia Recksiedler, German Youth Institute (DJI)

Sleep quality plays a crucial role in mental health, particularly in later life. While prior studies highlight individual determinants of sleep, little is known about cross-country differences in sleep quality and their associations with lifestyle behaviors over time. This study aims to fill this gap by examining longitudinal sleep dynamics across Europe and identifying protective and risk related health behaviors affecting sleep quality. Using data from the Survey of Health, Aging, and Retirement in Europe (SHARE), we analyze nine waves (2004–2022) of panel data from individuals aged 50 and older (nearly 500,000 observations). We assess sleep problems, sleep-related medication use, and sleep duration (night sleep and napping). Key predictors include health behaviors (physical activity, diet, weight fluctuations, tobacco and alcohol use), as well as socio-

economic factors and critical life events. To capture both within-individual and between-individual variations, we apply hybrid panel models and estimate country-specific effects.

Preliminary results indicate substantial cross-country variations in sleep quality and lifestyle behaviors. Older adults in some countries (e.g., Balkan states, Ireland) maintain stable sleep patterns over time, while those in others (e.g., Estonia, Sweden, Belgium, France, and Poland) experience significant sleep disturbances, often linked to illness, retirement, and bereavement. Physical activity appears to be a key protective factor, though its effects vary across countries. These findings highlight the need to support older adults in adapting their health behaviors to maintain adequate sleep and enhance quality of life. We discuss results within a biopsychosocial framework, emphasizing biological, psychological, and social determinants of sleep in later life.

TALK 2: Meat And Dairy Consumption Through the ‘Parenting Journey’: Food Socialization and Age-Specific Nutritional Prescriptions

Presenter: Emy Scheer, Université Libre de Bruxelles

To move towards sustainable societies, several individual actions have been flagged as ‘most effective’ to lower one’s carbon footprint, eating more plant-based among others (Wynes and Nicholas, 2017; Sandberg, 2021). While MoC are often seen as “windows of opportunities” (Verplanken and Roy, 2016) to change consumption habits, it does not always lead to more sustainable lifestyles. Indeed, Nordström and authors found that emissions increased with parenthood, because of changes in food consumption and transportation (2020).

Therefore, the paper aims to explore the meat and dairy consumption of “eco-parents”, who feel concerned by their carbon footprint. The objective is to research how meat and dairy consumption evolved compared to pre-parenthood years, and through the parenting years. Our assumption is that parenthood should not be studied solely as a MoC and that studying the “parenting journey” (Kent, 2025) allows a more nuanced understanding of parents’ evolving experience of food provision.

The methodology involves semi-direct, retrospective, interviews with 33 “eco-parents” living in Brussels. Interviews were first conducted with parents of pre-schooled children (<5 years old), then with parents of children in primary school (5-12) and lastly with parents of teenagers in high school (12-18/19). The method aims to explore the life course changes within the parenting journey, in relations to meat and dairy consumption.

Results show how meat and dairy consumptions are embedded in “good parenting” practices, which evolve with socially constructed stages of childhood. On the one hand, the food socialization of children plays a role in whether, when and how they “ought” to eat meat and dairy; and the other hand, parents are advised nutritional prescriptions by official authorities, which are age specific. Attempting to follow such prescriptions (to be “good parents”) influences how they navigate the daily management of meat and dairy provision, despite their sustainability ideals.

TALK 3: The Role of Physical Activity in the Unemployment-Health Relationship: Evidence Based on German Panel Data

Presenter: Sebastian Prechsl, Institute for Employment Research (IAB)

Co-author: Gerhard Krug, Institute for Employment Research (IAB)

Studies have documented adverse effects of unemployment on various health outcomes, yet it remains an open question whether these effects are causally related to changes in health-related behavior.

We focus on physical activity as a potential mediator and whether changes in physical activity can explain how unemployment impairs health. Competing theoretical perspectives suggest that unemployment may either restrict physical activity due to financial strain, stigmatization, and discouragement, or increase it through greater time availability and stress relief. We use thirteen waves of the German panel study "Labor Market and

Social Security" ($N_{it} = 57,124$; $N_i = 13,123$) and apply fixed-effects models with time-varying controls in combination with mediation analysis techniques. Indirect effects are calculated using the difference method and bootstrapped standard errors. Time-distributed fixed-effects models are employed to assess temporal dynamics before and after unemployment entry. We classify unemployed as those who are registered with the federal employment agency in Germany. Self-rated health (1-5) and physical activity (0-4) are measured using five-point self-assessment scales.

We find a negative total effect of unemployment on self-rated health ($\beta = -0.063$; $p < 0.01$). At the same time, unemployment increases physical activity ($\beta = 0.173$; $p < 0.001$) and physical activity positively affects health ($\beta = 0.046$; $p < 0.001$). We also find a positive indirect effect (IE= 0.008; $p < 0.001$) that partly counterbalances the negative unemployment effect—implying that the unemployment effect is 13 percent stronger net of physical activity. Time-distributed models show that the indirect effects hold across all phases of unemployment, with no meaningful temporal variation.

Physical activity suppresses part of the health deterioration associated with unemployment. The temporal pattern is more consistent with a time-availability mechanism than with stress relief, as we find no increase in physical activity in the year prior to unemployment entry.

TALK 4: The Graying of the Protest Generation: Political Activism and Progressive Values Across Time and Generations

Presenter: Merrill Silverstein, Syracuse University

The baby boom cohort is often labeled the "protest generation" to describe its commitment to social change and political transformation in response to societal upheavals of the late 1960s and early 1970s. The leading edge of this generation was involved in marches and rallies advocating for racial equality, ending the war in Vietnam, and student rights on campus. In this research we seek to connect the youthful political protests and progressive values of this generation to their political engagement and progressive values fifty years later. To investigate this question, we use data from 340 respondents aged 16-26 participating in the 1971 wave of the Longitudinal Study of Generations and a follow-up wave in 2022 when they were in their 60s and 70s. Political protests in 1971 were measured by participation in protest movements (e.g., peace marches and civil rights demonstrations) and progressive values toward the social issues of the time (e.g., opposing the military draft and eliminating poverty). These early protest behaviors and progressive values are used to predict later political engagement (e.g., registering voters, political campaigning, and participating in town hall meetings) and progressive values toward contemporary issues (e.g., support for universal health care, women's rights, immigration, and climate reform). Findings reveal associations between early protest activities and later political engagement. Progressive values expressed earlier predicted later values toward contemporary social issues.

Results point to dynamic equilibrium in political activism and social attitudes over half a century in the lives of baby boomers. While forms of activism have become more traditional and relevant social issues have shifted in type, continuity in these domains reveals strong path dependency. These results argue for impressionable youth and critical period frameworks to explain the persistent effects of early imprinting during an acute historical period over the long arc of the life course.

5A STREAM: CHILD / YOUTH DEVELOPMENT SYMPOSIUM

Adverse Childhood Experiences Research: From Conceptual Frameworks to Empirical Applications

Chairs: Armine Abrahamyan, University of Porto; Sidonie Roque, University College London

Over the past 25 years, research on adverse childhood experiences (ACEs) has shown that early-life adversity is associated not only with physical and mental health outcomes, but also with socially patterned exposures and subsequent social position across the life course. Despite growing evidence, variation remains in how ACEs are defined and analysed, with implications for life-course research. This symposium brings together three complementary studies examining different approaches to conceptualising and modelling ACEs, drawing on two population-based birth cohorts.

The first presentation focuses on the cumulative risk approach to ACE measurement and examines associations between ACEs and multimorbidity in later adulthood. It explores the biological pathways linking early adversity to later health using data from the 1958 National Child Development Study (NCDS) in Great Britain.

The second presentation adopts a single-adversity approach to investigate associations between specific childhood adversities and allostatic load in adolescence, using data from the Generation XXI birth cohort in Porto, Portugal.

The third presentation applies a dimensional framework of childhood adversity, examining how threat, deprivation, and unpredictability are associated with cardiovascular and orthostatic stress responses in midlife, using NCDS data.

Together, these studies demonstrate how different operationalisations of childhood adversity capture key life-course processes shaping health trajectories.

TALK 1: Proteomic Signatures Underlying the Relationship Between Adverse Childhood Experiences and Multimorbidity: Evidence from the British National Child Development Study

Presenter: Raphaële Castagné, CERPOP - University of Toulouse

Co-authors: Zineb Zair, Cyrille Delpierre, Michelle Kelly-Irving, CERPOP - University of Toulouse

Multimorbidity, defined as the co-occurrence of two or more chronic conditions, represents a growing public health concern in ageing populations, throughout the life course. Early life risk factors of multimorbidity include adverse childhood experiences (ACEs), as they increase the risk to multiple chronic conditions over the life course.

This study investigated the association between ACEs and multimorbidity in late life and explored the mediating roles of a large numbers of biomarkers in the ACEs-multimorbidity association in the National Child Development Study (NCDS). Participants were drawn from the NCDS who attended the age 44/45 biomedical assessment and subsequent follow-up at ages 50, 55, 62 (N = 5,056). Cumulative ACE scores were calculated and categorised as 0, 1, or ≥ 2 ACEs, based on prospectively collected data across six ACE domains. Proteomic data were obtained using the Olink Cardiovascular II and Organ Damage panels, each measuring 92 proteins. Multimorbidity was defined as the presence of two or more chronic conditions, compared with one or no condition, across nine health disorders. Regression-based models adjusted for intermediate variables were used to examine associations between ACEs, proteomic profiles, and multimorbidity.

Five proteins were significantly associated with ACEs. Participants reporting two or more adversities had higher levels of adrenomedullin, EGF-like repeats and discoidin receptor domains protein, interleukin-6, polymeric immunoglobulin receptor, and serine protease 8. Consistently participants with two or more ACEs were also more likely to develop two or more chronic conditions at ages 50, 55 and 62. Furthermore,

adrenomedullin, interleukin-6, and serine protease 8, were associated with an increased future risk of multimorbidity at each age.

Our findings underscore the importance of early-life prevention and the consideration of psychosocial factors across the life course to promote healthy aging.

TALK 2: Adverse Childhood Experiences and Physiological Wear-and-Tear in Adolescence: Findings from the Generation XXI cohort

Presenter: Armine Abrahamyan, University of Porto

Co-authors: Michelle Kelly-Irving, CERPOP - University of Toulouse; Milton Severo, Liane Correia-Costa, Mariana Amorim, Sara Soares, Sílvia Fraga, University of Porto

Adversity-induced stress may increase vulnerability to biological risk and contribute to physiological dysregulation, reflected by elevated allostatic load (AL). This study examined associations between specific adverse childhood experiences (ACEs) and AL at key developmental stages in a paediatric population from the Generation XXI birth cohort.

Individual ACEs were assessed prospectively at ages 10 and 13. AL was assessed at age 13 using nine biomarkers representing four physiological systems: cardiovascular, metabolic, immune/inflammatory, and renal. The analytical sample included 3,787 participants with data from baseline and two follow-up waves. Multivariable linear regression models were used to estimate associations between exposure to specific ACEs at ages 10 and 13 and AL at age 13, adjusting for adolescents' age, sex, height, and maternal education. Analyses of individual adversities showed that parental separation or divorce ($\beta = 0.024$; 95% CI: 0.007–0.042) occurring before age 10 was associated with higher AL. When adversities occurred between ages 10 and 13, parental separation or divorce ($\beta = 0.023$; 95% CI: 0.007–0.039), difficulties in school ($\beta = 0.021$; 95% CI: 0.007–0.035), and household alcohol or drug use ($\beta = 0.058$; 95% CI: 0.011–0.106) were each independently associated with increased AL at age 13. Biomarker-level analyses indicated that metabolic and immune systems were the most responsive to these specific adversities.

These findings suggest that adolescents exposed to selected ACEs show increased AL burden and emphasise that the type and timing of childhood adversity are critical for understanding early biological dysregulation.

TALK 3: Dimensions of Childhood Adversity and Midlife Orthostatic Stress Response in the 1958 British Birth Cohort

Presenter: Sidonie Roque, University College London

Co-authors: Michele Orini, King's College London; Peter Martin, Yvonne Kelly, University College London; Rebecca Lacey, City St. George's University of London

Childhood adversity has been linked to long-term changes in physiological stress systems, yet evidence connecting adversity to cardiovascular or orthostatic responses in midlife remains mixed. Using data from the 1958 National Child Development Study, this study examines whether childhood threat, deprivation, and unpredictability are associated with resting and orthostatic heart rate (HR), blood pressure (BP), and orthostatic hypotension (OH) at age 62.

Adversity indicators were operationalized as proportional composite scores for each dimension and sub-dimension. Resting and standing HR and BP were collected during a standardized sit-to-stand protocol. Missing data were addressed using multiple imputation, and models adjusted for early-life factors, other adversity dimensions, medication use, and clinic variables.

Most adversity dimensions showed no associations with resting or standing cardiovascular measures or with HR and BP responses to orthostatic stress. Several outcome-specific associations were observed. Greater exposure to the threat sub-dimension, direct physical violence, was associated with higher odds of OH at age 62 (OR = 2.50, 95% CI: 1.21, 5.14). Higher childhood unpredictability predicted a larger decline in systolic BP

during postural change ($\beta = -1.38$, 95% CI: -2.53, -0.23). Overall deprivation ($\beta = -2.22$, 95% CI: -4.16, -0.29) and cognitive deprivation ($\beta = -1.27$, 95% CI: -2.47, -0.08) were associated with lower resting diastolic BP.

Findings provide limited evidence for broad associations between childhood adversity dimensions and midlife cardiovascular regulation. Observed effects were modest and outcome-specific, suggesting selective influences on BP regulation rather than widespread autonomic dysregulation.

TALK 4: Distinct Patterns of Adverse Childhood Experiences and Pathways to Mental Ill Health in Adults: Evidence from a National Cohort of Australian Men

Presenter: Sean Martin, Australian Institute of Family Studies

Co-authors: Mulu Woldegiorgis, Katrina Scurrah, Constantine Gasser, Swen Kuh, Stephanie Fisher, Catherine Andersson, Australian Institute of Family Studies

Background: Adverse Childhood Events (ACEs) are linked to poorer mental health in adulthood, but less is known about how different patterns of childhood adversity relate to mental health for men. There is also limited evidence on whether protective factors reduce these risks across ACE profiles.

Methods: We analysed data from Ten to Men: The Australian Longitudinal Study on Male Health. ACEs were measured using a 10-item questionnaire (ACE-10). Latent class analysis was used to identify distinct ACE profiles. We examined associations between ACE profiles and recent depressive and anxiety symptoms (PHQ-9 and GAD-7) and mental health conditions diagnosed in adulthood. Modified Poisson and Cox proportional hazards models were fitted. We also assessed whether resilience-enhancing factors, including social support and connectedness, mediated these associations.

Results: ACEs were common, with 62% of men reporting at least one ACE and 44% reporting two or more. Three ACE profiles were identified: low exposure (61%), emotional/physical abuse (30%), and high/multiple adversities (9%). Compared with men in the low exposure group, those in the emotional/physical abuse group were 69% more likely to have moderate to severe depression (adjusted risk ratio [aRR] 1.69; 95% CI 1.56–1.84) while men in the high adversity group were more than twice as likely. Similar dose–response relationships were observed for anxiety symptoms (aRR ~ 2.1) and diagnosed mental health conditions (adjusted hazard ratios ~ 2.5). Resilience-enhancing factors partially mediated these associations, with social support explaining around 10–15% of the association between ACEs and depression.

Conclusion: Distinct patterns of childhood adversity are associated with differing risks of mental ill health among men. Assessing ACE profiles, rather than individual adversities alone, may help identify men at higher risk. Strengthening social support and connectedness may offer some protection and should be considered in trauma-aware, male-responsive services.

TALK 5: Re-considering the Relationship Between Family Instability and Child Well-being: The Role of Maternal Adverse Childhood Experiences

Presenter: Lawrence Stacey, Vanderbilt University

Co-author: Paula Fomby, University of Pennsylvania

The relationship between family instability and child well-being has been the topic of much conversation in family sociology over the years, with studies generally showing that children hailing from families experiencing instability generally fare worse than their counterparts from families with less or no instability. Although studies have documented a link between family instability (e.g., number of family transitions, union instability) and child well-being (e.g., mental health, temperament, cognitive stimulation), some of those associations are explained by characteristics of the mother prior to the child's birth, like mother's education. Despite this important work, little research has considered the role of parents' adverse childhood experiences (ACEs)—household dysfunction, abuse, and neglect that took place within in the household before the age of 18.

ACEs predict union instability and early and nonmarital fertility and also have been shown to have intergenerational effects and shape children's behavioral problems, highlighting the possibility that parental

ACEs might confound the association between family instability and child well-being. In this paper, we use data from the National Longitudinal Survey of Youth 1979 (NLSY79) and NLSY79-Child and Young Adult Supplement (NLSY79-CYA) to examine the potential role of maternal ACEs in the oft-discussed and long-documented relationship between family instability and child well-being, including children's cognitive outcomes and behavioral problems.

Preliminary results show that indeed ACEs are associated with both family instability and children's cognitive outcomes and behavioral problems. The results also suggest that the association between family instability and child wellbeing is partially accounted for by maternal ACEs, highlighting the partial spuriousness of one of the most discussed and debated relationships in family sociology and public policy.

5B STREAM: METHODS / DATA SYMPOSIUM

Large Language Models in Longitudinal Survey Research: Design, Analysis, and Metascience

Chair: David Bann, University College London

Artificial intelligence—particularly large language models (LLMs)—is rapidly reshaping how surveys are designed, tested, analysed, and interpreted. This symposium brings together methodological and applied work examining how AI can be integrated into longitudinal survey research, spanning questionnaire design, data preparation, analysis, and metascience.

The papers showcase emerging uses of LLMs across the survey lifecycle. One contribution demonstrates how agentic AI systems can aid questionnaire testing using synthetic respondents. Another assesses the performance of LLMs for coding open-ended survey responses. A further contribution evaluates whether locally deployable LLMs can assist with survey data cleaning and harmonisation—a common bottleneck in longitudinal research—while meeting strict data governance requirements. Finally, the symposium considers broader meta-scientific applications of LLMs, including large-scale reviews of research practices and policy claims in population health.

TALK 1: Automating Questionnaire Testing with Agentic Large Language Models

Presenter: Paulo Serôdio, University of Essex

Longitudinal surveys place unusually high demands on questionnaire testing due to complex routing and repeated measurement, yet it remains labour-intensive and difficult to scale. Traditional questionnaire testing approaches struggle to exhaustively test routing logic, capture heterogeneous behaviours, or identify subtle inconsistencies prior to fieldwork. To address these limitations, we develop an agentic framework that uses large language models (LLMs) to generate and evaluate synthetic survey response data for questionnaire testing. In this system, LLMs act as simulated respondents, navigating survey instruments under diverse, configurable personas while producing realistic answer patterns, including item nonresponse and refusals. A complementary set of agents evaluates the resulting data, auditing routing paths, internal consistency, plausibility, and coverage of survey logic.

The framework combines rule-based checks with “LLMs- judge” evaluation, enabling systematic identification of design flaws that may be missed by manual testing. We demonstrate the approach using a pilot module from the UK Household Longitudinal Study, converting questionnaire specifications into structured schemas that support automated routing and reproducible testing runs. The paper contributes to life course methodology by showing how synthetic data generation can be used as a tool for quality assurance and experimental testing of question design. More broadly, it illustrates how agentic AI systems can be embedded within longitudinal research infrastructures.

TALK 2: Evaluating LLMs for Open-Ended Survey Coding and Classification

Presenter: Laone Maphane, University of Southampton

Co-author: Gabriele Durrant, University of Southampton

Open-ended survey questions are widely used to capture respondents' views in their own words, but coding these responses for analysis remains time-consuming and difficult to standardise. Recent advances in large language models (LLMs) have renewed interest in automated approaches to open-ended survey coding, yet there is limited evidence on how these tools perform under real survey conditions. This paper examines the use of LLMs for coding open-ended survey responses using data from surveys conducted by the National Centre for Social Research. The dataset consists of thousands of verbatim answers collected under routine fieldwork procedures and therefore offers a realistic setting for evaluating automated coding in practice. In addition to this, the responses cover a range of topics and include substantial variation in length, clarity and thematic focus. Because of this diversity, a key aim of the study is to examine how different LLMs handle these varied coding challenges. The study therefore considers both locally deployed models and commercially available systems and evaluates different ways of applying these models to the coding task. Model outputs are assessed using existing human coded data as a benchmark, with evaluation framed around survey-methodological concerns such as reliability, consistency, and adherence to established codebooks. The paper aims to inform how LLMs might be used in practice for open-ended survey coding, and what issues survey researchers should consider when assessing their suitability for this task.

TALK 3: Can AI Automate Survey Data Cleaning? Evaluating Local and Cloud-Based Large Language Models

Presenter: Mack Nixon, University College London

Frontier Large Language Models (LLMs) excel at general coding tasks and have become fundamental tools in code development, most commonly through third-party cloud-based models accessed via chatbots or IDE integration. However, adoption in quantitative research, particularly in analysis of longitudinal population studies, is constrained by governance requirements that prohibit the transmission of sensitive data to external services. Here, we investigate the utility of lightweight agents powered by locally deployable open-weight models, for AI-assisted data analysis that satisfies data governance constraints. We introduce an open source framework for evaluating the efficacy of AI agents, powered by local LLMs, on one of the most persistent bottlenecks in research on longitudinal population studies: data preparation. The framework comprises: a ground-truth dataset (human-curated data preparation for a British cohort with multidimensional data across 6 sweeps), task definitions targeting data cleaning and variable harmonization, and automated routines for evaluating the LLM-produced R code and corresponding data outputs. We benchmark models across the deployment spectrum, from commercial APIs to open-weight alternatives. Open-weight models running on consumer-grade hardware perform well against the human-curated ground truth, suggesting a viable path for AI-assisted data preparation in governance-restricted research settings.

TALK 4: Science or Advocacy? The Global Rise of Policy Claims in Population Health Research (1990-2024)

Presenter: David Bann, University College London

Should original research articles routinely contain prominent policy claims, such as recommendations or calls to action? Growing emphasis on research impact might be welcome yet have unintended consequences (e.g., incentivising overextrapolation, and undermining the perceived objectivity of scientists). We examined 45,807 abstracts from ten leading Epidemiology and Public Health journals (1990–2024). Using a large language model with human validation, we classified policy claims and mapped trends. Claims markedly increased from 17.6% to 35.8%, with wide variation across countries and journals (>60% vs <6%). Keywords linked to higher claim rates differed by topic and time: some corresponded to topics with clear causal evidence (“tobacco”), others to topics with more complex causal evidence and notable researcher advocacy (“health inequalities” and “COVID-19”). Claims were most common in qualitative or cross-sectional studies, and less common in cohort, quasi-experimental, or experimental studies. We argue that these patterns reflect a research culture increasingly oriented toward claiming policy relevance—and incentives that encourage attaching claims to single studies. Our findings raise questions about how scientists and journals balance

evidence, advocacy, and credibility. Ensuring that policy claims remain commensurate with evidence will be central to building trust as policy impact continues to be incentivised.

Discussant: Liam Wright, University College London

5C STREAM: HEALTH / WELLBEING 4 SYMPOSIUM

Gender and Intersectionality

Chair: H el ene Colineaux, Imperial College London

Intersectional approaches are increasingly used in social epidemiology to examine how multiple dimensions of social stratification (gender, race, social class, etc.) shape biology, bodies, and health across the life course. Quantitative methods, including multilevel intersectional models (e.g. MAIHDA), are now commonly applied to move beyond single-axis analyses of health inequalities. One year after a first SLLS symposium on gendered and intersectional social-to-biological/ health processes, this session aims to assess where these approaches have taken us.

This symposium brings together contributions presenting empirical applications, methodological developments, or critical reflections on what intersectional quantitative methods reveal in longitudinal and life-course research.

TALK 1: Gender, Social Context and Cancer Incidence: Evidence from Population-Based and International Analyses

Presenter: Amalia Martinez, CERPOP – University of Toulouse

Co-authors: Nadine Hamieh, H el ene Colineaux, Michelle Kelly-Irving, Cyrille Delpierre, S ebastien Lamy, Emmanuel Wiernik, CERPOP – University of Toulouse; Pascale Grosclaude, Institut Universitaire du Cancer de Toulouse

Intersectional approaches are increasingly mobilised in social epidemiology to examine how gender and other dimensions of social stratification shape health across the life course. However, their contribution to understanding cancer incidence remains insufficiently explored. This presentation draws on doctoral research investigating gendered social and structural mechanisms contribute to sex differences in cancer incidence, using both international and national data.

The research combines an ecological analysis of colorectal and lung cancer incidence across 29 countries, examining associations with gender inequality and economic indicators, and a national cohort-based study in France analysing gender-related social, behavioural, medical, and anthropometric mediators of colorectal cancer incidence. A causal mediation framework was used to quantify the contribution of gendered mechanisms, while interaction terms were explored as secondary analyses at both analytical levels.

Across cancers and scales of analyses, interaction effects did not substantially alter the estimated associations. Rather than indicating an absence of gender effects, these findings suggest that gendered inequalities in cancer incidence are shaped by cumulative and structured life-course processes, which may not be adequately captured by conventional interaction-based quantitative models. This work contributes a critical reflection on the use and limits of intersectional quantitative approaches for studying social-to-biological processes in cancer epidemiology.

TALK 2: How Intersectional Social Dimensions Shape Hypertension Incidence in Women and Men: A Population-Based Cohort Study

Presenter: Erë Rrustemi, Unisanté

Co-authors: Aurélie M. Lasserre, Lausanne University Hospital; Margot Guth, Michael Amiguet, Jeanne Barbier, Joëlle Schwarz, Carole Clair, Unisanté

Hypertension is the leading preventable risk factor for cardiovascular diseases, with well documented sex differences. Intersectional profiles, including gender-related variables, socioeconomic position (SEP), and ethno-migration background, may shape hypertension risk differently in women and men. This study aimed to examine the different intersectional profiles and their influence on hypertension risk in women and men.

We analysed 2,399 participants (57% women; mean age: 48.3±9.1) from CoLaus|PsyCoLaus, a population-based cohort in Lausanne, Switzerland. Latent class analysis of baseline (2003-2006) gender-related, SEP and ethno-migration background variables identified five intersectional profiles: 1) Higher-qualified workers, living in couple with children; 2) Non-professionally active, living in couple with children, non-European and/or migrant background; 3) Non-professionally active, living in couple without children; 4) Intermediate qualification workers, living alone (reference) and 5) Lower-qualified workers, living in couple with children. Incident hypertension at the third follow-up (2018- 2021) was analysed using logistic regression including administrative sex, class membership probabilities, and their interactions. Models were adjusted for age, BMI, diabetes and dyslipidaemia.

Overall, women had lower odds of incident hypertension than men (OR 0.49, 95% CI 0.34-0.69). However, the association between administrative sex and incident hypertension varied by profile: a positive sex-by-class interaction was observed for women in Class 5 (OR 1.99, 95% CI 1.09-3.63; $p=0.02$). Intersectional profiles modify administrative sex differences in incident hypertension. While women overall had lower risk, this advantage disappeared in women in lower-qualified work with familial responsibilities, highlighting the importance of intersectional approaches for identifying at-risk subgroups, that might be overlooked by traditional analyses.

TALK 3: Health Behaviors as Mediators Between Administrative Sex and BMI: A Longitudinal Study in a Swiss Population

Presenter: Margot Guth, Unisanté

Co-authors: Erë Rrustemi, Margot Guth, Michael Amiguet, Jeanne Barbier, Carole Clair, Joëlle Schwarz, Unisanté; Aurélie M. Lasserre, Lausanne University Hospital

The difference in obesity prevalence between women and men is substantial and varies across contexts, highlighting the key role of social factors in this gap. Adherence to gender norms (e.g., health behaviors) may contribute to this disparity by shaping gendered susceptibility to obesity.

This study aims to assess the mediating effects of four health behaviors on the association between sex and body mass index (BMI) increase over a 15-year period. We will use data from the CoLaus|PsyCoLaus study, a population-based cohort in Lausanne, Switzerland, at baseline (2003–2006), follow-up 1 (2009–2012), and follow-up 3 (2018–2021). Gender norms will be operationalized with four health behaviors at follow-up 1: physical activity, dietary patterns, alcohol consumption and smoking status. These behaviors will be assessed as mediators in multiple mediation analyses on the association between administrative sex measured at baseline and BMI increase at follow-up 3. Among the 6,733 participants at baseline, 3,549 participants (54.9% were women) had BMI data available at follow-up 3. Their mean age at baseline was 50.53 years (± 9.83). Mean BMI was 25.23 (± 4.16) at baseline and 26.36 (± 4.77) at follow-up 3. By examining health behaviors as mediators between administrative sex and BMI increase, this study will help clarify how these behaviors are gendered pathways to obesity. Findings are expected to improve understanding of the gender gap in obesity in Switzerland and may inform targeted public health interventions.

TALK 4: Intersecting Inequalities in Later Life: Migration Citizenship Trajectories, Gender, and Stratified Ageing in China

Presenter: Nan Zhang, University of Manchester

Migration is a major life-course transition with long-term implications for later-life well-being, particularly under stratified citizenship regimes. In China's hukou (subnational citizenship) system, unequal allocation of social rights and welfare benefits structures internal migration. Using an intersectional life-course framework, this study examines how migration–citizenship trajectories intersect with social origin and gender to shape depressive symptoms in later life. Using six waves of the China Health and Retirement Longitudinal Study (CHARLS, 2011–2020; N=8,297), we constructed five migration–citizenship trajectories: lifelong rural residents, rural–urban migrant workers without hukou conversion, in-situ urbanised adults (administratively reclassified as urban), and upwardly mobile hukou converters, and lifelong urban residents. Multilevel growth-curve models estimated trajectories of depressive symptoms (CES-D-10) between ages 60 and 80.

Persistent inequalities emerged across trajectories. Upwardly mobile hukou converters and lifelong urban residents reported the lowest levels of depressive symptoms, whereas lifelong rural residents and rural–urban migrant workers exhibited the highest levels. Insitu urbanised adults occupied an intermediate position. These disparities remained stable with age, consistent with persistent-inequality and cumulative-disadvantage hypotheses than for ageing-as-leveler processes. Gender differences were pronounced: women reported higher depressive symptoms across all trajectories, and mental-health benefits associated with upward mobility were weaker among women. Early-life disadvantage and limited access to social protection were associated with poorer later-life mental health.

Later-life depressive symptoms reflect cumulative exposure to stratified citizenship, gendered labour market processes, and unequal institutional incorporation rather than migration alone, highlighting how regulated mobility contributes to stratified ageing and persistent mental-health inequalities.

5D STREAM: WORK

INDIVIDUAL WORK / HEALTH PAPERS

TALK 1: Macroeconomic Shocks and Cognitive Function Trajectories Across the Life-Course

Presenter: Ridho Al Izzati, Northumbria University

Co-author: Eduwin Pakpahan, Northumbria University

Exposure to a macroeconomic shock when first entering the labour market can have a long-term impact on individual health outcomes. Combining aggregated GDP per capita with 9 waves (18 years) of data from the Survey of Health, Ageing and Retirement in Europe (SHARE) across 20 countries (n=31,294) and using a linear growth model, this study assesses the scarring effects of graduating during a crisis on both the long-term level and trajectory of cognitive function and examines how these effects vary across population groups.

This study finds that individuals exposed to a positive macroeconomic shock during graduation from full-time education are associated with higher cognitive health in old age. Conversely, exposure to a negative macroeconomic shock or crisis during graduation negatively affects cognitive health in later life. This long-term cognitive impact is greater among female respondents and persists throughout the years. On the other hand, the trajectory analysis shows that crisis time graduation does not accelerate the rate of cognitive decline.

These findings support the scarring effect hypothesis that facing an adverse macroeconomic outcome in early labour market experience has a long-lasting impact on health outcomes ('initial effect hypothesis'), but our analysis does not confirm the 'accelerated deterioration effect hypothesis' of the cognitive decline. From the subgroup analysis, we find that higher childhood socioeconomic status, higher parental education level, and higher respondents' educational attainment may have mitigating effects on adverse macroeconomic exposure in early years. In later life, vigorous physical activity and participation in social activities are also associated

with reduced long-term impacts of adverse macroeconomic exposure on cognitive health. This paper contributes to the life course literature by refining and quantifying the heterogeneous impact of macroeconomic exposure during graduation from fulltime education on long-term cognitive function.

TALK 2: Mental and physical health changes around transitions into health-related economic inactivity in the United Kingdom

Presenter: Megan James, University of Sheffield

Co-authors: Damon Morris, Alan Brennan, University of Sheffield

Background: Transitions into health-related economic inactivity (not working nor seeking work due to poor health) can have lasting impacts on subsequent health trajectories, even after accounting for future returns to the labour market. This study aims to investigate changes in mental and physical health before, during, and after the onset of health-related economic inactivity. It explores whether these associations vary by age or subsequent labour market status.

Methods: This study uses data from Waves 1 to 15 (2009-2024) of Understanding Society, the UK Household Longitudinal Study, for working-age adults (16-64 years). We included adults with complete information on their economic activity, prior demographic and socioeconomic covariates, and at least one measure of health before and after the onset of health-related economic inactivity. We employed propensity score matching to match those who experienced a period of economic inactivity due to long-term sickness to similar individuals who did not. Linear mixed-effects models are used to estimate physical and mental health trajectories up to 9 years before and after the onset of health-related economic inactivity. Piecewise growth curve modelling will be used to statistically test changes in health following economic inactivity due to long-term sickness. Health-related outcome measures include mental health (GHQ-12, SF-12 MCS) and physical health (SF-12 PCS). Analyses are stratified by age group, gender, and one-year subsequent labour market status. Sample sizes vary from 755 (GHQ-12, ages 16-29) to 3,189 individuals (SF-12, ages 50-64).

Discussion: Preliminary findings show health trajectories diverge substantially based on labour market status one year after a period of health-related economic inactivity. None of the subsequent labour market groups who experienced long-term sickness return to the levels of health of their matched counterparts, suggesting longer-term 'scarring' associated with a period of health-related economic inactivity, regardless of subsequent labour market recovery.

TALK 3: Searching for Mechanisms of Cumulative Advantage: Accumulated Labor Market Insecurity and Recovery from Health Shocks in Later Working Life

Presenter: Malgorzata Mikucka, University of Mannheim

This paper conceptualizes the ability to recover after a sudden deterioration in health as a distinct and policy-relevant dimension of health. Moving beyond a focus on the long-term health trajectories or the onset of illness, I examine post-shock recovery within cumulative advantage and disadvantage framework. From this perspective, the socially differentiated capacity to recover from health shock may be a mechanism that contributes to diverging health trajectories.

The study investigates whether exposure to affective job insecurity and unemployment during the decade preceding a health shock shapes the probability of recovery. Using longitudinal data from the German Socio-Economic Panel (SOEP), I follow individuals who experienced a marked health worsening between ages 55 and 65. I define health worsening as a deterioration in the top decile of within-person changes in the SF-12 physical and mental health scales. Recovery is defined as a return to, or substantial improvement toward, pre-shock health levels within a two-year observation window. To reduce selection bias, I match respondents on their propensity to experience job insecurity and unemployment.

Preliminary findings reveal clear socioeconomic gradients in recovery. Individuals with higher education and better pre-event health show a higher probability of recovery. In contrast, prior exposure to unemployment and job insecurity is related to lower recovery chances, although estimates remain sensitive to model

specification. Panel attrition following a health shock is substantial, but does not vary systematically by initial health status or education. Sensitivity analyses address attrition through inverse probability weighting and imputation, and alternative definitions of health worsening based on transitions to poor self-rated health and the onset of health limitations yield similar patterns.

Overall, the findings show that recovery after a health shock is socially patterned. Unequal exposure to labor market insecurity may operate as a mechanism of cumulative disadvantage, shaping not only the risk of health decline but also the capacity to regain health in later life.

TALK 4: The Causal Effect of Trade Unions on Workers' Health: A Parametric G-Formula Approach Using Longitudinal Data from the Panel Study of Income Dynamics (PSID)

Presenter: Juan González-Hijón, Université Libre de Bruxelles

Co-authors: Natasia Hamarat, Jacques Wels, Université Libre de Bruxelles; Theocharis Kromydas, University of Glasgow

Background: Trade unions are recognized as determinants of public health, yet research often conflates individual membership with workplace presence. This study distinguishes between the direct psychosocial benefits of membership and the structural "spillover" effects of union presence to evaluate the role of organized labor as a structural determinant of public health.

Methods: We analyzed longitudinal data from the U.S. Panel Study of Income Dynamics (2001–2021; N=14,671). We employed a hybrid two-phase strategy: first, using Exploratory Causal Discovery (FGES algorithm) combined with expert knowledge to construct Directed Acyclic Graphs; second, using the parametric g-formula to estimate causal effects of union membership and workplace presence on mental health (Kessler-6) and self-reported health (SRH). We calculated Mean and Mean Ratios (MR) for total and direct effects (adjusting for potential mediators: income, working hours, and housing tenure).

Results: For mental health, membership showed robust protection in both Total (MR=0.96; 95% CI: 0.93, 0.99) and Direct models (MR=0.96; 95% CI: 0.93, 0.99). Conversely, workplace presence was associated with better mental health (Total MR=0.96; 95% CI: 0.92, 0.98), but this association was attenuated after adjusting for socioeconomic factors (Direct MR=0.98; 95% CI: 0.95, 1.01). For self-reported health, membership showed a protective Total effect (MR=0.98; 95% CI: 0.97, 0.99) but a non-significant Direct effect (MR=0.99; 95% CI: 0.97, 1.00). However, workplace presence consistently protected SRH in both Total (MR=0.98; 95% CI: 0.97, 0.99) and Direct adjustments (MR=0.98; 95% CI: 0.97, 0.99).

Conclusions: These findings suggest distinct protective mechanisms. Union membership appears to protect mental health through direct psychosocial pathways (e.g., collective voice), whereas its physical health benefits are largely accounted for by socioeconomic adjustments. In contrast, workplace union presence, while influencing mental health mainly through economic channels, may act as a direct structural determinant for physical health. This suggests safer environments could benefit all workers regardless of membership status.

TALK 5: Do Housekeeping Genes Mediate the Association of Socio-Economic Position with Health?

Presenter: Brenda Ozeias Santos, Trinity College Dublin

Co-authors: Robert J. Leigh, Rose Anne Kenny, Cathal McCrory, Trinity College Dublin

Background: Social inequality is associated with earlier disease onset, morbidity, and premature mortality. In recent years, DNA methylation (DNAm) has emerged as a biological marker to investigate how socioeconomic position (SEP) affects health at the molecular level. Indeed, alterations in levels of DNAm at a relatively small number of CpG sites across the human methylome have been used to quantify the pace of ageing, termed epigenetic clocks. We further explore whether premature ageing is due to alteration of mechanisms regulated by housekeeping genes, leading to the loss of homeostasis within the cell.

Methods: We used DNAm data for $n = 862$ participants aged 50-90 years in the Irish Longitudinal Study on Ageing (TILDA). An Epigenome-Wide Association Study (EWAS) was performed to examine associations between DNAm and Socio-economic position (SEP), modelled as a latent factor derived from occupation, income, education, and home value. Each significant CpG probe ($P < 0.005$) was mapped to its corresponding gene and used for further analysis.

Results: Methyloomic informed gene enrichment analysis highlighted 1309 hypomethylated genes, of which 81 were housekeeping genes; and 1104 hypermethylated genes, of which 98 were housekeeping genes. EWAS analysis specifically identified 17 statistically significant CpG probes ($PFDR < 0.05$) which showed differential methylation across the SEP latent factor tertiles. A social gradient can be observed for each probe.

Conclusion: Methylation plays a key role in regulating gene expression which are of paramount importance for essential housekeeping functions, where altered methyloomic profiles potentially resulting in loss of basic cell maintenance.

5E STREAM: WORK / EDUCATION

INDIVIDUAL SCHOOL-TO-WORK PAPERS

TALK 1: Modeling School to Work Transitions Using Linked Panel Data from Thailand: 2012-2024

Presenter: Joshua Hawley, The Ohio State University

Co-authors: Nuttanan Wichitaksorn, Auckland University of Technology; Thanarat Chotikasathian, Thailand Development Research Institute; Seong Ji Jeong, Penn State University; Sungjin Lee, San Diego State University

Using linked panel data taken from the Thailand National Labor Force Survey (NLFS) this paper investigates the labor market impact of completing schooling on work status. We investigate both employment and unemployment outcomes for linked individual records for any two-year period between 2012 and 2024 using the matched rotation group in the NLFS. We find that educational improvements are associated with increased employment, wages, and shifts in the sector or work. Impacts are strongest for youth and for those attending vocational and technical schooling. There are important implications for the Thai government, supporting increased investment in TVET. Moreover, we point to several suggestions for improving the use of the NLFS as a panel survey.

This paper uses an underutilized data source in a unique way to study individual level transitions between education and employment over a 12-year period. The NLFS is linked using household and individual identifiers over any two-year period between 2012 and 2024. The rotation group design is reset every 10 years, meaning in 2001 and 2011 there were new sampling frames set for household sampling. In each quarter 2 rotation groups are followed (Q1,Q3 and Q2,Q4). While not all samples are linked, overall, we can link most cases for up to 4 periods of measurement over a two-year period.

This study extends work done by social and economic scientists. While the Current Population Survey (CPS) has a rotation group design that has received some attention, other surveys in nations outside of the OECD have not received as much attention. The Thai data, along with data from Vietnam, Serbia, and others have been used in a few records. While the survey designs differ, the argument can be made that these panel data created from labor force surveys are necessary supplements to existing data that do not measure employment transitions over time.

This paper demonstrates a method specific to Thailand that can be added to the growing knowledge base in other nations.

TALK 2: Predictors and Adult Well-Being Outcomes of Atypical Educational Pathways in Individuals from Disadvantaged Backgrounds

Presenter: Laetitia Gendron, Université du Québec à Montréal

Co-authors: Dale M. Stack, Lisa A. Serbin, Concordia University; Marie-Hélène Véronneau, Université du Québec à Montréal

Educational pathways have become increasingly diversified, partly due to growing flexibility within many school systems. These reforms aim to democratize access to education for more diverse populations while responding to social needs. Consequently, some students pursue linear paths through secondary and tertiary education, whereas others follow atypical pathways marked by interruptions, program changes, or other non-prescribed transitions. Although atypical pathways have been linked to outcomes such as degree completion, job instability, and income, their long-term implications for adult well-being remain insufficiently understood. Examining their predictors and consequences is therefore essential, particularly among individuals from disadvantaged backgrounds who may not benefit equally from institutional flexibility.

As part of the Concordia Longitudinal Project, 211 adults aged 50–60 (144 women), originally recruited as children from Canadian schools serving disadvantaged neighborhoods, reported on their diplomas and school transitions through structured phone interviews. Atypical pathways were coded dichotomously (0 = linear, 1 = atypical) based on at least one non-prescribed educational transition, such as a program change, a school interruption, or a shift from vocational to higher education. Outcomes included satisfaction with one's educational pathway and overall life satisfaction in mid-adulthood. Linear probability models showed that stronger childhood academic skills and higher maternal education predicted a greater likelihood of following atypical pathways, whether short (high school diploma or less) or long (college or university degree). Life satisfaction was highest among individuals who completed long linear pathways, whereas satisfaction with one's educational pathway depended primarily on educational attainment rather than pathway type.

These findings suggest that individuals with greater early-life resources are more likely to make use of flexible educational options, possibly because they possess the academic and familial support needed to navigate them. Although atypical pathways may offer opportunities for exploration, they also reflect instability, which may contribute to lower life satisfaction in mid-adulthood.

TALK 3: Adolescent Work Expectations Across Time and Place: Evidence on Care Jobs

Presenter: Ludovica Gambaro, German Youth Institute

Co-author: Francesca Borgonovi, OECD

This study examines occupational expectations across birth cohorts born between 1985 and 2008, drawing on life course perspectives that conceptualise adolescence as a foundational life stage for occupational choices. Life course research highlights how teenagers make important vocational and educational choices during this period, while they consolidate values and cultural orientations that also reflect their sociohistorical context. Prior studies show that adolescent aspirations are strongly gendered and predictive of the gender typicality of occupations in adulthood.

We focus on aspirations towards nurturant care occupations – such as nursing, teaching and care assistance – which have expanded substantially over the past four decades yet remain female-dominated. To examine change across cohorts, we use data from 12 high income countries that participated in the Program for International Student Assessment (PISA) and collected career expectations in 2000, 2003, 2006, 2015, 2018 and 2022.

Two research questions guide the analysis. First, has the proportion of girls and boys aspiring to nurturant care jobs changed across cohorts? As girls have been progressively encouraged to enter science, technology, engineering, and mathematics fields, we expect a decline in girls' aspiration towards care occupations over time. Second, how are aspirations towards nurturant care occupations associated with adolescents' self-concept, competencies and value orientations and have these associations strengthened in a context marked by growing emphasis on self-expression and individual self-realisation?

We estimate logistic regression models before and after adjusting for individual characteristics – including their achievement – and for both the full student sample and the subsample reporting a specific occupational aspiration. By examining stability and change in aspirations across cohorts in different countries, the analysis contributes to the literature on cross-cohort comparisons providing insights into how shifting sociohistorical conditions – including technological transformation, changes in gender gaps in educational and labour market uncertainty – shape adolescents' occupational orientations.

TALK 4: Educational Differences in Early Old-Age Retirement Before Age 65 in Sweden: The Role of Health and Work Over the Life-Course

Presenter: Emma Carlsson, Karolinska Institutet

Co-authors: Tomas Hemmingsson, Katarina Kjellberg, Bo Burström, Emelie Thern, Karolinska Institutet; Jonas Landberg, Stockholm University

Introduction: Early old-age retirement is the most common pathway out of the workforce before age 65 in Sweden, and those with lower levels of education are at higher risk of leaving early. Yet, these educational differences are not fully explained. Therefore, the present study aims to examine potential factors, including work, health and civil status, and their mediating role in the association between education and early old-age retirement.

Methods: This register-based cohort study included all individuals born 1951-1954 and registered in Sweden in 2005 (n = 319 175). Mediation analysis was used to examine the mediating role of health (mental, physical and alcohol-related disease measured throughout working life), work (job control and physical workload), and civil status, on the association between education and early old-age retirement. The outcome early old-age retirement was examined using four different definitions; old-age retirement at age 61/62 with or without income, and old-age retirement at age 63/64 with or without income.

Results: The mediation analysis is ongoing. Preliminary results suggest that job control, physical workload, and civil status were risk factors for all four outcomes. Health throughout adulthood was found to be a risk factor for old-age retirement at age 61/62 without income, but not for the other outcomes.

Discussion: Those with lower levels of education are at higher risk of withdrawing old-age retirement before age 65, and the mediation analysis in this study will help us to understand and explain why these educational differences exist. This knowledge could, in turn, direct interventions with the aim of keeping those of working age at work.

5F STREAM: INEQUALITY INDIVIDUAL MIGRATION 1 PAPERS

TALK 1: Forever is a Long Time: How Balancing Work and Care Informs Migrants' Intention to Stay

Presenter: Klara Raiber, Radboud University

Co-authors: Nella Geurts, Radboud University; Mustafa Firat, University of Groningen

Migrants' life in a new residence country compounds various challenges and opportunities. Yet, migration as such can be reversible, and not all migrants intend to stay. In this study, we focus on the question of which migrants want to stay - or do not want to stay – in Germany long-term by looking at both the paid work and family domains combined. We base our analysis on 4,529 migrants in the Panel Study Labour Market and Social Security (PASS). First, we run a latent class analysis on past and present paid work and family characteristics, and in a second step, we relate the classes to the intentions to stay in Germany permanently. In a future third step, we want to explore whether the relationship between family and paid work combinations differs in their relationship with intentions to stay, by group of origin and feeling of integration in society. We found three preliminary classes, with the first class mostly being unemployment and with low child and informal care involvement (here called the unembedded). The second class is dominated by parents with low

current labor market attachment (the parents), and the last class includes migrants with children and partners, but also informal care involvement (the unpaid caregivers). When relating those classes to intentions to stay in Germany, we found that parents were especially more likely to want to stay, while the unembedded and unpaid caregivers did not differ statistically from each other. Overall, the results indicate that paid work and family tend to cluster around similar patterns, and that parenthood without other caregiving duties can facilitate the motivation to stay after migration.

TALK 2: Not Settled Enough to be Internationally Mobile: How Deadlines in the Life Course Schedule Deter Potential Migrants

Presenter: Jacob Thomas, Corvinus University of Budapest

An immobility-mobility paradox (hereafter (im)mobility paradox) exists with respect to a tension between societal expectations that an individual should achieve in the life course and the propensity to emigrate. This (im)mobility paradox is that the resources that often facilitate migration—different types of social ties and socio-economic status in the country of migrant origin— also constrain potential migrants by tying them to their country of origin, thereby deterring them from migrating and even going abroad. Strong familial and societal expectations that individuals complete certain life course objectives like university study, marriage, childbirth, and home purchase by certain age deadlines lead individuals to continually postpone their aspirations to go abroad and anchor them in the society of origin. Many who regret forgoing opportunities to go abroad later strategically raise their children as second-generation emigrants. The paper draws on data from ethnographic observation, interviews, and surveys, conducted over a two-year period in various cities in mainland China to offer evidence of this tension at various distinct stages of the life course based on oral history interviews conducted with several dozen mainland Chinese people who once aspired to go abroad but never did due to life course processes. I also apply machine learning methods to quantitative data about these individuals and a model I developed elsewhere of the probability of obtaining a non-immigrant visa to demonstrate that most of these deterred individuals would not obtain a visa if they applied. I conclude by arguing that these life course processes in China are stark and obvious enough that it enable us to more easily observe such migration-reducing barriers than we would observe in other societies where they are present but less strong and noticeable. This contributes to our understanding of the relationship between life course processes and immobility/migration.

TALK 3: Using the Office for National Statistics Longitudinal Study (ONS-LS) to Study Migration and Passport Holding Stability and Change Between 2001 and 2021

Presenter: Alison Sizer, University College London

Introduction: In 2020 the UK left the European Union following the 2016 referendum. Media reports suggested a resulting increase in number of UK citizens applying for Irish passports. We present findings showing migration flows to England and Wales (E&W) 2001-2021 of LS members present in 2021, and changes in ONS-LS members' passport holding between 2011-2021.

Methods: The ONS-LS covers a 1% sample of the E&W population (~1.3 million). It links individual census forms across the 1971-2021 Censuses with some life events data (e.g. births, deaths, immigrations). It is one of three UK census-based Longitudinal Studies. Linkage of the ONS-LS to National Health Service registrations enables examination of immigration to E&W; and the addition of a question on passports held in 2011 and 2021 allowed the investigation of passport transitions. ONS-LS members who were born outside the UK were coded into three country of birth categories: "Ireland", "Other EU" (EU country excluding Ireland) and "RoW" (Rest of the World).

Results: Of the ~71,800 members present for the 2021 Census and who migrated into E&W in 2001-2021, the majority came from RoW, but there were upticks in migrants from Other EU countries in 2004, after "freedom of movement" was introduced, and in 2019-2020 before the deadline to apply for "settled status" prior to Brexit in January 2020. Of LS members present in 2011 and 2021, 1162 with a UK passport only in 2011 transitioned to having UK and Irish passports in 2021, greater than the ~290 members with UK and Irish passports in 2011.

In adjusted logistic regression models, transitioning to holding a UK and Irish passport in 2021 was associated with sex, age, education, socioeconomic class, ethnicity and region.

Conclusions: We showcase recent research using the ONS-LS focused on migration flows to E&W and passport holding transitions in 2001 to 2021.

TALK 4: Youth Migration in Time of Crises in Ethiopia: A Life Course Perspective

Presenter: Yisak Tafere, Young Lives Ethiopia (Oxford University)

The life course is 'a sequence of socially defined events and the roles that individuals enact over time' (Giele and Elder 1998: 22). Migration demonstrates the four themes of the life course perspective: the interplay between lives and historical times and place, linked lives, timing of lives, and human agency (Elder, 1984). Migration is affected by social, economic, political and other contexts in the communities of origin and destinations (Edmonston, 2013). Drawing on two cohorts from the Young Lives longitudinal study in five Ethiopian communities, this paper analyzed data from the 2014, 2019, and 2025 rounds. It examined young people's migration trajectories within their life course, focusing on those who returned (voluntarily or deported), remain abroad, failed to reach their destination, or are preparing to re(migrate).

The latest round 6 qualitative study find that over half (58%) of young people interviewed reported migrating, either domestically or internationally, primarily in pursuit of employment, education, marriage, or as a consequence of conflict. The war in Northern Ethiopia has compelled many to relocate, thereby disrupting educational trajectories and livelihoods. Gendered migration patterns are evident: men frequently migrate for seasonal labor or join the army during conflict, whereas women's mobility is more shaped by education, marriage, and family obligations. Women are disproportionately exposed to risks of exploitation, while men often engage in hazardous but potentially remunerative work.

Although migration entails significant risks, some international migrants achieve economic success, remit income, and serve as role models for others. However, when migration is driven by desperation, such as conflict, poverty, or trafficking, it tends to interrupt education, family life, and personal development. In such cases, migration functions less as a pathway to opportunity than as a disruption of the life course.

5G STREAM: HEALTH / WELLBEING 5

INDIVIDUAL ENVIRONMENT PAPERS

TALK 1: Early Life Course Air Pollution Exposure and Neurodevelopmental Conditions in Childhood

Presenter: Gergő Baranyi, University College London

Co-authors: Ioannis Bakolis, King's College London; John Ward, University of Cambridge; Katie Harron, University College London

Early-life exposure to air pollution poses risks for child health, and emerging evidence suggests potential links with neurodevelopmental conditions such as an autism spectrum condition (ASC) and attention deficit hyperactivity disorder (ADHD). However, findings remain inconsistent and often rely on short follow up periods.

This study provides a comprehensive investigation of how exposure to air pollution from pregnancy through adolescence relates to neurodevelopmental diagnoses across childhood. We used data from the Millennium Cohort Study, a large, nationally representative sample of children born in the UK in 2000–2002. Residential histories were linked to 25 × 25 m grid-resolution PM10 and NO₂ concentrations from pregnancy to adolescence; we derived 300meter buffers around postcodes. Neurodevelopmental conditions were identified through parental reports of diagnoses, special education needs, and additional support needs between ages 5 and 14. Confounder adjusted generalized linear mixed effects models with random intercepts for government regions were used to account for regional clustering. The final sample included 14781 participants; 4.6% had an ASC diagnosis and 3.4% had ADHD during childhood. Higher PM10 exposure during

pregnancy (OR = 1.30; 95% CI: 1.10, 1.54 per 1-IQR increase), infancy (OR = 1.33; 95% CI: 1.12, 1.58), early childhood (OR = 1.35; 95% CI: 1.15, 1.58), and mid-childhood (OR = 1.58; 95% CI: 1.28, 1.95) was associated with increased odds of ASD. After adjusting for prior exposure, only pregnancy (first trimester) and infancy (first six months) remained significant. Although PM10 exposure was also associated with ADHD, these associations fully attenuated after excluding comorbid ASC cases. These findings suggest that prenatal and very early postnatal exposure to particulate matter may contribute to ASC risk. Future research should incorporate quasi-experimental approaches to strengthen causal inference and examine potential gene-environment interactions.

TALK 2: Association Between Neighbourhood Greenspace Availability and the Development of Multiple Long-Term Conditions: A Follow-Up Study in Urban Areas of Scotland

Presenter: Chunyu Zheng, University of Edinburgh

Co-authors: Eleojo Abubakar, University of Liverpool; Chris Dibben, Bruce Guthrie,

Alan Marshall, Jamie Pearce, University of Edinburgh; Katherine Keenan, University of St. Andrews

Whilst there is a plethora of work linking greenspace to single health outcomes through a multitude of pathways, few studies have considered the relationship between greenspace and multiple long-term conditions (MLTC), which is the complex combination of varying kinds of long-term conditions. While previous studies focused on neighbourhood greenness, evidence is limited on how the availability of different types of greenspaces, defined by its land use and function, relates to MLTC. Our study examined the association between the availability of types of greenspaces and the development of MLTC measured by i) the co-occurrence of 2+ long-term conditions (2+ LTCs) and ii) the co-occurrence of at least one mental and one physical conditions (mental-physical MLTC). Linking individual-level Scottish Longitudinal Study (SLS) records (a nationally representative database that comprises 5.3% of the Scottish population) with the postcode-level availability of greenspaces (identified by respondents' place of residence) by types in urban areas in 2012 and the corresponding health records (hospitalisation records and cancer registry), focusing on the transition from 0 conditions to the first occurrence of 2+ indexed conditions in 2012-2019, we followed the eligible population for up to 79 months using Cox models with multilevel confounder adjustment and a 12-month washout. Findings suggested that, compared with no exposure, low availability of private gardens or public parks was associated with 11% and 9% lower hazards of developing '2+ LTCs', respectively, while high availability was associated with 13% and 8% lower hazards. However, no meaningful associations were observed between total greenspaces, natural greenspaces, or sports-related greenspaces and '2+ LTCs', and none were observed for mental-physical MLTC. These findings suggest the more important role of the greenspace function, a dimension of greenspace quality, in the process of MLTC development, rather than the greenspace quantity.

TALK 3: Mapping Later Life Health and Social Care Needs at the Neighbourhood Level

Presenter: Laurence Rowley-Abel, University of Edinburgh

Co-authors: Alan Marshall, University of Edinburgh

There are well-established and stark geographical inequalities in the health of older adults across the United Kingdom. Existing literature has shown how these spatial inequalities in later life arise out of an accumulation of health-harming factors across the life course, both at the individual level and the neighbourhood level. However, research has yet to translate this understanding of the mechanisms into models that can produce detailed geographical estimates of the health and social care needs of older adults. Estimates of need for small areas across the country would provide a valuable tool for local government and health care systems to plan where to deliver services within neighbourhoods, which is particularly important given the current policy drive to move services out of hospitals and into the community. Building on research links made at a previous Society for Longitudinal Lifecourse Studies conference, this project uses new synthetic population data in combination with the UK Household Longitudinal Study to produce estimates of health and social care needs in the older population for small census areas in the United Kingdom. Using these estimates, we then analyse hotspot areas where needs are particularly concentrated. Preliminary results show that distinct spatial patterns in need do emerge, beyond those expected based on geographical differences in population age-structure and deprivation. We present these estimates as a resource for better understanding the geography of older adults' needs that can be used as we respond to population ageing.

TALK 4: Using Climate Data to Enrich Longitudinal Population Study Data at the UK Longitudinal Linkage Collaboration

Presenter: Abigail Harrison, University of Bristol

Co-authors: Richard Thomas, Andy Boyd, University of Bristol

UK Longitudinal Linkage Collaboration (UK LLC) is the national Trusted Research Environment for data linkage in longitudinal research. UK LLC currently brings together data from >24 Longitudinal Population Studies (LPS), supporting the linkage of participants' study data with health, socio-economic and place-based records. We describe the novel methodology to facilitate the linkage of UK Met Office climate data with an LPS databank in a privacy-preserving manner. We explore how triangulation across data, not previously brought together in this way, can support research and inform policy decisions for climate change, health and wellbeing.

UK LLC has linked to the 1km HadUK-Grid Gridded Climate Observations dataset. Understanding changing trends in climate variables such as air temperature, precipitation, sunshine, and days of ground frost is important for research relating to, for example, epidemiology, public health and urban climate service planning.

Climate data complements longitudinal study data and other linked place-based indicators and health records. Research has found relationships between adaptability to climate change, mental and physical health, deprivation, hospital admissions and service provision. UK LLC enables triangulation of information using different sources of data, climate observations, indices of deprivation and healthcare records, giving a more holistic perspective. The benefits of linking all these datasets together are that it maximises LPS collected data with long-term outcomes and allows for a broader scope of analyses.

UK LLC use a decision-making framework that mitigates risks, including disclosure of neighbourhoods with unique and identifiable qualities. Our control measures balance data utility and the context in which the data is analysed to make informed decisions on required disclosure controls. Climate data can not only support research into the health and social impacts of the UK climate, but it can also underpin policy on climate change, associated impacts and adaptability, a key priority for the UK Government.

6A STREAM: CHILD / YOUTH DEVELOPMENT SYMPOSIUM

Adolescence and Transition to Adulthood as Formative Periods Extending to Mid-Life

Chair: Jeylan Mortimer, University of Minnesota

Life course principles of timing, life-span development, and life-long openness draw attention to the malleability of human beings as they respond to key experiences. The papers in this symposium address these principles by drawing on longitudinal data from the Youth Development Study collected over 30 years from adolescence to mid-adulthood (ages 15-46).

Monica Kirkpatrick Johnson shows that persistent self-concept change (in self-esteem, self-efficacy, and values) occurs during adolescence and transition to adulthood, but such shifts become more transitory thereafter. Kaspar Burger examines the impacts of parental education on adolescent self-esteem and depressed mood. Irrespective of parental mental health, parental education is found to have a positive effect on adolescent self-esteem, boding well for the offspring future mental health trajectory. Presentations by Lucy Clark and Jeylan Mortimer focus on long-term consequences of teen work, a relatively understudied phenomenon in comparison to the vast literatures on family and school experiences. The intensity (average weekly hours) and duration (months) of two forms of work experience---informal unpaid work in the family (care for children and the elderly) and formal paid work in the community ---are found to significantly predict long-term career trajectories (educational attainment, career development, and wages) up to mid-life.

TALK 1: New Evidence for Self-Concept Change in Adolescence and Youth, and Stability in Mid-Life

Presenter: Monica Kirkpatrick-Johnson, Washington State University

Co-authors: Mike Vuolo, Ohio State University; Xiaowen Han, Jeylan Mortimer, University of Minnesota

The extent to which people hold stable ideas and attitudes throughout their lives is a persistent concern among scholars. Developmental processes early in life are widely considered to lay the groundwork for future attitudes, well-being, behavioral adaptation, and attainment. However, little is known about whether central components of the self-concept manifest persistent change, or simply short-term fluctuations around a stable baseline, through stages of the life course, including the lengthening transition to adulthood.

The present study examines key self-related orientations as participants in the Youth Development Study moved from adolescence to mid-life over a 30- year period. These include self-efficacy, self-esteem, and extrinsic and intrinsic work values. Applying analytic methods recently employed by Lersch (2023) to study civic and political attitudes during adulthood, we find evidence that more persistent change in self-orientations occurs during adolescence and the transition to adulthood; greater stability is manifest once adulthood has become established and continues until mid-life. Our study also takes a first step in examining whether aging stability arises through the occupancy of adult roles, zeroing in on the transition to adulthood period. We compared the magnitude of lasting change during this life stage among those who have not acquired specific adult social roles (considered singly), those who transitioned into them, and those who persistently occupied them. Contrary to our expectations, we found few differences.

We argue future research should pay greater attention to experiences within adult roles. We also suggest further consideration of the time spent in adult roles and role configurations, since initially the many changes involved in the transition to adulthood are disruptive.

Taken as a whole, this study provides empirical support for an oft assumed predominance of attitude change in youth, and a pattern of “aging stability” thereafter. And it outlines productive next steps to explain this life course pattern.

TALK 2: Assessing the Effect of Parental Education on Offspring Mental Health: Evidence from a Multigenerational Longitudinal Study

Presenter: Kaspar Burger, University of Potsdam

Co-author: Francesca Mele, University of Potsdam

Adults with higher levels of education lead healthier lives and education may be considered a fundamental cause of mental health. Moreover, there is evidence that the benefits of education extend intergenerationally, as parental education is positively related to children’s mental health. However, key gaps remain in our understanding of the relationship between parental education and child mental health.

First, it is unclear whether parental education predicts child mental health net of parental mental health, which may be transmitted intergenerationally. Second, the question arises as to whether parental mental health moderates the effect of parental education on child mental health. Parental mental health issues might undermine positive effects of parental education; they may induce stress, inadequate parental care and support for children, as well as unhealthy modelling behaviors. We examine whether parental education (ages 31-38) predicts offspring mental health during adolescence (ages 15-18), a highly formative stage for mental health development, when controlling parental mental health measured both in adolescence (ages 14- 18) and in adulthood (ages 31-38). Moreover, we investigate whether parental mental health moderates the effect of parental education on adolescent mental health. We use data from the longitudinal Youth Development Study (265 parents, 422 children) and consider depressive mood and self-esteem as indicators of mental health. Results from a structural equation model (RMSEA = .064, 90% CI = .062, .067) suggest that parental education significantly predicts adolescent self-esteem ($\beta = .25$, $p < .001$), but not depressive mood ($\beta = -.03$, $p > .05$), when controlling parental mental health. We also find that the effect of parental education on offspring self-esteem is not significantly moderated by parental mental health, irrespective of whether it is measured in adolescence or adulthood.

We conclude that parental education has robust effects on adolescent self-esteem, with potential implications for the offspring's future mental health trajectory.

TALK 3: The Duration and Intensity of Adolescents' Childcare and Eldercare Responsibilities: Links to Short-and Longterm Educational Outcomes

Presenter: Lucy Clark, Tufts University

Co-authors: Emma Armstrong-Carter, Tufts University; Jeylan Mortimer, University of Minnesota

This longitudinal study documents individual differences in the intensity and duration of adolescents' childcare and eldercare responsibilities from ages 14 to 18. Further, it investigates how adolescents' family caregiving responsibilities predict socioeconomic characteristics and educational outcomes across the high school years and at midlife. Participants (N = 1,130, 52% female, 12% Asian, 9% Black, 4% Hispanic) were followed longitudinally from ages 14 to 46. Across four years of high school, adolescents reported the number of weekly hours they spent providing childcare and eldercare in their homes. These reports were used to classify participants' caregiving patterns into five categories: no care, occasional, sporadic, steady, or extensive. Participants also reported their high school grade point averages, whether they graduated from high school on time, and their educational attainment at age 46. Household income and maternal education were reported by parents at baseline. Adolescents who provided extensive childcare (high intensity, long duration) and sporadic eldercare (high intensity, short duration) across four years were disproportionately concentrated among adolescents from socioeconomically disadvantaged families. These caregiving patterns were also associated with lower educational attainment by midlife, even after controlling socioeconomic status and other demographic characteristics. Extensive childcare was additionally linked to declines in academic grades across high school. Although youth's eldercare responsibilities were not associated with academic grades between subjects, within-subjects analyses revealed that adolescents had lower grades during years when they provided more eldercare. Despite prior evidence that youth with extensive family obligations are highly motivated to excel in school, our findings suggest that institutional barriers may be hindering their short- and long-term educational goals.

This study highlights the importance of incorporating adolescents' family contributions into life-course research on educational inequity and underscores the need for policies that better support caregiving youth across academic transitions.

TALK 4: The Long-term Effects of Adolescent Work on Adult Socioeconomic Attainment

Presenter: Jeylan Mortimer, University of Minnesota

Co-author: Jeremy Staff, Pennsylvania State University

We investigate the benefits and costs of adolescent employment for adult socioeconomic attainment. While some have expressed concern about the costs of early employment, especially if working jeopardizes educational investment, prominent theoretical perspectives suggest long-term benefits: human capital theory, since adolescent employment could enhance work-related knowledge and "soft" skills; the screening model, as teen work could signal productivity to early employers, initiating successful career trajectories; and the occupational socialization model, because teen work could inculcate positive work attitudes, self-reliance, and time management skills. Whereas prior studies considered outcomes of youthwork only during and closely following high school, data from the Youth Development Study (YDS) enabled us to extend the investigation to mid-life. A cohort of 9th graders was followed from ages 14-15 (1988) to 45-46 (2019). Using coarsened exact matching to account for prior differences in socioeconomic background, educational motivations and behavioral adjustment, we examined both short- and long-term educational and career outcomes among youth whose teenage employment varied in intensity (average hours) and duration (months) during the school year. Logistic and OLS regression models showed that intensive adolescent work (averaging >20 hours/week) was positively associated with wages immediately following high school, but this benefit dissipated with age. Intensive youth workers, compared to those who averaged moderate hours, were also less likely to earn a BA. Early intensive work thus gave youth a head start but inhibited long-term careers in higher income occupations. In contrast, youth who worked at high (vs. low) duration quickly acquired jobs they considered "careers" and continued to hold such jobs to mid-life. They also reported higher wages throughout

the entire period of observation. Future research should assess whether near-continuous teen work still yields the same long-term advantages in the labor market as high duration employment did for members of Generation X.

Discussant: Ingrid Schoon, University College London

6B NO SESSION

6C STREAM: HEALTH / WELLBEING 4

INDIVIDUAL LIFESTYLE 2 PAPERS

TALK 1: Identifying Distinct Physical Activity Trajectories from Adolescence to Adulthood and Subsequent Health Risks

Presenter: Eoin McNamara, Growing Up in Ireland

Introduction: The health benefits of physical activity at different stages across the life course are well established. Less is understood about the health impact of physical activity trajectories and persistent inactivity over an extended period.

This study aimed to identify distinct trajectories in physical activity levels from childhood to adulthood in a large cohort of young Irish people, identifying associated risk factors, and the extent to which specific physical activity trajectories predict negative health outcomes in adulthood.

Methods: Data from waves 1 to 5 of Growing Up in Ireland's Cohort '98 were used, spanning the period from age 9 to 25yrs. Self-reported physical activity data were gathered at each wave, and weekly levels of moderate-to-vigorous physical activity (MVPA) were calculated. Latent growth mixture modelling was employed to identify distinct physical activity trajectories within the cohort. Extensive information on health outcomes and wider socio-demographic factors was gathered via interview, and interactions with activity trajectories were explored through logistic regression analysis.

Results: Overall physical activity levels decreased substantially from childhood to adulthood, dropping from 271 minutes of MVPA per week at age nine to 160 minutes at age 20. Three distinct physical activity trajectories were identified: a persistently active group, a persistently inactive group and a decreasing activity group. Membership of the persistently inactive group displayed the strongest predictive effect on subsequent health issues, including obesity and chronic illness. This group was characterised as having a higher representation of females and those from less advantaged family backgrounds

Conclusions: Whilst an overall trend of disimproving activity levels was observed from childhood to early adulthood, individual variations were observed. The persistently inactive group was most at risk of subsequent health issues, highlighting the cumulative impact of poor health behaviours over a sustained period, and emphasising the need to address physical inactivity early in life.

TALK 2: Shaping Childhood Beverage Consumption Habits: Findings from the Nutrition and Sustainability-Based DRINK Trial

Presenter: Katia Castetbon, Université Libre de Bruxelles

Co-authors: Lucille Desbouys, Manon Rouche, Wassila Assakali, Université Libre de Bruxelles; Isabelle Thiébaud, Club Européen des Diététiciens de l'Enfance (CEDE)

Improving children's nutritional behaviours through both health related and environmental sustainability interventions may yield long term health benefits. The aim of the DRINK cluster-randomised trial was to evaluate the effectiveness of such interventions in decreasing sweetened beverages (SB) and increasing tap water consumption in Belgium.

Two cohorts of French-speaking primary schools were included, and all schools were randomised into four groups according to a factorial plan: (i) control; (ii) nutrition-only; (iii) sustainability-only; and (iv) combined intervention. Interventions (early 2022-July 2023) included scheduled water breaks and provision of posters, leaflets, reusable cups, and bottles. Children recorded all beverages they consumed in a 4-day age-adapted booklet at baseline (2021), mid-term (2022), and final evaluation (2023). Children and parents additionally self-completed questionnaires covering beverage-related behaviours as well as perceptions and interactions with the living environment. Blinded group analyses are ongoing, with unblinding planned in spring 2026. A two-stage targeted minimum loss-based estimation (two-stage-TMLE) method is used to account for the cluster-randomised design and child-level data loss over time, with adjustment for baseline imbalances between intervention groups.

Among the 46 schools initially randomised (n=3,664 children), after accounting for school withdrawals and missing child-level data, valid repeated measures of beverage intake are available for 565 children in 31 schools. Through two-stage TMLE, partially observed data from 1,812 children will be incorporated to enhance the estimation of intervention effects on usual SB and tap-water intakes.

By considering both the variability in beverage intake and changes in participation across the two-year follow-up, the DRINK trial offers an opportunity to analyse trajectories of beverage consumption during a critical developmental period. Furthermore, protocol adaptations during the Covid 19 period placed the project within a real-world context. These longitudinal insights will help identify realistic levers for action that could be applied to support healthier and more sustainable trajectories throughout primary school years.

TALK 3: Cumulative Incidence of Psychotropic Use by Age 30 in Finland: A Synthetic Cohort Approach

Presenter: Heta Moustgaard, The Social Insurance Institution of Finland (Kela)

Co-authors: Juho Leppänen, Ripsa Niemi, Tapio Räsänen, Heini Kari, Hanna Koskinen, Miika Vuori, The Social Insurance Institution of Finland (Kela)

Background: Psychotropic use is rising rapidly among children, adolescents, and young adults across the world, yet up-to-date estimates of how this affects the cumulative incidence of psychotropic use across childhood and youth are lacking. We use a synthetic cohort approach to estimate how likely would it be for a child born today to use psychotropic medication by age 30 given current age- and sex-specific prescribing patterns, and how this has changed over the past two decades.

Methods: We use nationwide registers on prescription purchases linked to population records on all permanent residents of Finland aged 0–30. We calculate the cumulative incidence of psychotropic use for the calendar years 2004, 2009, 2014, 2019, and 2024 using a synthetic cohort approach based on annual one-year age-specific incidence rates. Our main outcome is the first purchase of any psychotropic medication. We also separately assess ADHD medication, antidepressants, antipsychotics and anxiolytics and sedatives.

Results: With the 2024 prescription patterns, around 60% of women and 45% of men would use psychotropics at least once by age 30, compared with 25% and 20% in 2004. The increase is mainly due to increased use of antidepressants among women, and ADHD medication among both men and women. The cumulative

incidence of ADHD medications in 2024 was nearly 30% in both sexes (vs. <5% in 2004), while antidepressant use exceeded one-half among girls and was around one-third among boys (vs. 15–20% in 2004).

Conclusions: Current Finnish prescribing patterns would result in about half of young adults using psychotropic medication by age 30, a share that has increased dramatically over the last two decades. This raises concerns about overprescribing of psychotropics among children and youth. The synthetic cohort approach offers a life-expectancy-like, year-specific summary that does not predict the future but captures annual treatment patterns and their cumulative implications.

TALK 4: Preschool Developmental Outcomes of Children Exposed to Opioids in Pregnancy: Using Scottish Health Records to Understand Lifecourse Risk and Resilience

Presenter: Louise Marryat, University of Glasgow

Co-authors: Senga Robertson, Alison McFadden, University of Dundee; James P. Boardman, University of Edinburgh; Anne Whittaker, University of Stirling

Objectives: Prenatal opioid exposure is increasing internationally, driven by both illicit drug use and rising prescription opioid use. Yet children affected by this early adversity have been largely absent from longitudinal research due to challenges in traditional follow-up. In a period of rapid structural change in drug use, service provision, and social inequality, this study examines how early opioid exposure shapes preschool developmental outcomes, with implications for lifecourse trajectories.

Methods: Using linked Scottish administrative health data, we identified 4,865 children exposed in utero to illicit opioids or prescribed methadone/buprenorphine (births 2009–2019), and an additional 4,793 children exposed through pain medication. An unexposed comparison group was matched on maternal age, health board, and deprivation. Health visitor developmental assessments and preschool vision-screening data at ages 4–5 were linked to construct a population-level longitudinal cohort. Analyses used descriptive statistics and regression modelling to estimate developmental differences and adjust for confounders including smoking, alcohol use, and birthweight.

Results: Children exposed to illicit opioids or methadone/buprenorphine showed markedly elevated rates of behavioural, social–emotional, and cognitive difficulties—three to four times higher than matched controls. They were also around five times more likely to have visual problems identified at preschool screening. Although children exposed via pain medication also demonstrated increased developmental difficulties, these were substantially lower than in the illicit/prescription-substitution group. Associations persisted after adjustment for key confounders.

6D STREAM: WORK
INDIVIDUAL WORK / FAMILY
PAPERS

TALK 1: Parents' Employment Precariousness, Non-standard Work Schedules, and the Time They Spend with Their Children

Presenter: Mette Bluhm, University of Rostock

Co-author: Martina Dieckhoff, University of Rostock

Our study explores the implications of employment precariousness on the time parents spend actively engaging with their children. Our research question is “How do precarious work arrangements affect quality time with children?”.

By focusing on the time parents spend with their children in various activities we are able to contribute to better understanding the role of employment precariousness and non-standard work in shaping children's life outcomes. We know from existing work that parents' non-standard work is associated with negative outcomes for children including depression, behavioral problems, and lower educational attainment. By using time use

data, we shed more light on one mechanism which may drive the relationship between precarious employment and children's poorer outcomes: time spent with children. We examine different dimensions of precarious and non-standard employment: fixed-term employment, in-work poverty, shift work and weekend work and how they relate to time spent with children on different activities. Our analysis differentiates between toddlers (0-2 years of age), pre-school children (3-years until school entry) and elementary school children (from school entry until 10 years of age) and provides analyses for fathers and mothers.

Using the German Time-Use Survey from 2022 and drawing on a sample of working adults with at least one child ten years or younger in their one- or two-parent household ($n = 9,946$ diary days), we show that employment precariousness and non-standard work schedules are substantially and significantly associated with the time parents spend with their children on activities even after controlling for other sociodemographic and work-related variables.

We find that parents on fixed-term contracts spend notably less time reading to, playing or having conversations with their pre-school children than parents on permanent contracts, this holds for fathers and mothers. By contrast, for toddlers, we find that shift work decreases time spent with children on the same activities.

TALK 2: Couple Employment Dynamics and First Childbirths in Europe

Presenter: Kristina Dorofeeva, University of Florence

Economic instability has become a persistent feature of European labour markets, characterised by high youth unemployment, widespread temporary employment, and uneven family policy support. This macro-level instability generates substantial uncertainty for young couples, particularly those navigating precarious employment trajectories. This uncertainty significantly shapes fertility behaviour, contributing to postponed or foregone childbearing. Yet, despite growing recognition that fertility behaviour results from joint decision-making, existing research rarely examines how each partner's employment situation shapes the transition to first parenthood across different institutional contexts.

This study examines how partners' employment status and contract type influence the likelihood of a first childbirth in Europe, and how these associations have evolved over time. Using longitudinal data of the European Union Statistics on Income and Living Conditions (EU-SILC), spanning 2005–2021, I estimate event-history models with couple-level employment configurations to assess the gendered effects of employment instability and their temporal evolution. The analysis focuses on heterosexual couples from 19 countries.

Results show that permanent contracts for both partners increase first childbirth likelihood, but income plays a limited role once employment configurations are considered. Over time, the negative effect of women's temporary employment has weakened, dual temporary employment has become less restrictive, and male temporary contracts remain strongly associated with lower childbirth probabilities. Regional variation is pronounced: while Mediterranean and Nordic countries show high first-birth probabilities among couples with stable male and precarious female employment, East-Central Europe still penalises employment instability heavily.

The study contributes by centring the couple as the unit of analysis, demonstrating how persistent gender norms interact with labour market uncertainty, and highlighting institutional variation in couples' adaptive strategies. Policy implications suggest that enhancing employment stability — particularly for young employees — may be more effective for supporting family formation than income-based measures alone.

TALK 3: Revisiting the Motherhood Penalty: Life Course Effects of Employment, Partnership and Fertility on Women's Midlife Health Outcomes in Germany

Presenter: Johanna Turgetto, University of Potsdam

Background: The motherhood penalty is a well-established concept in inequality research, primarily referring to persistent income losses and career disadvantages following motherhood. In parallel, life-course research has increasingly applied tri-dimensional approaches that jointly analyse employment, partnership, and fertility trajectories, consistently showing that women's health disadvantages in midlife do not result from single status positions but from specific constellations of linked lifecourse trajectories, particularly those combining intensive care responsibilities with weak or unstable labour-market attachment and partnership instability. However, while health outcomes have been examined within this framework, they have rarely been conceptualised explicitly as part of the motherhood penalty. As a result, the processes through which motherhood-related economic and employment disadvantages translate into long-term health inequalities remain insufficiently specified. Existing studies often rely on coarse employment distinctions, treat employment interruptions as homogeneous episodes, and implicitly assume that labour-market re-entry is inherently health-promoting, leaving differences in timing, duration, and quality of interruptions and re-entry under-explored.

Objective: This paper extends the motherhood penalty framework to health outcomes by conceptualising it as a process through which linked employment, partnership, and fertility trajectories generate cumulative health (dis-)advantages over time. Rather than treating employment interruptions and re-entry as binary events, the analysis describes their timing, duration, employment quality, and alignment with biographical aspirations in order to distinguish heterogeneous motherhood trajectories.

Data and Methods: Using data from the Life Study 2024, employment, partnership, and fertility trajectories are reconstructed via sequence analysis and complemented by process-oriented measures. Multivariate models estimate associations with mental and physical health at age 57, controlling for early health and social selection.

Conclusion (preliminary): Preliminary findings confirm that midlife health disparities are shaped less by motherhood itself than by unstable and low-quality employment and care trajectories, suggesting that employment promotion without addressing care inequality risks shifting economic motherhood penalties into health outcomes.

TALK 4: Linked Lives: Mapping Work and Family Trajectories of Intergenerational Donors

Presenter: Alisa Jashari, University of Turku

Co-authors: Mirkka Danielsbacka, Elisa Tembellini, University of Turku

European societies are undergoing significant demographic shifts, characterized by more coexisting generations but fewer members within each. Within this "beanpole family" structure, the family has become a critical source of support. This study investigates how the long-term employment and family formation trajectories of older Europeans shape their patterns of intergenerational transfers of money and time. This study adopts a life-course perspective, utilizing sequence analysis to treat an individual's entire life history as a coherent unit of analysis.

Using longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE 2004-2022), the study identifies distinct life-course typologies for over 10,000 individuals to determine which trajectories predict becoming a "frequent donor" in old age. A central focus is placed on the gendered dimension of these patterns, examining whether mothers and fathers follow distinct trajectories and how these paths influence their transfer behavior differently. Furthermore, the article explores cross-country differences in how these life-course patterns manifest across 27 European societies. By linking work and family trajectories to later-life patterns of intergenerational transfers, the findings reveal how gendered patterns in intergenerational transfers are created and reproduced throughout the life course.

6E STREAM: WORK / EDUCATION**INDIVIDUAL CAREWORK PAPERS****TALK 1: Social Inequalities in Support Between Multiple Generations in Europe Over Time**

Presenter: Christian Deindl, TU Dortmund University

Family members support each other. Parents help their adult children with financial transfers and hands-on support and childcare, while children support their older parents with help and care. However, profound social inequalities linked to different need and opportunity structures as well as public transfers within different contexts can be suspected. Given the growing problem of many western welfare states to finance their pensions and health care, poverty in old age is a growing risk. The consequences of poverty for transfers within the family are not well understood.

While there is some research on each aspect separately, and some research on the connections between certain transfer types at certain family stages, there is still no conclusive study bringing together all different support types between three generations from different social backgrounds over time. In our view, taking a longitudinal multi-generational perspective is essential to capture dependencies and negotiations within families. If middle-aged parents have to take care of their own older parents, they have fewer resources for their children, who might then receive less attention and support from their parents. This may differ according to individuals' access to support from public or private institutions where country and regional specifics have a huge impact on support patterns. Using six waves of the Survey of Health, Ageing and Retirement in Europe (SHARE) we look at intergenerational transfers between three generations over time across multiple European regions, considering mid-aged Europeans in the "sandwich" position between older parents and children and include both transfer directions over time to assess the links between social inequality, changes within the family and country level, and intergenerational solidarity. Our results show the importance of the middle-generation for transfers in the family. We are able to show that poverty has a tremendous negative effect on transfer pattern across all generation in Europe.

TALK 2: Changing Life-Course Logics of Grandparental Childcare in Rural China: Evidence from 2009 to 2021

Presenter: Tianqi Zhou, Syracuse University

Co-author: Merril Silverstein, Syracuse University

This study examines changes in the mechanisms underlying grandparental childcare provision over a twelve-year period, drawing on data from the Longitudinal Study of Older Adults in Anhui Province collected in 2009 and 2021. We estimate logistic regression models predicting the likelihood of grandparental childcare, incorporating characteristics of grandparents and adult children, with standard errors clustered at the grandparent level. Aggregate patterns across both waves reveal persistent structural biases. Grandparents consistently favored first-born children, and a pronounced gender asymmetry persisted: daughters were significantly less likely than sons to receive childcare support. However, the logics governing investment in sons and daughters diverged over time. In 2009, support for daughters was primarily shaped by patrilineal and birth-order norms. First-born daughters were 1.651 times more likely to receive childcare than their younger sisters, suggesting that traditional hierarchies continued to structure intergenerational assistance. By 2021, this birth-order effect disappeared. Instead, grandparental support for daughters became contingent on reciprocal exchange: daughters providing high levels of financial support to their parents were 2.679 times more likely to receive childcare. For sons, the trajectory moved in the opposite direction. In 2009, sons offering moderate to high financial support were more likely to receive childcare, reflecting a present-oriented exchange logic. By 2021, this reciprocal effect weakened, and support became increasingly strategic. Sons engaged in business and commercial occupations were more likely to receive grandparental childcare, indicating investment in future lineage returns rather than immediate reciprocity. Despite these shifts, altruism remained a stable baseline. Divorce, widowhood, and severe economic hardship consistently increased the

likelihood of grandparental support for both genders. Overall, the findings demonstrate a transition from normatively structured caregiving toward differentiated logics of reciprocity and strategic investment, reflecting broader transformations in family organization and rural socio-economic contexts in China.

TALK 3: Health and Wellbeing in Late Life: Insight from Longitudinal Ageing Studies

Presenter: Istikhar Ali, Jawaharlal Nehru University

Co-author: A. B. Dey, AIIMS - New Delhi

Population ageing in India is accelerating rapidly, with the population aged 60 and above projected to more than double by 2050. While increased longevity reflects major public health gains, it also coincides with a growing burden of chronic illness, persistent infectious disease, and rising cognitive impairment. India's older adults face a distinctive dual disease burden, where non-communicable diseases (NCDs)—such as diabetes, hypertension, and cardiovascular conditions—coexist with communicable diseases (CDs), compounding risks of frailty and neurocognitive decline. Yet cognitive ageing remains under-diagnosed and insufficiently integrated into health policy, particularly when examined in relation to structural inequality and caregiving systems.

This study investigates cognitive health among older Indians using harmonised data from the Longitudinal Ageing Study in India (LASI Wave 1, 2017–2018) and the LASI-Diagnostic Assessment of Dementia (LASI-DAD Waves 1–2, 2017–2024). Focusing on adults aged 60+, it examines three interrelated questions: (1) how multimorbidity—including NCDs, CDs, and biomarker-confirmed physiological risk—shapes cognitive outcomes; (2) whether intergenerational support and caregiving arrangements buffer or exacerbate decline; and (3) how caste, gender, education, and rural–urban residence intersect to produce unequal cognitive ageing trajectories.

Cognitive functioning is measured through composite and domain-specific neuropsychological assessments, while health burden includes both self-reported diagnoses and biomarkers (HbA1c, blood pressure, BMI, C-reactive protein). Social stratification and caregiving variables capture structural positioning and relational support. Analytical methods combine descriptive statistics, multivariable regression, and longitudinal mixed-effects modelling, with interaction terms to assess intersectional disadvantage.

Findings indicate that multimorbidity and inflammatory risk are strongly associated with poorer cognitive performance, with biomarker evidence revealing substantial under-diagnosed disease. Significant disparities emerge across caste, gender, education, and rural residence, reflecting cumulative life-course disadvantage. Intergenerational co-residence and emotional support demonstrate protective effects, though caregiving burdens remain gendered and underrecognized. By situating cognitive decline at the intersection of biological risk and social inequality, this study underscores the need for integrated geriatric, dementia, and caregiver support policies to promote equitable and healthy ageing in India.

TALK 4: Life After Informal Caregiving? Mental Health Trajectories When Spousal Caregiving Ends

Presenter: Carine Rakofsky, Université Libre de Bruxelles

Co-authors: Bram Vanhoutte, Céline Mahieu, Université Libre de Bruxelles

The links between mental health and wellbeing and caregiving have been extensively documented in the literature. However, the trajectory of caregivers' mental health around the transition out of caregiving has received far less attention. Several reasons may lead to caregiving cessation, such as the death of the care recipient, changes in their level of dependency, or the caregiver's own health problems. Each of these reasons is likely to differently shape the evolution of depressive symptoms at the end of caregiving.

To examine this question, we reshape longitudinal data of informal caregivers within the household from SHARE and estimate event-centered multilevel growth models. The transition is identified when an individual reports being a caregiver at wave T–1 and no longer being a caregiver at wave T0. Time is centered on this transition and modeled using three splines capturing the pre-transition trajectory, the change between T–1 and T0 (transition), and the post-transition trajectory. Depressive symptoms are measured using the EURO-D scale.

Changes in the ADL scores of the care recipient and caregiver between T-1 and T0 are used to characterize changes in dependency at the time of transition.

Our results show a significant decrease in depressive symptoms among women during the transition, corresponding to a significant inflection between T-1 and T0. No significant change is observed among men. The cause of caregiving cessation moderates this trajectory: an increase in symptoms is observed following the death of the care recipient as well as when the ADL score of the care recipient or caregiver increases between T-1 and T0.

These results highlight the heterogeneity of depressive trajectories at the end of caregiving and identify configurations associated with higher psychological risk.

6F STREAM: INEQUALITY

INDIVIDUAL SOCIAL / HEALTH PAPERS

TALK 1: Are Breast Cancer Treatment Pathways Different Between Women Born in France or in Sub-Saharan Africa? Results from a French Retrospective Life-Event Survey

Presenter: Anne Gosselin, Ined - French Institute for Demographic Studies

Co-authors: Clémence Schantz, Karna Coulibaly, Annabel Desgrées du Loû, Joseph Larmarange, Université Paris Cité; Leonor Drouin, Sylvie Giacchetti, Laetitia Someil, Luis Teixeira, Hôpital Saint Louis; Gaétan Des Guetz, Hôpital Delafontaine; Laurent Zelek, Hôpital Avicenne

Background: Breast cancer is the most common cancer among women and has one of the highest incidence rates worldwide in France, with over 60,000 new cases diagnosed annually. In sub-Saharan Africa, women are diagnosed younger and with more aggressive breast cancers; they also could encounter more difficulties in access to healthcare in France. However, research investigating potential differences in post-cancer period according to place of birth remains limited, particularly in France. This study aims to compare the treatment pathways between women born in France and in sub-Saharan Africa and to understand the underlying mechanisms.

Methods: Our study is based on the retrospective life-event survey SENOVIE, conducted among 470 women with breast cancer in three hospital wards in the Greater Paris Area between 2024-2025. Data were collected through face-to-face interviews using standardized questionnaires and a paper life-event grid to collect annual data, from birth to date of the survey, on residential, occupational and family trajectories, as well as diagnosis and treatments for breast cancer. This study includes women born in France (WBF, n=375) and women born in Sub-Saharan Africa who were diagnosed in France (WBSSA, n=79).

Results: Preliminary results indicate differences in cancer characteristics according to place of birth: among WBSSA, median age at diagnosis was 49 years old (versus 55 among WBF) and 28% had an aggressive form of cancer (triple negative) (versus 11% among WBF). 49% of WSAA declared strong treatment-induced limitations, versus 26% of WBF.

Kaplan Meier estimates will be used to compare time between diagnosis and treatment, length of treatment-induced physical limitations, and examine access to supportive care according to origin. Multivariable duration models will be used to examine the respective role of cancer characteristics and social factors in differences according to origin.

TALK 2: Developmental Conditions and Child Health at Age Three: Evidence from the Hungarian Birth Cohort Study (Cohort '18)

Presenter: Julianna Boros, HCSO Institute for Quantitative Population and Economic Research

Early childhood is a sensitive stage in the life course when social inequalities in health may begin to emerge and become established. Guided by life-course and cumulative (dis)advantage frameworks, the paper examines whether health and developmental conditions are socially stratified by age three and whether institutional responses shape these early differences. Using data from the Hungarian Birth Cohort Study (Cohort '18), we examine three interconnected domains: maternal-rated general health, medically diagnosed developmental conditions and their severity, and participation in early intervention services. Maternal-rated health was measured on a five-point scale. Developmental conditions include speech delay, sensory impairments, motor development problems, postural disorders, and growth-related deviations, with reported severity levels. Access to early intervention services and financing type were also assessed. We estimate sequential regression models to explore (1) socioeconomic gradients in maternal-rated health, (2) social patterning in diagnosed developmental conditions and their severity, and (3) inequalities in access to early intervention among children with developmental needs.

Results indicate that social differentiation is already visible at age three. Maternal education, subjective income, and settlement size are associated with both perceived child health and the likelihood and severity of diagnosed developmental conditions. Furthermore, access to early intervention services appears socially stratified, suggesting that institutional responses may not fully compensate for early disadvantage.

Our findings support a life-course interpretation in which early childhood health and developmental conditions function as mechanisms through which social inequalities are initiated and potentially accumulated. By examining both health status and access to intervention, this study highlights the interplay between family-level resources and institutional structures in shaping early life trajectories.

TALK 3: Priorities for Supporting a Life Course Approach to Health and Wellbeing: A Scoping Review

Presenter: Anita van Zwieten, University of Sydney

Co-authors: Vanessa De Rubeis, Chandni Maria Jacob, Hsin-yi Lee, Ritu Sadana, World Health Organization; Janeen Baxter, University of Queensland; Arnaud Chiolero, Stéphane Cullati, Saman Khalatbari-Soltani, University of Fribourg; Mark Hanson, University of Southampton; Anne McMunn, University College London; Jane Rylett, Western University

Background: Life course approaches are recognised as a critical tool for improving population health, but remain underutilised. Key stakeholders may have important insights into priorities for supporting wider uptake.

Aim: To identify and summarise existing literature on priorities for supporting a life course approach to health, wellbeing and health equity across research, policy, practice, and knowledge exchange.

Methods: Scoping review. We searched academic databases (MEDLINE/Embase/PsycINFO) and grey literature (WHO-IRIS/Google Scholar) for English language priority-setting studies or reviews published since 2015, which focused on stakeholder priorities for supporting a life course approach to health/wellbeing/health equity in research, policy, practice or knowledge exchange. We mapped the study scope, priority-setting methods, and focus of the priorities, including the domain of applying a life course approach (research/policy/practice/knowledge exchange) and level of support for the approach (APPLYING/ADVANCING/ACTING).

Results: Of 629 records, 24 priority-setting studies were included. Studies focused on the application of a life course approach across a range of topics, most commonly maternal, child/adolescent or sexual/reproductive health. The number of stakeholders involved in the consensus process ranged from 11-231, with the most commonly-involved stakeholders being researchers and patients/community members. Nearly half of studies had priorities that focused solely on supporting life course approaches in research, with a few each on policy,

practice, or a mixture of these domains, and only one considered knowledge exchange. Around a third of studies each were at the level of APPLYING a life course approach to a particular field, ADVANCING the approach by identifying barriers/enablers to its adoption, and ACTING on barriers/enablers by generating tools.

Conclusion: We identified a small body of literature describing stakeholder priorities for supporting a life course approach to health/wellbeing. Further priority-setting studies are needed on policy/practice domains, and operating at the ADVANCING/ACTING levels to identify and address barriers and enablers to adoption of life-course approaches.

TALK 4: Educational Spillover Effects and Influenza Vaccination Uptake in Europe: The Role of Social (Dis)Connection

Presenter: Valentien Taeldeman, Ghent University

Co-author: Katrijn Delaruelle, Ghent University

Introduction: While previous research has predominantly examined the impact of parental education on their children's preventive health behaviours, fewer studies have explored the reverse relationship. This study analyses the upward spillover effect of adult children's education on older adults' influenza vaccination uptake. Theoretically, longer-educated children may provide informational, motivational, and instrumental support that promotes preventive health behaviours in their parents. Conversely, older adults whose ties to such resources are weaker may experience what recent lifecourse literature calls "unlinked lives". Such conditions often coincide with social isolation, loneliness, or living alone, factors known to undermine preventive health behaviours. Furthermore, cross-country differences are expected, given variation in preventive healthcare institutions.

Methods: Data from the Survey of Health, Ageing and Retirement in Europe (SHARE) were used, including 40,272 adults aged 50 and above across 27 European countries. Preliminary two-level binomial logistic regression models were estimated to explore both individual-level and macro-contextual influences on influenza vaccination uptake.

Results: Preliminary results reveal (1) an initial association between adult children's education and parents' vaccination uptake, with parents of longer-educated children showing a greater likelihood of being vaccinated than those with shorter-educated children. (2) However, this link largely attenuates and becomes non-significant once social connection variables, such as household composition and social network size, are included. (3) Substantial cross-country heterogeneity further indicates the role of institutional contexts in shaping these intergenerational patterns.

Discussion: Anchored in fundamental cause theory, this study highlights the intergenerational educational gradient in health inequalities, as well as the pivotal role of social connections and their absence in shaping preventive health behaviours. By integrating intergenerational dynamics with macro-level institutional variation, the study contributes to understanding the social processes underlying inequalities in preventive practices across Europe.

6G STREAM: HEALTH / WELLBEING 5**INDIVIDUAL AGEING 2
PAPERS****TALK 1: Health Consequences of Providing Downward Support in Later Life: Do Types of Support and Their Combination Patterns Matter?**

Presenter: Ariane Bertogg, University of Konstanz

Co-author: Anna Manzoni, North Carolina State University

Providing downward intergenerational support to adult children is widespread and has been shown to occur in a stratified manner, with more affluent parents providing more support. Support has been linked both positively and negatively with multiple health outcomes. However, support may take different forms, including practical support and financial transfers. Yet, little is known about how different types of downward support are linked with health in later life, and how patterns of substitution (i.e., providing one type) or complementarity (i.e., providing both types) are associated with changes in subjective and objective physical and mental health in later life.

Using eight prospective panel waves from the Survey of Health, Ageing and Retirement in Europe (SHARE), we apply Fixed Effects Linear Regression models on a sample of parents aged 50 or older to trace changes in health to the provision of downward intergenerational support (no support, time only, money only, both). Additionally, we investigate heterogeneity across parents from different socio-economic backgrounds and with different baseline health.

Findings suggest that 17% provide only practical support, 10% only financial support, and 6% provide both. Providing practical support alone or complementing it with financial support is associated with greater grip strength. Providing financial support alone or alongside practical support is associated with a higher number of chronic conditions and depressive symptoms. Parents who provide only practical support report better self-rated health, while those who provide only financial support report greater life satisfaction. Protective patterns for grip strength and life satisfaction are more pronounced among lower-educated, whereas risks for chronic conditions and depression are reduced among higher-educated respondents. Life satisfaction is higher for parents with poor baseline health and lower for those with good baseline health.

TALK 2: Housing Trajectories and the Rhythm of Ageing: How Intergenerational Tenure Trajectories Influence the Timing of Health Loss in Later Life

Presenter: Damiano Uccheddu, Université Libre de Bruxelles

Co-author: Bram Vanhoutte, Université Libre de Bruxelles

Housing tenure trajectories are a key dimension of social stratification through which inequalities are reproduced across the life course and transmitted between family generations. Little is known about how intergenerational housing trajectories –from parental tenure through adult housing career – shape the timing of health decline in later life. We reconstruct complete housing tenure sequences from age 1 to 49 and examine their associations with later-life health. Using both retrospective and prospective data from 11 waves (spanning 2002-2024) of the English Longitudinal Study of Ageing (ELSA) for 2,790 men and 3,683 women (47,471 observations), we applied sequence analysis (optimal matching, followed by Ward clustering and PAM) and evaluated 2-20 cluster solutions, identifying six intergenerational housing trajectories. Preliminary results from panel random effects regression models with binary contrasts suggest consistent later-life health inequalities. Relative to the average of all other trajectories, ownership reproduction and early upward mobility are associated with lower levels of ADL limitations (binary contrasts: -0.120 and -0.088, respectively), IADL limitations (-0.267 and -0.153), and depressive symptoms (-0.304 and -0.163). Conversely, downward mobility and persistent disadvantage are associated with higher levels of ADL limitations (0.206 and 0.304), IADL limitations (0.360 and 0.620), and depressive symptoms (0.288 and 0.704). Late upward mobility and migrant upward mobility do not differ substantively from the overall mean on any health outcome. These preliminary findings suggest that housing careers shape later-life health inequalities through cumulative advantage and disadvantage operating over decades across generations. In developing this study further, we will employ event

history analysis to investigate how intergenerational housing trajectories affect variability in the timing of key adverse ageing events – including health, income, and wealth loss – to assess whether the long arm of parental tenure operates through distinct mechanisms of cumulative disadvantage and compensatory advantage across life domains.

TALK 3: Ethnic Inequalities in Frailty Levels and Trajectories in the United Kingdom

Presenter: Alexander Labeit, University College London

Co-authors: Susan Pickard, University of Liverpool; Simon Conroy; The Royal London Hospital;

Thibault Köhler, Bram Vanhoutte, Université Libre de Bruxelles

Background: Frailty is a major issue for UK health and social care systems. The UK is an ethnically diverse country, yet how frailty trajectories differ between ethnic groups is not known.

Methods: Using a frailty index (FI) based on an accumulation of deficit approach, the growth trajectories of the five largest non-White ethnic groups (Caribbean, African, Pakistani, Indian and Bangladeshi) were estimated making use of the UK Household Longitudinal Study (UKHLS).

Results: Levels of frailty were elevated for all five ethnic groups in comparison to White ethnicity. There was substantial heterogeneity regarding levels and growth rates of frailty between ethnic groups, with growth trajectories being markedly more elevated for Pakistani individuals. These differences in frailty trajectories persisted after adjusting for sex and the highest level of qualification.

Conclusion: There is heterogeneity in frailty trajectories between the five ethnic minorities in comparison to White ethnicity in the UK, especially for Bangladeshi and Pakistani ethnicities. It is possible that culturally adapted interventions earlier in the life course might improve frailty related outcomes for ethnic minority groups.

TALK 4: Neighborhood Racialized Economic Residential Segregation Across Adolescence and Adulthood and Epigenetic Aging Among Participants in a Nationally Representative Study of Midlife Adults in the United States

Presenter: Chantel Martin, University of North Carolina, Chapel Hill

Co-authors: Sylvie Tuder, Alena Sorenson D'Alessio, Brandt Levitt, Audrey L. Kelly, Kathleen Mullan Harris,

Lauren Gaydos, University of North Carolina, Chapel Hill; Allison E. Aiello, Columbia University;

Taylor W. Hargrove, University of Maryland, College Park

Racial disparities in aging-related diseases persist in the United States (U.S.), where the burden of aging-related outcomes like Alzheimer's disease and dementias, hypertension, diabetes, and stroke are consistently higher for Black adults than White adults. In the U.S., residential segregation is an established fundamental cause of health disparities and studies suggest that residential segregation may accelerate epigenetic aging; however, evidence primarily stems from cross-sectional studies of racial residential segregation despite increases in segregation by socioeconomic position. We examined associations between residential segregation and epigenetic aging among 821 Black and 2,759 White participants in the National Longitudinal Study of Adolescent to Adult Health across adolescence (1994-1995) and early midlife (2016-2018). Census tract racialized economic segregation was measured using Index Concentration of Extremes. Epigenetic aging was measured using three epigenetic clocks (PhenoAge, GrimAge2, DunedinPACE) and an inflammation-related DNAm surrogate based on C-reactive protein. Exposure to racialized economic segregation was higher for Black than White participants. Cumulative exposure to neighborhoods with higher concentrations of lower income Black households across adolescence and early midlife was associated with accelerated epigenetic aging and faster pace of aging for Black and White participants. Residing in neighborhoods with higher concentration of lower income Black households in early midlife, but not adolescence, was associated with accelerated epigenetic aging, faster pace of aging, and inflammation-related DNAm among both groups. We also found evidence that exposure to residential segregation in adolescence, but not early midlife, accelerated epigenetic aging among White participants.

Our findings suggest that neighborhoods with racially and economically unequal conditions can accelerate epigenetic aging, potentially increasing risk of aging-related diseases. Additional research is needed to identify intermediate pathways that may be amendable to public health and policy interventions aimed at reducing aging-related chronic diseases.

MEET THE EDITORS: ADVICE FOR SUCCESSFUL PUBLISHING (PANEL SESSION)

Panel: Anne McMunn, University College London; Deborah Carr, Boston University;

Kathrin Komp-Leukkunen, LUT University (via Zoom); Morten Wahrendorf, University of Duesseldorf

Chair: Jessica Kelley, Case Western Reserve University

Peer reviewed scholarship remains the currency of the scientific enterprise and of acknowledgment of scholarly contribution and relevance. This session convenes a panel of current and former editors from journals that publish longitudinal and life course research. They will discuss strategies for success in the peer review process and trends in publishing from their perspective “behind the desk.” Attendees will learn about the publishing priorities of each of the journals represented. Ample time will be dedicated to audience questions.

SLLS HARVEY GOLDSTEIN MEMORIAL AWARD LECTURE**Beyond Typical Pathways: Methods for Linking Life-Course Trajectories to Covariates and Outcomes**

Presenter: Matthias Studer, University of Geneva

(Winner of the 2025 SLLS Harvey Goldstein Memorial Award)

Many life-course studies investigate the relationships between trajectories and covariates or later-life outcomes, for instance, how educational pathways differ by social origin, or how work and family trajectories are associated with poor health at old age. Such relationships are difficult to study because trajectories contain several theoretically meaningful aspects that may reveal distinct inequality patterns or lead to different outcomes: the timing of situations, their duration, and their sequencing. However, different methods might highlight distinct between-group differences and value parsimony differently. Therefore, a key methodological choice needs to be made.

This keynote presents and compares four complementary approaches providing different levels of detail on the association: single trajectory indicators, sequence analysis, feature extraction and selection, and mixed-method case selection. The discussion highlights the key role of validation, the added value of integrating qualitative data, and the need to capture atypical and off-track trajectories, which tend to be overlooked by standard approaches despite their theoretical relevance. The approaches are illustrated with applications from educational and residential trajectories, and the talk assumes no prior familiarity with sequence analysis.

**7A STREAM: CHILD / YOUTH DEVELOPMENT
SYMPOSIUM****Reflections on Positive Youth Development: Insights from Prof. Salmela-Aro's Contributions**

Chair: Katja Upadyaya, University of Helsinki

This symposium centers on how motivation, engagement, and school climate shape youth wellbeing across critical educational transitions. Building on Prof. Salmela-Aro's seminal work on positive youth development, the papers collectively translate theory into evidence and practice at scale. The symposium focuses on current issues facing adolescents and young adults, including rising academic pressures, post-pandemic adjustment challenges, and widening gender disparities, which make system-level, developmentally attuned interventions essential.

The first paper by Dr. Henseke examines UK adolescents' life satisfaction from 1994–2024; the results showed stability until 2014/15, followed by a marked decline—especially among girls—driven primarily by satisfaction with appearance, schoolwork, and friendships.

The second paper by Dr. Chow tests a virtual peer program grounded in the Four Cs; the results showed reduced loneliness, increased belonging, short-term gains in self-regulated learning, and longer-term boosts in self-efficacy.

The third paper by Dr. Upadyaya maps the longitudinal trajectories of school burnout and engagement; the results showed rising burnout through secondary schooling, a dip then rebound in engagement, and the emergence of “engaged but burned-out” profiles.

The fourth paper by Dr. Vinni explores science motivation across Finnish basic education; the results showed gendered patterns and that early self-concept and value beliefs shape STEM aspirations.

Together, these studies exemplify and extend Prof. Salmela-Aro's contributions to positive youth development, highlighting actionable levers— school climate, peer support, self-regulation, and early, equity-focused motivation—for sustaining well-being and achievement.

TALK 1: Explaining the Decline in UK Adolescents' Life Satisfaction: A Decomposition of Risk and Domain-Specific Correlates (1994–2024)

Presenter: Ingrid Schoon, University College London

Co-authors: Golo Henseke, Wei Luo, University College London

There has been an alarming decline in subjective wellbeing and increase in mental health problems among adolescents in recent decades. There is, however, little evidence on the relative importance of different explanatory factors, leaving it unclear which factors are driving this downturn in adolescent wellbeing. To close this evidence gap, this study draws on both the British Household Panel Study and the UK Household Longitudinal Study (UKHLS) youth surveys to 1) examine gendered long-term trends in adolescent (aged 10–15) life satisfaction from 1994 to 2024; 2) understand the relative contribution of multiple 'established' risk factors, including socioeconomic adversity, relationship quality with parents and peers, social media use, exam pressure, satisfaction with school climate, school work and one's own appearance. Using decomposition analysis, we find that adolescent life satisfaction was approximately flat between 1994 and 2014/2015, irrespective of sex. Post-2015, life satisfaction fell both among boys and especially among girls, leading to increased gender inequality in adolescent life satisfaction after a period of parity. For boys, appearance satisfaction was the dominant predictor of wave-to-wave changes in overall happiness ($\beta = 0.82$, $p < 0.001$), while satisfaction with schoolwork and friends contributed modestly. For girls, schoolwork (0.48), appearance (0.36), and friends (0.34) each contribute significantly (all $p < 0.001$). Exam pressure explained partly the drop of satisfaction with schoolwork for both sexes. Classic risk factors (socio-economic adversity, housing conditions, and relational risks) do not explain the fall in life satisfaction; if anything, they cushioned it. Likewise, intensified social media use cannot explain the downward trend in life satisfaction.

The findings indicate that interventions aiming to promote adolescent well-being should make school wellbeing a system-level priority. There should also be more investment in raising early body-image resilience, reducing sensitivity to or fear of the judgment by others.

TALK 2: Translating the Four Cs into Practice: A Virtual Peer Support Program Facilitating Channelling, Choice, Co-Agency, and Compensation

Presenter: Angela Chow, Indiana University

Co-authors: Shuhan Yuan, Assumption University; Hsien-Chang Lin, San Diego State University

Introduction: College students continue to report decreased motivation, learning challenges, and reduced well-being following the COVID-19 pandemic, underscoring the need for theory-driven interventions that support academic and psychosocial adjustment. Guided by Salmela Aro's life-span model of motivation, which emphasizes channelling, choice, co-agency, and compensation (the Four Cs), we developed Connect and Thrive, a four-week virtual peer support program. The intervention integrated app-based goal-setting and tracking with weekly peer mentor-led Zoom meetings. The Four Cs were operationalized through activities aligned with goal achievement, sense of community, well-being, and technology support. Channelling and choice were supported through structured semester and weekly goal setting. Co-agency was fostered through peer interaction and shared activities. Compensation was facilitated by providing accessible technological and relational supports when other resources were limited.

Method: Participants were 41 undergraduates (mean age = 20.2; 78% female) at a Midwestern university in the United States who participated in Connect and Thrive during Spring 2022. A repeated-measures design assessed outcomes at baseline, post program (Post 1), and four-month follow-up (Post 2). Psychosocial outcomes included loneliness, and belonging; learning outcomes included self-regulated learning and self-efficacy. Linear mixed-effects models adjusted for demographic covariates.

Results: Loneliness significantly decreased and belonging significantly increased at both follow ups. Self-regulated learning improved at Post 1 only, whereas self-efficacy showed delayed improvement at Post 2.

Discussion: Overall, Connect and Thrive translates the Four Cs into an applied virtual intervention with promising effects on student well-being and motivation. Future studies should explore whether extending the

intervention period and providing more systematic opportunities for repeated application of goal setting, strategic planning, and self-evaluation skills can help stabilize and sustain improvements in self-regulated learning. Moreover, future iterations of Connect and Thrive may include more activities designed to foster authentic mastery experiences, thereby promoting growth in students' learning self-efficacy.

TALK 3: The Development and Longitudinal Associations of School Burnout and School Engagement from Primary School to Young Adulthood

Presenter: Katja Upadyaya, University of Helsinki

Co-authors: Olli-Pekka Heinimäki, Marguerite, Beattie, Yirou Fang, Jussi Järvinen, Salla Veijonaho, Janica Vinni, Junlin Yu, Lauri Hietajärvi, University of Helsinki

This study synthesizes the development and longitudinal associations of school burnout and engagement from primary school to young adulthood, building on Prof. Salmela-Aro's foundational work and the School Burnout Inventory (SBI) and Schoolwork Engagement Inventory (EDA). Burnout (exhaustion, cynicism, inadequacy) and engagement (energy, dedication, absorption) are core indicators of student well-being with consistent links to achievement and adjustment. Prior research shows girls and students from lower SES backgrounds are more vulnerable to burnout, yet comprehensive longitudinal evidence across educational stages has been limited. We aggregate multiple Finnish datasets spanning Grades 1–10 and follow-ups into higher education/work, including Elementary STEM (2016–2021), Mind the Gap (2013–2016), Bridging the Gaps (2017–2021), FinEdu (2003–ongoing), and ySKILLS (2021–2023). All measured SBI/EDA (original or short forms). Precision-weighted generalized additive mixed models (REML) disentangled developmental from secular trends and estimated burnout–engagement correlations. The results showed significant nonlinearity in grade-related trajectories. Burnout increases from comprehensive school through the end of secondary education, alongside an effectively linear secular rise over years. Engagement declines during comprehensive school but turns upward in secondary education; secularly, engagement rose slightly before 2010, then declined, with a sharp drop around 2020 coinciding with COVID-19. The burnout–engagement association is generally negative but varies over the academic path: stronger inverse relations in lower grades (as burnout falls and engagement rises), weakening in Grades 7–9, and evidence in secondary education for “engaged but burned-out” profiles where both rise simultaneously. Year-wise, the correlation is modest and near-linear.

These preliminary findings indicate distinct, stage-sensitive trajectories and a worrisome secular pattern: overall increases in both burnout and engagement over time. They underscore the need to balance demands and resources across transitions, bolster school climate and supports, and attend to vulnerable groups. Final analyses will pool individual-level data with finer time resolution to examine covariates (e.g., gender) and refine developmental and contextual inferences.

TALK 4: Development of Students' Science Motivation in Finnish Basic Education

Presenter: Janica Vinni, University of Helsinki

Co-authors: Lauri Hietajärvi, Katja Upadyaya, University of Helsinki

Students' subject-specific task values are shaped by the cultural contexts (Eccles & Wigfield, 2020). Prior research show that female students and students with low socioeconomic background (SES) opt out from science education. Motivation in science becomes especially relevant in middle school before students' transition to upper secondary education. Using person-oriented approach, this study examines students' self-concept and task values (i.e., intrinsic and utility value, and cost) in physics. Further, the associations of the profiles with students' gender and SES were examined. Longitudinal data was collected through Grades 7 to 9 in 32 middle schools in Helsinki, Finland (N=1619; age 13-15 years; 50% female, 46% male, 4% other). Repeated Measures Latent Class Analysis identified four task value -profiles in Grades 7–9: 1. Low increasing science motivation with medium cost (10%); 2. Medium decreasing science motivation with increasing cost (18%); 3. High stable science motivation without cost (32%); 4. High decreasing science motivation with increasing cost (39%). High stable science motivation profile consisted mainly of boys, while Medium decreasing science motivation profile consisted mainly of girls. Moreover, students with low SES belonged more likely to Medium decreasing science motivation profile. Academic achievement and educational aspirations between the profiles will be explored.

7B STREAM: HEALTH / WELLBEING 6 SYMPOSIUM

The Relationship Between Care and Health

Chair: Markus King, University of Potsdam

The process of demographic ageing in most western societies increasingly highlights the importance of caregiving. The majority of this care is still provided by children, spouses and other family member. This informal care is often a time demanding, stressful task and which can tremendously impact the health and wellbeing of the carers. Problems in the combination of employment and care obligations are furthermore likely to increase the negative impact on health; informal carers may adopt unhealthy behaviours like smoking, drinking or overeating. At the same time, the connection between care and health can be different for different groups and across the life course and factors such as sexual orientation, as well as the family and employment situation can moderate the impact of care on health.

This symposium will report findings on various connections between care and health. We will look at the impact of the combination of care and employment on health, we will analyse the connection between care and health behaviours, the moderation effect of sexual orientation and the care over the life course, with consideration of the different family and employment situation in different phases of the life course.

TALK 1: Assessing the Impact of the Combination of Informal Caregiving and Employment on the Health and Wellbeing of Mid-Life Carers in Germany: Evidence from the Life 2024 Study

Presenter: Markus King, University of Potsdam

The provision of informal care can be a physically and mentally demanding task. Carers often have to not only manage their own emotion and health but also the health and emotion of the care recipients, they can feel overwhelmed or even burned out by their care. The majority carers also have to juggle their caring demands with the need to secure their own livelihood, thus they need to find a way to combine their caregiving tasks with their (pre-existing) employment which may lead to additional stressors due to the potential existence of job-caregiving conflicts, occurring economic problems or other role strains. The aim of this presentation is to investigate how the combination of caregiving and employment leads to changes in the subjective health and mental wellbeing of carers compared to non-carers as well as those carers who are not in employment at time of caregiving between the age of 45 and 57, using data from the latest wave of the German 'Lebensverläufe von der späten Kindheit ins frühe Erwachsenenalter' cohort study. Additionally, given that qualitative research indicates that male and female carers are pursuing different strategies when combining care and job demands and given that women are often more involved in informal caregiving, this presentation aims at potential gender differences in the effects of this combination on the carer's health. Based on previous studies it is expected that informal caregivers in employment are receiving penalties in their subjective and especially mental health.

TALK 2: Functional Health and Depression in the Second Half of Life: The Moderating Role of Sexual Orientation in Germany

Presenter: Robert Heidemann, TU Dortmund University

Functional limitations in later life are known to increase the likelihood of experiencing depressive symptoms. Similarly, sexual orientation has been linked to mental health disparities, with lesbian, gay, and bisexual (LGB) individuals reporting depressive symptoms more frequently than their heterosexual counterparts. However, it remains unclear whether and how sexual orientation moderates the association between functional limitations and depression in older adulthood.

In the case there is a moderation, two contrasting hypotheses are conceivable. On the one hand, LGB individuals with functional health limitations may experience a stronger increase in depressive symptoms due to potential difficulties in accessing adequate social or care support. On the other hand, they might show a weaker increase in depressive symptoms compared to heterosexual individuals if experiences of adversity in prior life stages have fostered greater resilience as the crisis competence approach suggests.

To examine which scenario applies in the German context, data from multiple waves of the German Ageing Survey (DEAS) is analysed using a pooled ordinary least squares model and a fixed effects regression. The findings contribute to understanding how intersecting dimensions of health and minority status shape mental well-being in later life.

TALK 3: The Relationship Between Caregiving Intensity and Health Behaviours Across the Lifecourse in the UK: A Longitudinal Study

Presenter: Enrico Pfeifer, University College London

Co-authors: Rebecca Lacey, City St George's, University of London; Baowen Xue, Hynek Pikhart, Anne McMunn, University College London

Evidence on the relationship between unpaid caregiving and health behaviours is mixed, and most longitudinal studies focus on entry into caregiving. Yet caregiving is dynamic, with intensity often increasing over time. However, little is known how changes in caregiving intensity shape caregivers' health behaviours. We analysed waves 2–13 of the UK Household Longitudinal Study. At each wave, we derived a caregiving intensity measure that combined weekly care hours with place of care (inside versus outside the household). We then used these repeated measures to estimate longitudinal caregiving typologies via latent class analysis among caregivers. Outcomes were physical inactivity, smoking, problematic drinking, and daily fruit and vegetable intake. We assessed associations between caregiving typologies and outcomes using regression models adjusted for demographic, socioeconomic, household, and health characteristics. Five classes were identified: low outside (reference), mixed outside, low-to-medium inside, high inside, and an "increase" class transitioning from low outside to higher-intensity co-resident caregiving. Compared with low outside caregivers, low-to-medium inside and high inside caregiving were associated with higher odds of physical inactivity and smoking, and with lower fruit and vegetable intake. These classes also had lower odds of problematic drinking. Associations for the mixed outside and increase classes attenuated after adjustment. There was no evidence of effect modification by sex or age group.

Sustained co-residential caregiving, particularly at higher intensities, was associated with higher physical inactivity, smoking, and poorer diet, alongside lower problematic drinking. Targeted respite and integrated behavioural support within carer services may reduce emerging health inequalities among co-resident caregivers.

TALK 4: Care and Health Over the Life Course: The Moderation Role of Family and Employment

Presenter: Christian Deindl, TU Dortmund University

Care has often a negative impact on the health and wellbeing of caregivers. Apart from caregiving, handling other obligations like family and employment at the same time can increase the negative impact of caregiving. At the same time, other obligations can be seen as mediators that help carers to cope with the negative emotions and stress from caregiving. These so-called second stressors (family, employment) and mediators are changing over the life course. It is therefore crucial to analyze the impact of care on health and wellbeing over the life course, including other obligations and possible mediators. Based on the German Socioeconomic Panel (GSOEP), we analyze the impact of caregiving across time and across different age groups for men and women on health and wellbeing. The first results show that the impact of caregiving is different across age groups. While wellbeing is consistently lower across all age groups, health is only affected for older caregivers. The impact of care on employment and time spent with family is worse in midlife, indicating that those will increase the negative impact on health in carers.

7C STREAM: METHODS / DATAINDIVIDUAL METHODS / DATA 1
PAPERS**TALK 1: Linking Administrative and Longitudinal Data to Reveal Perinatal Factors Associated with Mental Health Disorders in Children by Age 9 Years**

Presenter: Suzanne Tough, University of Calgary

Co-authors: Nicole Racine, University of Ottawa; Shainur Premji, University of York;

Andre Plamondon, Université Laval, Québec; Sheila McDonald, Alberta Health Services Calgary;

Sheri Madigan, Alberta Children's Hospital Research Institute, Calgary

Background: Early identification of children who are at risk of developing mental health disorders is essential for implementing prevention and intervention approaches. The pregnancy and first year of life offers a unique period to identify these risks, as well as protective factors, due to the high frequency of contact with healthcare professionals.

Methods: The current study linked longitudinal cohort data from the All Our Families study (Canada) with administrative health records up to age 9 years (n=2,814), to identify risk and protective factors from the perinatal period (pregnancy through to first year of life) that are associated with common mental health diagnoses, specifically ADHD and emotional disorders. Parents also reported via surveys whether their child had received a mental health diagnosis prior to age 9 years.

Results: For a diagnosis of ADHD via administrative health records or parent report by age 9 years, risk factors included maternal post-partum mental health difficulties, difficulty meeting basic financial needs, an unwanted pregnancy, infant feeding and sleeping problems, and the presence of the child experiencing a physical health condition prior to 12 months, whereas high parent self-efficacy was associated with a decreased likelihood of a child ADHD diagnosis. For diagnosis of an emotional disorder, maternal postpartum mental health difficulties, single parenthood, an unwanted pregnancy, difficulty soothing the infant, and a maternal history of child abuse were risk factors, whereas parent optimism and partner relationship satisfaction were associated with a decreased likelihood of diagnosis.

Conclusions: Both shared and disparate perinatal factors are associated with the diagnosis of ADHD versus an emotional disorder. Thus, the perinatal period may offer a critical window for identifying both risk and protective factors that could allow healthcare professional to target tailored prevention or intervention that may reduce the likelihood of later mental health problems in children.

TALK 2: Delivering 'Research Ready' Linked Health Data: The Approach Adopted by the UK Longitudinal Linkage Collaboration (UK LLC)

Presenter: Rachel Calkin, University of Bristol

Co-authors: Katharine Evans, Abigail Harrison, Samuel Neale, Sivaranjani Selvaraj,

Richard Thomas, Andy Boyd, University of Bristol

UK Longitudinal Linkage Collaboration (UK LLC) is the national Trusted Research Environment (TRE) for data linkage in longitudinal research. It brings together data from 22 Longitudinal Population Studies (LPS) and links these to >500,000 study participants' routinely collected health, administrative and environmental records.

A key priority for UK LLC is ensuring that researchers have high-quality, discoverable and well-documented data resources which are preserved for the long term. We have therefore developed an end-to-end 'research ready' process that spans the entire linked data curation pipeline. This includes dataset selection and agreements with data owners and processors, data ingest and quality assurance, cataloguing and citation, and the generation of value-added metadata and derived datasets.

In this presentation, we explain how we make linked electronic health records from NHS England 'research ready', so researchers across disciplines and career stages can quickly understand these complex datasets.

UK LLC does not modify datasets. Instead, we check and verify metadata to ensure they are sufficient for researchers to make informed decisions about the applicability of data items to their research and to be able to draw accurate inferences. Our innovation lies in taking a longitudinal, standardised approach to data curation and documentation across diverse data sources.

To further assist researchers, we generate datasets derived from linked health data and from socio-demographic data reported by study participants. These enable researchers to understand the makeup of their study population without having to harmonise data across multiple sources. UK LLC applies consistent definitions across all LPS and ensures that methods of variable derivation are accessibly documented.

Driven by researchers' needs, UK LLC prioritises the development of 'research ready' products to facilitate a diverse range of projects. These products cater for the specific needs of the longitudinal research community, supporting optimal user experience whilst aligning with national and international standards.

TALK 3: A New Training Trusted Research Environment (T-TRE) for the Longitudinal Research Community

Presenter: Andy Boyd, University of Bristol

Co-authors: Richard Thomas, Samuel Neale, Jacqui Oakley, Robin Flaig, University of Bristol; Chris Orton, University of Swansea

UK Longitudinal Linkage Collaboration (UK LLC) is developing a new training Trusted Research Environment (t-TRE) designed to build capability across the longitudinal research community through synthetic data. This initiative responds to a growing need for researchers to adapt to rapidly evolving data landscapes, in which Longitudinal Population Studies (LPS) data are increasingly accessed, linked, and analysed within Trusted Research Environments (TREs). Driven by data protection requirements, rising public and participant expectations, and the diversification of data sources, TREs are now an established norm for longitudinal research.

However, researchers may face barriers when working with linked longitudinal data or with TREs. These include limited familiarity with TRE tools and workflows, uncertainty around governance requirements, and a lack of methodological confidence in addressing challenges such as sample representation, linkage bias, and the analysis of pooled LPS datasets. The t-TRE directly addresses these barriers by providing a low-risk, proportionately governed environment built around synthetic data – simulated data which retain some structural and statistical properties of the real data - that mirror the structure and complexity of real datasets without relating to real individuals. This approach enables rapid access, and realistic training in TRE operations, analytical tools, and good data management practices. By allowing researchers to develop and refine syntax in advance of receiving real-data access, the t-TRE has the potential to support early project development while the governance to access the actual TRE and real data is arranged: providing efficiencies by allowing users to explore data, write code and potentially test feasibility.

In this user-oriented presentation, we will provide the rationale and outline protocol for the t-TRE. This pilot project fills a critical infrastructure gap in the LPS landscape and forms part of Population Research UK's commitment to strengthen capacity and skills within the UK's longitudinal research ecosystem.

TALK 4: Can We Trust Trends in Well-Being? Mode Effects and Measurement Invariance of the WHO-5 in the Panel Study "Growing up in Germany (AID:A)"

Presenter: Sabine Düval, German Youth Institute (DJI)

Co-authors: Susanne Kuger, Emilie Hauser, Katrina Blindow, German Youth Institute (DJI)

The reliability of survey data depends on minimizing sources of error. One key source arises from survey mode, which can systematically influence responses without reflecting true changes in the construct of interest. This is particularly relevant in longitudinal research on well-being, where observed changes should reflect true well-being rather than mode-related artifacts. Mode effects can distort between-person comparisons and within-person comparisons, highlighting the importance of evaluating measurement invariance in longitudinal multi-mode surveys. We use data from the panel study "Growing up in Germany" (AID:A) from 2019 and 2023. Well-

being is measured with the WHO-5 scale, covering joy, relaxation, energy, feeling refreshed upon waking, and interest in everyday life (Bech, 2004). In 2019, survey modes were CAPI and CATI (~6,500 adult respondents). In 2023, four modes were available (CAPI, CATI, CAWI, CASI; ~6,100 adult respondents). Preliminary comparisons indicated no meaningful mean differences by mode in 2019, whereas in 2023, CAWI and CASI respondents reported slightly higher WHO-5 scores (i.e., less well-being). Next, we conducted multi-group CFA (MG-CFA) separately for each year. In 2019, we found that the WHO-5 one-factor structure fit well in both survey mode groups. Factor loadings were highly similar, supporting metric invariance, and scalar invariance was largely supported, indicating that latent mean comparisons across modes were meaningful. In 2023, the one-factor structure again fit well across all groups. Factor loadings remained highly consistent, supporting metric invariance and also largely supporting scalar invariance. These results refer to cross-sectional comparisons within each year. Therefore, next steps include examining longitudinal invariance and mode switching, including whether prior well-being predicts subsequent mode choice. Findings will inform both substantive understanding of well-being in social context and methodological practice in multi-mode longitudinal surveys, underscoring the importance of assessing measurement invariance in longitudinal research on social development, inequality, and lifecourse trajectories.

TALK 5: Beyond the Census: The ‘Transformation’ of the Population-Level Data Infrastructure in Aotearoa

Presenter: Polly Atatoa Carr, University of Waikato

This paper provides an overview of the contemporary data system in Aotearoa for lifecourse and longitudinal research, focusing on census data, the evolving landscape of longitudinal studies and surveys, and the growing reliance on linked administrative data.

Central to population-level data in Aotearoa is the census of people and dwellings, held every 5 years up until 2023. Census data is critical for ensuring robust, up-to-date population denominators including for priority populations (such as the Indigenous Māori), for undertaking research on known sensitive and critical influences on lifecourse trajectories, and for providing a sampling frame for longitudinal studies and population-level surveys. Recent decisions on the ‘transformation’ of the census in Aotearoa have resulted in the loss of traditional enumeration and the reliance on large-scale data linkage between predominantly administrative data sources to ‘build’ population counts and guide social investment decisions. While administrative data linkage has expanded analytical possibilities, there are significant methodological and policy challenges that result from this loss, including implications for continuity, representation, validity, small-area analyses, monitoring for equity, and the translation of evidence into policy.

Such shifts in the data landscape also have an important impact on the use, role and development of longitudinal studies. This paper also reflects on the rich history and current configuration of these studies in Aotearoa, highlighting strengths in depth and innovation alongside notable limitations in cross-cohort alignment across the lifecourse, and the lack of strategic and political value (now and into the future). By situating these developments within an international context, this paper identifies critical methodological, governance and strategic issues for lifecourse research in Aotearoa. Greater collaboration and coordination across data collections and renewed investment in robust data collection, including longitudinal infrastructure, is necessary to maximise the value of existing data assets, address intergenerational processes that influence population wellbeing, equity, and sustainability, and support future evidence-informed policy.

7D STREAM: WORK / EDUCATION

INDIVIDUAL EDUCATION / FAMILY PAPERS

TALK 1: Mechanisms of Educational Reproduction Across Three Generations: Financial Assistance and Socialization

Presenter: Hiroshi Ishida, University of Tokyo

Co-author: Misaki Matano, Gunma Prefectural Women's University

Two important mechanisms facilitate the multigenerational transmission of inequality. First, contact-based socialization occurs when grandparents transmit attitudes, aspirations, values, and knowledge through direct interaction with their grandchildren, particularly when they co-reside (socialization hypothesis). Second, non-contact-based material transmission involves financial support from grandparents to grandchildren, which may fund extracurricular activities, tutoring, and private education (financial assistance hypothesis).

This study examines how financial assistance and co-residence with grandparents affect the intergenerational reproduction of education. It addresses two research questions: (1) Does financial support from grandparents mediate the transmission of educational inequality from grandparents to grandchildren? (2) Is the association between grandparents' education and grandchildren's education stronger in families where grandparents and grandchildren co-reside than in families without co-residence? To answer these questions, we use data from the Japanese Life Course Panel Surveys (JLPS), a nationally representative survey conducted in Japan since 2007.

Regarding the first hypothesis, the results show that financial assistance from grandparents increases grandchildren's likelihood of college attendance and partially mediates the association between grandparents' and grandchildren's educational attainment. However, the association remains strong and statistically significant even after controlling for grandparental financial support. This finding suggests that financial assistance explains only a modest portion of the intergenerational transmission of education, supporting the financial assistance hypothesis while indicating the presence of additional mediating mechanisms.

With respect to the second hypothesis, the association between grandparents' education and grandchildren's education is stronger among families who co-reside with grandparents than among those who do not. However, this difference is not statistically significant at the 5 percent level, largely because only a small proportion of parents (3 percent of the sample) resided with highly educated grandparents. Although consistent with the socialization hypothesis, the evidence is not conclusive.

TALK 2: The Relationship of Family Structure and Social Capital: A Propensity Score Analysis Across Three Countries

Presenter: Micah Harmon, Brigham Young University

Co-authors: Shana Pribesh, Ashley Weisman, Old Dominion University; Kayla Mean, Scott Sais, Jonathan A.

Jarvis, Mikaela J. Dufur, Brigham Young University

Family structure is a critical context shaping children's access to relational, emotional, and informational resources within the home. Understanding how different household compositions—living with two biological parents, a single parent, or cohabiting parents—shape levels of family social capital is essential for informing policies that support children's development. Family social capital encompasses parent-child relationship quality, parental involvement, shared activities, communication patterns, and the broader home learning environment. Despite extensive research on family structure, cross-national evidence that isolates its effects on family social capital remains limited. This proposed study employs propensity score matching (PSM) to estimate the association between family structure and family social capital using three large, nationally representative longitudinal birth-cohort datasets: Australia's Longitudinal Study of Australian Children (LSAC), the United Kingdom's Millennium Cohort Study (MCS), and the United States' Early Childhood Longitudinal Study (ECLS). The analysis focuses on children aged 8 to 10, a period characterized by increasing autonomy, evolving parent-child dynamics, and heightened importance of homebased relational supports. Within each

dataset, PSM will be used to construct balanced comparison groups across the three household types. Matching variables will include socioeconomic characteristics, parental mental health, neighborhood context, and early childhood developmental markers. This approach reduces selection bias and enhances the ability to approximate causal estimates of the relationship between household composition and family social capital. By harmonizing constructs and aligning analytic procedures across LSAC, MCS, and ECLS, the project will provide robust, comparable insights into how family structure influences the relational resources available to children across different policy and cultural environments. This work aims to inform international policy discussions on strengthening family supports and promoting equitable access to social capital for children growing up in diverse family structures.

TALK 3: Highly Educated but Economically Vulnerable: Divorce as a Critical Turning Point in Women's Life Courses in Lithuania

Presenter: Migle Eleonora Cernikovaite, Mykolas Romeris University

This paper examines divorce as a critical turning point that reshapes women's life-course trajectories in Lithuania, a post-transition society characterized by weak post-divorce income protection, limited welfarestate buffering, and the privatization of family risk. Despite the high levels of female educational attainment, divorce frequently leads to long-term economic vulnerability rather than temporary income loss. According to recent national reports, Lithuania's overall at-risk-of-poverty rate was 21.5% in 2024, while single-person households reached absolute poverty levels of 36.7% (State Data Agency of Lithuania, 2025). In the broader European Union (EU) context, single-parent households remain among the most poverty-exposed groups (31.9% of households in the EU in 2023), underscoring the relevance of examining divorce-related turning points and subsequent trajectories (Eurostat, 2024).

The study utilizes longitudinal and retrospective data from the EU-SILC and national household surveys. It focuses on women aged 30–55 with tertiary education and traces income dynamics, employment stability, and poverty risks before and after divorce. Life-course trajectory analysis and event-history models assess how institutional gaps shape post-divorce outcomes.

The findings demonstrate a systematic erosion of educational advantage following divorce. A significant increase in poverty risk and in-work poverty is observed among highly educated women, particularly in cases where child support payments are irregular or non-existent. Weak enforcement of alimony and child maintenance substantially amplifies post-divorce income loss, shifting economic responsibility from former partners to women. The analysis further shows that limited welfare-state amortization fails to stabilize income trajectories after marital dissolution. Public transfers offer only short-term benefits and fail to counteract the cumulative losses associated with care responsibilities and labor-market disruptions. Consequently, families are increasingly turning to private coping strategies. Intergenerational support, including financial transfers, shared housing, and childcare, is identified as a key safety net, though it is considered inadequate in addressing social risks. The Lithuanian case demonstrates how post-transition welfare arrangements can transform divorce into a persistent life-course penalty rather than a reversible setback, challenging assumptions about education as a universal buffer against poverty.

TALK 4: Factors Associated with Home Learning Environment and Screen Time in Primary School Children: Findings from the Five to Twelve Longitudinal Study

Presenter: Joshua Hodgkin, National Centre for Social Research (UK)

Co-author: Jules Allen, National Centre for Social Research (UK)

This paper outlines early findings on children's screen time and home learning environment (HLE) from Five to Twelve, a new longitudinal study funded by the Department for Education. Five to Twelve tracks the development of primary school children in England from the age of five/six (year 1), until age ten/eleven (year 6). The study is now in its third year of data collection. Home learning environment measures frequency and breadth of engagement in a series of educational activities in a child's home environment, such as how often a child is read to, draws or paints, or receives learning assistance. A positive home environment is associated with improved cognitive abilities and educational outcomes in young children (Dickerson and Popil, 2016;

Sammons et al., 2015). In contrast, while digital devices may aid communication and learning, excessive screen time is associated with poorer mental health, sleep disturbance, and vision issues (Champagne-Hamel et al., 2023; Lissak, 2018).

This paper will present initial descriptive findings from the Five to Twelve year 1 baseline report (to be published spring 2026; detailed findings currently under embargo due to pre-publication restrictions). It will explore demographic and socio-economic predictors of scores on the Home Learning Environment (HLE) index (Melhuish et al., 1999). The paper will also discuss predictors of children's screen time, as well as of digital activities engaged in by young children.

This presentation offers an opportunity to explore initial findings around two key areas of contemporary interest in the field of child development. It will also highlight the opportunities to researchers presented by Five to Twelve data. Over time, the study will offer rich insights into child development and primary education in England in the 2020s and beyond, contributing to greater understanding of this critical stage of the life course.

7E STREAM: LONGITUDINAL STUDY

INDIVIDUAL LONGITUDINAL STUDY 1 PAPERS

TALK 1: The GUIDE Pilot Survey: Preparing Europe's First Childhood Cohort Study

Presenter: Toni Babarovic, Ivo Pilar Institute of Social Sciences

Co-authors: Gary Pollock, Tara Poole, Manchester Metropolitan University; Ognjen Obucina, Institut national d'études Démographiques (Ined)

The Growing Up In Digital Europe (GUIDE) project conducted a 2023 cross-national pilot survey to evaluate the methodological and operational foundations of a planned longitudinal study of children and families. Fieldwork in Croatia, Finland, France, Ireland, and Slovenia tested harmonised procedures across three target populations: carers of newborns, carers of eight-year-olds, and eight-year-old children. The latter two groups formed linked carer-child dyads, enabling assessment of paired sampling and interviewing protocols.

The pilot served as a methodological stress test of cross-national sampling, recruitment, and implementation workflows. Country teams applied standardised sampling frameworks designed to approximate population coverage while accommodating national registers and survey infrastructures. Analyses focused on recruitment feasibility, response processes, socio-demographic composition, and the operational viability of maintaining dyadic linkage. Sample profiles were examined to identify coverage gaps, respondent burden, and cross-country comparability, providing evidence on the performance of harmonised sampling strategies in diverse institutional contexts.

Preparation and fieldwork procedures were evaluated through interviewer training, implementation monitoring, and systematic qualitative feedback from carers, children, and interviewers. Particular attention was given to comprehension, interview flow, ethical considerations in child interviewing, and logistical challenges affecting participation.

Findings indicate that harmonised sampling and dyadic recruitment were largely feasible, yielding samples with broadly expected socio-demographic variation while revealing procedural bottlenecks that can be addressed without altering core design principles. Overall, the pilot confirms the methodological readiness of GUIDE's sampling and data collection model for full implementation in 2028. The lessons derived strengthen cross-national comparability, operational efficiency, and respondent experience, supporting the development of a robust European longitudinal infrastructure for studying childhood and family life.

TALK 2: Growing Up in Digital Europe (GUIDE): Conducting an International Comparative Longitudinal Study in a Fast-Changing World

Presenter: Sandra Florian, French National Institute for Demographic Research - INED

Co-authors: INED-GUIDE Research Team

Growing Up in Digital Europe (GUIDE) is Europe's first comparative birth cohort study of children's and youth's wellbeing. This paper will cover topics on the challenges for conducting international comparative longitudinal studies in a context of a fast-changing world. The issues addressed include challenges for questionnaire development and testing, data collection challenges and possible solutions, and challenges for achieving comparability. The presentation will also address the challenges for multiple-mode data collection, including in person interviewing, online self-administered questionnaires, and video interviewing, as well as the importance of piloting the survey protocol and questionnaire prior data collection.

The paper will present alternative sampling strategies, strategies to promote participation and cohort retention. These issues will be discussed within the current context of fast technological changes, evolving data protection laws, as well as, current public policies restricting children's access to certain digital platforms. The case of France will be discussed in comparison to other European countries.

TALK 3: An Introduction to the Scottish Longitudinal Study (SLS)

Presenter: Lee Williamson, University of Edinburgh

Objective: The Scottish Longitudinal Study (SLS) is a largescale research ready record-linkage study created and supported by the SLS Development and Support Unit (SLS-DSU). It links Census through time 1991-2022 to administrative data on major life events, maps changing residential location and for children, their progress through the educational system.

Methods: This paper will introduce the SLS as a data resource for researchers, the datasets held as part of it, along with the application process for using it. Census data are the building blocks of the SLS from 1991 onwards, for a 5% representative sample of the Scottish population (about 270,000 sample members each Census). The SLS links together a wealth of information from routinely collected administrative data, including vital events registrations (births, deaths and marriages), migration data, Scottish education data, and with appropriate additional permissions can be linked to NHS health data including cancer registry and hospital admission data.

Results: The size and scope of the SLS make it an unparalleled research resource in Scotland for analysing a range of socio-economic, demographic and health questions. Additionally, the longitudinal nature of the SLS is particularly valuable, allowing an exploration of causality in a way that cross-sectional data collected at a single point in time does not. In this way, the SLS can provide insights into the health and social status of the Scottish population and, crucially, how it changes over time. The Scottish Census was a year behind the rest of the UK, with the 2022 Scottish Census data to be linked by SLS summer 2026.

Conclusions: we will report on preliminary 2022 linkage and plans to extend user access arrangements outside Scotland. As part of the wider UK Census LS (UKcenLS), the SLS aligns with the ONS-LS for England and Wales and the Northern Ireland LS, facilitating cross-UK analysis.

TALK 4: ORIGINS: Investigating Early-Life Determinants of Life Course Trajectories

Presenter: Lisa Gibson, The Kids Research Institute Australia

Co-authors: Desiree Silva, Sarah Whalan, Nina D’Vaz, Jacqueline Davis, The Kids Research Institute Australia

Background/Aims: ORIGINS is the largest longitudinal birth cohort study in Australia, following 10,000 infants from the prenatal period to investigate the early determinants of health, development, and wellbeing.

The study seeks to identify early-life exposures that shape trajectories across multiple domains including physical, cognitive, and psychosocial, and to understand how these influence outcomes across the life course for children, families, and future generations. ORIGINS provides a unique platform to examine how structural and environmental factors in critical developmental periods affect later health, development, and social functioning.

Methods: In addition to observational assessments, ORIGINS serves as a framework for nested intervention studies aimed at improving modifiable aspects of the early-life environment. These interventions target nutrition, physical activity, microbial diversity, environmental pollutants, exposure to green and blue spaces, language development, mental wellbeing, and weight gain. By integrating longitudinal observational data with experimental sub-projects, ORIGINS enables the identification of early predictors of later outcomes and the testing of interventions during sensitive life course windows.

Results: To date, ORIGINS has recruited over 10,000 families (>23,000 participants), collected more than 20 million data points, and banked over 400,000 biological samples. Assessments include 2,800 one-year checks, 1,800 three-year checks, and ~1,000 five-year checks, alongside integration and harmonisation of more than 51 nested sub-projects. This comprehensive dataset allows for cross-domain and cross-life-stage analyses, supporting insights into trajectories of health and development and the intergenerational transmission of risk and resilience.

Conclusion: ORIGINS demonstrates how a large-scale, flexible research platform can generate rich longitudinal data to understand structure and change during critical life stages. It provides opportunities for early identification, prevention, and intervention, informing strategies to optimise developmental and health trajectories across the life course while enabling local and international research collaborations.

TALK 5: A Longitudinal Study Across Three Birth Cohorts: An Irish Example

Presenter: Katie O’Farrell, Central Statistics Office (Ireland)

Growing Up in Ireland (GUI) is the national, longitudinal study of children and young people in Ireland. This landmark survey is a principal data source for issues facing children and young people in Ireland today. The survey covers a broad range of themes and is composed of three cohorts: Cohort ‘98 who joined the study aged 9 and will be 30 in the next wave of data collection; Cohort ‘08 who joined the study at 9 months and are now 17/18, and Cohort ‘24, the new cohort of infants for whom Wave One data collection at 9 months finished in 2025. With the survey spanning multiple domains and life stages, GUI faces exciting opportunities and also challenges.

This presentation will discuss these with particular reference to the integration of secondary data sources to enrich the primary data returns.

7F STREAM: INEQUALITY

INDIVIDUAL POVERTY PAPERS

TALK 1: How Poverty and Low Income Shape Inequality in Educational Outcomes in Ireland

Presenter: Bertrand Maitre, Economic and Social Research Institute (ESRI)

Co-authors: Helen Russell, Emer Smyth, Economic and Social Research Institute (ESRI)

Previous research (Duncan and Brooks-Gunn, 1997;

Maitre et al., 2021) has shown how living in persistent poverty is linked to a range of negative outcomes for children and young people, including lower educational attainment. This paper builds upon the earlier work by Maitre et al. (2021) to identify the mechanisms through which persistent low income is related to educational outcomes using the Irish Growing Up in Ireland panel Cohort '08 data. The interviews were conducted when the children were 9 months, and 3, 5, 9, and 13 years old. The paper focuses on educational outcomes that are vocabulary test score at age 9, attitudes to school and school subjects at age 9, educational expectations at age 13 and attitudes to school subjects at age 13 among other outcomes. The analyses use structural equation modelling to assess the extent to which persistent low income has a direct effect on these outcomes and/or the extent to which it is mediated by the following processes:

- Parent-child conflict and parenting stress;
- The influence of local neighbourhood disorder and less developed social ties;
- The school attended (whether located in communities with higher levels of socio-economic disadvantage or not);
- The nature of out-of-school activities in which the child/young person engages.
- Influence of the home learning environment (books in the home, parental support for education etc).

Initial findings at age 9 indicate that longer exposure to poverty is associated with lower scores on a standardised vocabulary test. Furthermore, as the duration of poverty increases, its indirect effects also intensify, operating through mediating factors such as the home learning environment and the quality of outdoor school facilities for example. Looking at the relative strength of these mechanisms, the paper will provide an important evidence base for targeting supports towards children and young people from socio-economically disadvantaged families to enhance educational equity.

References:

Duncan, G., & Brooks-Gunn, J. (1997). *Consequences of growing up poor*. New York: Russell Sage Foundation.
 Maître, B., Russell, H., and Smyth, E. (2021). *The dynamics of child poverty in Ireland: Evidence from the Growing Up in Ireland survey*, ESRI Research Series 121, Dublin: ESRI.

TALK 2: When and What Matters in the Late-Career Path to Predict Poverty? A Diagnostic Sequence Approach Using Transformers

Presenter: Linda Vecgaile, Max Planck Institute for Demographic Research

European welfare states increasingly prioritize extended working lives and recognize the need to support individuals in the late-career phase - often from around age 55 - to prevent material hardship as workers approach pension age. A practical design question remains open: when (which ages) and what (which social employment states/transitions) to target so that interventions are allocated to the points in the career trajectory with the highest expected payoff in reducing near-term poverty risk.

I treat a Transformer model as a measurement device to locate where predictive signal resides within late-career histories. I proceed in three steps. First, using CPF-harmonized panel data from Germany and the United Kingdom, I encode yearly labor-market states (employment, hours, sector, industry, occupation, disability) and predict poverty at ages 60–62. I then diagnose which years and which features within the 55–59 window contributes most to poverty prediction and find that ages 55-57 dominate predictive leverage. Third, I run policy-style sequence edits, including (i) employment-attachment packages that shift unemployment or inactivity into employment under alternative hours regimes, (ii) transitions from unemployment or inactivity

into training/education, and (iii) disability stress tests that remove or mechanically increase disability signals to assess how strongly predicted poverty relies on late-career labels that may proxy benefit attachment and non-employment. Across both countries, the largest simulated reductions in predicted poverty risk arise from sustained shifts into stable full-time employment, while moves into – or persistence in – part-time/irregular work often attenuate gains and can increase predicted risk in some subgroups. Disability stress tests further suggest that the “retired/disabled” label is not a simple hardship marker: removing it can raise predicted risk close to retirement, consistent with it capturing protective entitlement or programme attachment. Effects vary by country and gender, highlighting where monitoring and targeted intervention design may be most efficient under budget constraints.

TALK 3: Economic Shocks and Children’s Educational Trajectories in Ghana: Evidence from Longitudinal Data

Presenter: Samuel Nyarko Agyapong, University of Cambridge

Despite significant progress in expanding access to education in Ghana, many children continue to experience delayed grade progression and school dropout. A key and less examined contributor to these outcomes is household economic instability. In settings with limited access to formal insurance and credit, short-term economic shocks may disrupt households’ ability to sustain investments in children’s education, thereby reinforcing educational inequality.

This study examines how household economic shocks affect children’s educational trajectories in Ghana using three waves of the Ghana Socioeconomic Panel Survey (2009/10, 2013/14, and 2017/18). Leveraging the longitudinal structure of the data, the analysis applies child fixed effects models to estimate the impact of household employment losses, consumption declines, and agricultural shocks on school dropout and grade progression. This approach controls for time-invariant child and household characteristics.

Preliminary findings show that exposure to economic shocks significantly increases the likelihood of school dropout and slows grade progression, particularly among children from poorer households. In contrast, asset ownership and remittance income appear to cushion these negative effects. The results underscore the importance of integrating education-sensitive measures into shock-responsive social protection policies to ensure that children’s schooling is protected during periods of economic stress.

TALK 4: Who’s Hurt Most by Debt? Heterogeneity in the Effects of Indebtedness on Midlife Health

Presenter: Shawn Bauldry, Purdue University

Co-author: Joseph D. Wolfe, University of Alabama-Birmingham

Although prior research finds that indebtedness is associated with poorer mental and physical health, less is known about whether these associations vary significantly across the population. Drawing on theories of cumulative disadvantage and relative deprivation, we test whether the health consequences of debt are moderated by individuals’ long-term propensity to become indebted. Using data from 7,672 respondents in the National Longitudinal Survey of Youth 1979 (NLSY79), we measure indebtedness as self-reported negative net worth in any survey wave from 1990 to 2018. Midlife health is assessed at age 50 using standardized SF-12 mental and physical health component scores. Propensity scores are estimated using long-term indicators of socioeconomic status, employment, health, and psychological resources. We estimate average treatment effects using propensity score matching and assess effect heterogeneity with matching-smoothing and stratification-multilevel estimators. Results show that indebtedness is associated with significantly worse midlife mental and physical health. We also find modest evidence of treatment-effect heterogeneity, i.e., the effects of debt on health are largest among individuals with the highest propensities of being indebted.

7G STREAM: HEALTH / WELLBEING 7

INDIVIDUAL MENTAL HEALTH / WELLBEING 1 PAPERS

TALK 1: Best Years of Their Lives? Young Adult Recollections of a ‘Happy’ Childhood Contrasted with Contemporary Indicators Collected at Age 9

Presenter: Aisling Murray, Department of Children, Disability and Equality (Ireland)

When Growing Up in Ireland’s Cohort 98 were surveyed at age 20 (in 2018), the last question on their interview asked them to reflect on whether they felt their childhood (age 4-11 years) and teenage years (age 12-18 years) had been “happy”. Both periods were answered separately on a six-point ‘strongly agree’ to ‘strongly disagree’ Likert scale. More 20-year-olds ‘strongly agreed’ that their childhood had been happy (57%) than said the same of their teenage years (31%); although there were an additional 29% and 36% who ‘agreed’ that their childhood and teenage years were happy respectively.

The longitudinal nature of Growing Up in Ireland allows us to compare the 20-year-old’s reflections on their childhood with their contemporary circumstances back when they were 9 years old. For example, 20-year-olds whose family had been in the lowest income quintile when they were 9 years old were less likely to subsequently ‘strongly agree’ that their childhood had been happy (50%) than their peers who had been in the highest income quintile (59%). Children who said they ‘always’ liked school at age 9 were more likely to recall their childhoods as happy when they were 20 (61%) than those who ‘never’ liked it at the time (46%). Parental report of their socio-emotional difficulties at age 9 (using the SDQ) were more positive (i.e. lower scores) for 20-year-olds who subsequently strongly agreed that their childhoods had been happy (mean =7.41) compared to less positive recollections (mean ‘strongly disagree’ = 9.49).

This is a rare opportunity to consider participants’ subjective evaluations of earlier stages in their lifecourse both with information that was collected contemporaneously and their current circumstances. For example, controlling for family income at age 20 attenuates but does not eliminate the apparent relationship between positive childhood recollections and family income at age 9.

TALK 2: From Adolescence to Adulthood: How Past Loneliness Relates to Loneliness in Young Adults

Presenter: Christine Doucet, Institut de la statistique du Québec

Loneliness can occur at any age, but it particularly affects young adults (Barreto et al., 2021; Hawkey et al., 2022). It can have significant repercussions, for example, on academic success, employment prospects, and physical and mental health (Christiansen et al., 2021; Matthews et al., 2019, 2023; Gouin et al., 2023). Few studies have examined how episodes of loneliness experienced at different stages of life are related. However, experiencing loneliness could lead some people to develop less adaptive social cognitions and interpersonal behaviours, which could complicate their future relationships (Cacioppo & Cacioppo, 2016). As part of the first edition of the Québec Longitudinal Study of Child Development (QLSCD 1), loneliness among young people was assessed at ages 10, 12, 13, 17, 22, 23, and 25. Various aspects of their social relationships, physical and mental health, and behaviours and attitudes were also documented throughout this period. Our analyses examined how loneliness experienced during adolescence relates to the likelihood of encountering at least two episodes of loneliness in early adulthood.

The results show that loneliness in adolescence increases this likelihood, even after accounting for several factors related to individual, relational, and health characteristics. Conversely, positive relationships with parents during adolescence, as well as being in a romantic relationship in early adulthood, were associated with a reduced probability of experiencing multiple episodes of loneliness. Several health, behaviour, and attitude related factors were also associated with this likelihood. Overall, these findings suggest that experiences of loneliness during adolescence can have lasting effects on well-being, while positive relationships with parents may play a protective role.

TALK 3: Custody Arrangements and Mental Health Across the Life Course: Evidence from Understanding Society

Presenter: Dawid Gondek, University of Lausanne

Co-author: Laura Bernardi, University of Lausanne

There has been ongoing controversy regarding how different post separation living arrangements influence the mental health of children—particularly those of pre school age—and their parents over time. Using rich longitudinal data from Understanding Society (UK), waves 5 to 15, we examine the extent to which custody arrangements are associated with mental health outcomes among children of various ages and their parents.

Existing evidence has rarely accounted for selection into different living arrangements, despite the fact that such selection processes also shape the mental health of family members. For example, parents with higher levels of education are more likely to adopt shared custody arrangements. To address this, we apply fixed effects models to estimate within person changes in mental health following transitions into different custody arrangements. This methodological approach accounts for stable observed and unobserved parental characteristics—such as enduring parenting styles or baseline levels of family conflict—that influence both the custody arrangement and the mental health of family members.

Moreover, little is known about how the mental health consequences of custody arrangements vary systematically according to child characteristics (e.g., age, sex), family circumstances (e.g., household type), and parental relationship dynamics (e.g., quality of the co-parenting relationship). To address this gap, we complement the fixed effects analysis with an exploratory framework based on the Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (MAIHDA). MAIHDA offers a flexible structure for examining intersectional patterns and assessing whether particular subgroups exhibit heightened vulnerability or resilience following custody transitions. By integrating fixed effects estimation with MAIHDA, this study provides one of the most comprehensive longitudinal assessments to date of custody arrangements and mental health.

The findings aim to contribute empirical clarity to a longstanding debate and support policy discussions surrounding family support, child wellbeing, and post separation parenting arrangements.

TALK 4: The Course of Anxiety and Depressive Symptoms in Adolescence and Associated Functional and Health Indicators During Adolescence and Early Adulthood

Presenter: Ellie Robson, Murdoch Children's Research Institute

Co-authors: Ming Gao, Louise Canterford, Alex Campbell, Jess Kerr, Nandi Vijayakumar, Susie Ellul, Susan Sawyer, Murdoch Children's Research Institute; Paul Moran, University of Bristol

Background: Rates of depression and anxiety in young people are rising. Much evidence is cross-sectional, limiting understanding of how symptoms unfold overtime and relate to functioning and wider health. Amid changing psychosocial contexts, it remains unclear whether adolescent symptoms reflect normative non-harmful developmental distress or whether certain trajectories signal broader functional impairment and adverse health outcomes in both adolescence and early adulthood.

Aims: Describe adolescent and young adult functional and health outcomes associated with adolescent anxiety and depressive symptom trajectories.

Methods: The Child to Adult Transition Study has annually surveyed 1,239 children in Victoria, Australia since 2012 (mean age 9). Using anxiety and depressive symptoms measured from 10 to 18 years, measures of course were derived: incidence, age of onset, and number of waves with symptoms. Over 63 repeated measures of functional and health indicators were assessed across adolescence (10–18 years) and early adulthood (19–21 years), and grouped into educational/occupational, social, and psychological functioning domains; adverse health behaviours; and other health indicators. Risk ratios were estimated modified using Poisson regression models with robust standard errors stratified by sex.

Results: Adolescent depressive and anxiety symptoms were associated with increased risk of poorer functioning across multiple domains in both adolescence and early adulthood, as well as adverse health behaviours and physical health indicators. For example, females reporting 3 or more waves with adolescent depressive symptoms (versus none) were associated with a 3.79 (95%CI 2.36-5.76) times increased risk of reporting persistent school disengagement, and a 2.4 (95%CI 1.55-3.55) times increased risk of loneliness in early adulthood. Dose response associations were evident for many outcomes, both in adolescence and young adulthood. There were marked differences by sex for some indicators.

Conclusion: Anxiety and depressive symptoms in adolescence are associated with broad and sustained functional and health risks, particularly when persistent.

TALK 5: Linear and Nonlinear Pathways from Multidomain Early Life Risks to Adolescent Behavioral and Emotional Problems

Presenter: Yan Li, University of Helsinki

Co-authors: Shuanghong Jenny Niu, University of Helsinki; Jing Yang, Jun Wang, Beijing Normal University

Purpose: Early life experiences significantly influence children's emotional and behavioral development, yet little is known about how early life risk (ELR) shape behavioral and emotional outcomes in early adolescence. This study investigated linear and nonlinear pathways from multidomain ELS to behavioral and emotional problems in early adolescence and assessed whether these associations differed by gender.

Methods: Data were drawn from the U.S. Early Head Start Research and Evaluation Study (n = 1,622). ELR across five domains—socioeconomic, biological, family conflict, parental mental health, and parenting—were assessed during the first three years of life. Behavioral and emotional problems were measured at approximately age 10 and categorized into internalizing and externalizing domains. Generalized additive models were used to examine linear and nonlinear associations between ELR and adolescent outcomes and to test gender-specific pathways.

Results: Socioeconomic adversity, family conflict, and parental mental health risks significantly predicted overall behavioral and emotional difficulties. Socioeconomic and parental mental health risks showed linear associations, whereas family conflict demonstrated nonlinear effects. Similar patterns emerged for externalizing problems. Gender differences were evident: girls were more strongly influenced by socioeconomic and parental mental health risks, whereas boys showed more pronounced nonlinear patterns associated with family conflict and parental mental health.

Discussion: Findings highlight the complex, domain-specific, and gender-differentiated effects of ELR on adolescent behavioral and emotional problems. Results underscore the need for early, family-focused interventions addressing socioeconomic adversity and psychosocial stressors to support healthier developmental trajectories.

8A STREAM: CHILD / YOUTH DEVELOPMENT SYMPOSIUM

Recent Developments in Child and Youth Cohort Studies (Session 1)

Chair: Jules Allen, National Centre for Social Research (UK)

Longitudinal cohort studies of children and youth are a core part of the survey infrastructure in many countries, providing a vital evidence base for child and adolescent research including on wellbeing, education and labour market participation. These sessions will cover recent developments, challenges and innovations in child and youth cohort studies. The presentations will cover the scientific content and design of these studies, as well as findings and progress so far. This is the first of two sessions and will cover younger cohorts of children under 8.

TALK 1: Developing Generation New Era: How Do Today's Parents of Young Children Feel About Participating in a Birth Cohort Study?

Presenter: Alyce Raybould, University College London

Co-authors: Lisa Calderwood, Erica Wong, Karen Dennison, Alissa Goodman, University College London; Pasco Fearon, University of Cambridge

Longitudinal birth cohort studies are essential for understanding children's development across generations, yet families of greatest research and policy interest are often the hardest to recruit and retain. Declining survey response rates, particularly among key sociodemographic groups, make it increasingly challenging to achieve large, representative baseline samples.

The Early Life Cohort Feasibility Study (2023–2024) tested recruitment approaches for a new UK birth cohort and found that response rates were lower than in previous cohorts, with the lowest participation among parents under 25. Many respondents also raised concerns about data privacy, underscoring the need for clear communication about study benefits and data safeguards.

Ahead of launching Generation New Era, the first UK-wide birth cohort in 25 years, the Centre for Longitudinal Studies commissioned two qualitative projects to address these challenges: improving engagement with younger parents and strengthening communication on data use, privacy, and security. Ipsos UK conducted semi structured interviews with 30 younger parents to explore reactions to recruitment materials, communication preferences, motivations and barriers to participation, and views on in home interviewing and saliva collection. Verian UK ran six focus groups with 30 parents to assess understanding of technical information on data use and identify ways to improve clarity, transparency, and trust.

Generation New Era aims to be inclusive, over representing families from Scotland, Wales, Northern Ireland, low income areas, and ethnic minority groups, and recruiting both mothers and fathers. Quota sampling ensured these groups were represented in both projects. This presentation will discuss how findings from these two projects informed the design of Generation New Era.

TALK 2: Growing Up in Québec: Recent Challenges, Retention Strategies and Use of Administrative Data

Presenter: Christine Doucet, Institut de la Statistique du Québec

Co-authors: Catherine Fontaine, Nancy Illick, Amélie Lavoie, Delphine Provençal, Améyo Xoxoabu Djeha, Institut de la statistique du Québec

The second edition of the Québec Longitudinal Study of Child Development (QLSCD 2)—also called the Growing Up in Québec study—was started to fulfill a need for knowledge about the development of children born in the early 2020s. Its main objective is to better understand the factors that contribute to the well-being of young people born in Québec in 2020–2021. Participation rates for the first five waves of the study carried out between 2021 and 2026 (when the children were aged 5, 17, 29 and 41 months and 4–5 years) will be presented. We will also discuss challenges in obtaining participation from non-resident parents, along with our reflections on these issues.

Next, we will describe newly implemented retention strategies, which include:

1. tailored retention approaches based on four attrition profiles identified from data collected during the first few waves;
2. efforts to better accommodate participants; and
3. personalized communication materials.

Finally, we will explain how administrative data have been used recently in the study.

TALK 3: The Children of the 2020s Birth Cohort: Study Update and Findings from the Second Survey of Families at Age 2 Years

Presenter: Marialivia Bernardi, University College London

Co-authors: Laurel Fish, Jessica Van De Grint, Lisa Calderwood, Alissa Goodman, Pasco Fearon, University College London; Sarah Knibbs, Ipsos; Sandra Mathers, University of Oxford

The Children of the 2020s study (COT20s) is a nationally representative birth cohort commissioned by the UK government's Department for Education, which follows 8,628 families with children born in England between September and November 2021. Data are collected annually from age 9 months to 5 years via face-to-face interviews (Waves 1, 3, and 5), and online or telephone surveys (Waves 2 and 4). Innovative features include direct assessments of children's language, cognitive, motor and executive function skills at ages 3 and 5, video-recordings of parent-child interactions at age 3, and monthly developmental questionnaires administered through the study app, BabySteps.

This presentation provides an update on the study, focusing on key findings from the second wave of data collection with 4,758 caregivers. The analysis compares spoken vocabulary levels of COT20s 2-year-olds with pre-pandemic cohorts and investigates the association between screen time (including watching television, videos and other digital content) and children's language and socio-emotional outcomes. We explore how home learning activities (shared reading, singing songs and rhymes, playing with letters and numbers, and painting or drawing) relate to child development, and whether these activities are influenced by the mental health and wellbeing of caregivers.

These findings are currently under embargo but will be published and available prior to the conference. The presentation will also outline plans for the Age 3 research report, provide an update on fieldwork for the Age 4 survey, and give an overview of the caregiver interview and child direct assessments at Age 5.

TALK 4: Longitudinal Evidence on Primary School Children's Development: Updates and Insights from the Five to Twelve Study

Presenter: Jules Allen, National Centre for Social Research (UK)

This paper provides updates on and insights from the Five to Twelve study, a new longitudinal research project funded by DfE that tracks the development of primary school children in England. This study will span multiple waves of data collection, from year 1 to 6. It aims to provide critical insights into primary education, focusing on children's wellbeing, education outcomes and the attainment gap.

First data collection ran from 2023-2024, when children were 5 to 6. Fieldwork included a face-to-face main informant interview (sample size: 8,600), child cognitive assessments, online partner questionnaire and a teacher survey. The second year of data collection (sample size: 5,550) used sequential web-CATI modes for up to three parents. It also conducted a PAPI teacher questionnaire, and took place between January until September 2025, when the children were 6 to 7. Year three fieldwork, again sequential web-CATI, will survey one parent and issue an online child questionnaire. It will take place during spring/summer 2026, when the children are 7 to 8.

This paper will: firstly, update on the study, including by outlining data collection approaches and differential response rates. Secondly, it will present findings from the first wave of data collection. Key results from year 1

will be explored across various developmental areas, including in children's home learning environments, screen time, and cognitive measures.

Thirdly, it will outline challenges and learning from the development of a child online survey for year 3, which will complete data collection in summer 2026.

By sharing information about design, progress, and findings, this paper aims to highlight the utility of this important longitudinal study for research into child development and education outcomes.

TALK 4: Refining the Growing Up In Digital Europe Instrument and Fieldwork Processes: Experiences from the UK Pilot Study

Presenter: Gary Pollock, Manchester Metropolitan University

Co-authors: Marialivia Bernardi, Charlotte Booth, Lisa Calderwood, Jennifer Symonds, University College London; Tara Poole, Klea Ramaj, Manchester Metropolitan University

Growing Up In Digital Europe (GUIDE) will roll out its first full cohort data collection in 2028. Representative samples of 8-year-olds and one of their parents (or carers) across Europe will be surveyed, for the first time using input harmonised questionnaires and common fieldwork protocols. Over the past decade, a series of EU-funded projects have built the scientific and technical infrastructure for GUIDE, and the study is now running national pilot studies to refine instruments, test procedures, and establish the best strategy for achieving national representative samples.

In the UK pilot, several features are being tested, contributing to the implementation of GUIDE as a whole, as well as the specific UK requirements. Firstly, interviews are conducted in the respondent's home and, to improve fieldwork efficiency, the parent interview employs a split mode design, beginning with CAPI and then transitioning to a CAWI self-completion, so that the interviewer can proceed with the child's CAPI interview simultaneously. Secondly, the cognitive assessment instrument, developed in the GUIDEPREP project and deployed in Croatia with PAPI has been fully digitised and incorporated into the CAPI. Thirdly, school-based sampling is being tested in some of the UK nations due to differential availability of robust sample information. Lastly, a new subset of items from the Health Behaviour Questionnaire (HBQ) was selected to measure the health and behaviour of children.

The results of the UK pilot will be available in Spring 2026. Together, these new features will directly inform the finalisation of the GUIDE research design for the 2028 fieldwork.

8B **STREAM: HEALTH / WELLBEING 6** **SYMPOSIUM**

How Families Live After Separation: Post-Separation Care Arrangements, Parent-Child Relationships, and Child Adjustment

Chair: Alexandra Langmeyer, German Youth Institute - DJI

Experiencing parental divorce or separation is a major turning point in one's life course and a reality for a growing share of children in many Western societies. Following the parental separation, family members are faced with the challenge of reorganizing their daily lives, such as settling care and living arrangements of minors. Many European countries have seen an increase in various physical post-separation care arrangements, including sole care with no, less, or frequent contact with both parents and shared care models. Examining children's well-being in these care arrangements is a key issue, yet prior research has largely been cross-sectional. Our proposed symposium aims to fill this gap by using Belgian, German, and Norwegian panel data to present evidence on children's perception of divorce (Belgium, De Laet et al.), links between changes in post-separation care arrangements and child adjustment (Recksiedler et al. for Germany; Larsen et al. for Norway). Special attention is given to digital media, which hold significant potential for

maintaining and facilitating parent–child contact following parental separation (Germany, Naab et al.). Daniel Meyer, an expert in the diversification of postseparation care arrangements and family policy, will discuss strengths and limitations, as well as shared contributions of the presentations.

TALK 1: Children’s Perspectives on Parental Separation: Family Change, Emotional Experiences, and Life Course Implications

Presenter: Romy De Laet, University of Antwerp

Co-author: Dimitri Mortelmans, University of Antwerp

Parental separation has become an increasingly common feature of contemporary family life, yet it remains a critical moment in children’s life courses. Children experience separation not only as the dissolution of the parental household but also as the beginning of new family configurations, such as single parent or stepfamily arrangements. These transitions involve a reorganization of everyday life, relationships, routines, and emotional security. This contribution foregrounds children’s perspectives to examine how family change is experienced during parental separation and across post-separation family contexts, and how these experiences are shaped by broader structural and normative transformations. Drawing on large-scale family research conducted in Flanders in 2010 (N=604) and 2025 (N=271), this contribution explores children’s emotional experiences during parental separation and subsequent family arrangements. First, attention is paid to how children make sense of separation, including emotions such as insecurity, anger, sadness, or relief, and how these experiences are shaped by relational and contextual family factors. Particular focus is placed on parental practices of communication and reassurance, which are central to children’s interpretations of separation and their sense of emotional stability. The contribution then examines how these emotional experiences are embedded in children’s everyday lives across diverse post-separation family arrangements. Beyond individual family dynamics, children’s experiences are situated within a broader context of social change by comparing insights from data collected fifteen years apart. Earlier findings highlight pronounced contrasts between children in intact and post-separation families, often associating non-intact family forms with more negative emotional, behavioural, or developmental outcomes. More recent findings indicate increasing convergence in children’s experiences across household types, suggesting a normalization of family diversity and changing expectations surrounding separation, parenting, and childhood. Adopting life course perspective, this contribution conceptualizes parental separation as a process embedded in children’s trajectories.

TALK 2: Child Well-Being in Separated Families: How are Stability and Change in Post-Separation Care Arrangements Linked to Emotional Problems in Germany?

Presenter: Claudia Recksiedler, German Youth Institute

Co-authors: Christine Entleitner-Phleps, Alexandra Langmeyer, German Youth Institute

Changing legal and cultural conditions across Europe led to a higher share of parents practicing shared care upon separation, in part because this allows for shared parental roles and children’s access to both parents. However, there is only sparse information concerning rates of change and stability in shared compared to sole parental care arrangements, and the respective ripple effects on families. This is particularly true for Germany, which still favors maternal sole care arrangements, as prior research on post-separation care was largely based on cross-sectional studies. Using data from the representative panel “Growing up in Germany” that collected information on about 500 minors in post-separation families between 2019–2023, we probe how post-separation care arrangements evolve and examine how change (vs. stability) in care arrangements is linked to children’s emotional wellbeing. Measures include, among others, children’s overnight stays at each parental residence, the frequency of parent-child contact with the non-resident parent, emotional child wellbeing based on the standardized Strengths and Difficulties Questionnaire, and families’ socio-economic standing. Preliminary descriptive analyses showed that the share of children in both shared and sole care arrangements remained highly stable over time (i.e., about 70% of children remained in their care arrangement) and that when changes occurred, a decrease in the amount and intensity of care was more frequent than an increase in such. Regression models further revealed that, even after adjusting for families’ socio-economic standing, practicing a stable shared care arrangement was linked to lower levels of children’s emotional problems compared to those in stable sole care arrangements. Decreasing care was also less

favourable for emotional child well-being compared to practicing a stable shared care arrangement. Findings are discussed in light of the unique characteristics of the German welfare state, issues related to self-selection into care arrangements, as well as implications for policy and practice.

TALK 3: Child Mental Health in Separated Families: Do Changes in Residence Arrangements Matter?

Presenter: Linda Larsen, Norwegian Institute of Public Health

Co-authors: Tonje Holt, Maria Morbech, Daniel R. Meyer; University of Wisconsin-Madison; Bruce M. Smyth; Australian National University

It has become increasingly common for children to live equally with both parents after separation (shared residence), although many still live primarily with one parent (sole residence). Many children also change residence arrangements over time. However, few studies have examined associations between residence changes and child mental health. This study investigates whether such changes are associated with child internalizing and externalizing problems, and whether associations depend on time since parental separation or the categorization of residence “changes.” Data were drawn from the Norwegian FamC study (families recruited from family counselling offices). The sample comprised 469 children from 299 families with data from at least two time-points (773 observations). Change/stability in residence arrangements were based on two-group (shared and sole), three-group (symmetric shared, asymmetric shared, and sole) and four-group (symmetric shared, asymmetric shared, extended sole, and limited sole) residence categorizations. Child internalizing and externalizing problems were assessed using the Strengths and Difficulties Questionnaire (mothers’ reports). Multi-level regression models accounted for siblings nested within families and the longitudinal data structure, including parent- and child-level covariates.

Key findings include: (1) Using a two-group categorization, children who changed arrangements had more internalizing and externalizing problems; and (2) More internalizing problems were also found among children who changed arrangement based on a four-group categorization. No other associations reached statistical significance. (3) Interaction effects showed that the association between changes in residence arrangements and child problems was stronger with more time since parental separation. Changes in residence arrangements may represent instability during critical times for children, potentially manifesting as more problems. This was particularly true using a broader residence categorization (shared and sole), and when more time had elapsed since separation. The findings highlight the need for interventions supporting children during family transitions and careful measurement of residence.

TALK 4: Digital Media, Parent–Child Contact, and Coparenting After Parental Separation

Presenter: Thorsten Naab, German Youth Institute - DJI

Co-authors: Christine Entleitner-Phleps, Alexandra Langmeyer, German Youth Institute - DJI

Digital media occupy a distinctive role in the daily lives of children growing up in separated or divorced families, as they enable contact between children and non-resident parents. Parental collaboration in childrearing, known as interparental coparenting, following separation or divorce is considered a key factor in shaping post-divorce family life as well as personal and digital contact between the child and the non-resident parent. Despite growing research interest, few quantitative studies address this phenomenon from children’s perspectives. We analyzed data from 499 children aged 9 to 17 participating in the representative German panel study “Growing up in Germany” (Wave 2023). Multinomial logistic regression models examined factors correlating with the frequency of digital contact between children and non-resident parents, incorporating sociodemographic variables and relationship quality measures such as the coparenting relationship between the ex-partners and postseparation conflict level. Our findings indicate that the majority of children (59.7%) maintained frequent digital contact with their non-resident parent, while 20.5% had no digital contact. We found strong associations between digital contact and family socioeconomic status, as well as the coparenting relationship and conflict level between the ex-partners. These results highlight the importance of digital media in maintaining parent-child relationships after separation, thus supporting the 'doing family' framework, while emphasizing that access is not equally distributed. The quality of co-parenting relationships

appears crucial for enabling digital contact, suggesting that interventions supporting cooperative post-separation parenting may also enhance children's opportunities for digital communication with non-resident parents.

Discussant: Daniel R. Meyer, University of Wisconsin-Madison

8C STREAM: METHODS / DATA

INDIVIDUAL METHODS / DATA 2 PAPERS

TALK 1: Are Interviewer Administered Follow-Ups of Web Nonrespondents Still Needed to Maximise Data Quality? Evidence from Understanding Society: The UK Household Longitudinal Study

Presenter: Gabrielle Durrant, University of Southampton

Co-authors: Jamie C. Moore, Pablo Cabrera Álvarez, Annette Jäckle, Peter Smith, Jonathan Burton, University of Essex

Many longitudinal surveys have transitioned to online data collection. To minimize the risk of nonresponse bias, surveys often adopt a web-first mode with follow-up of non-respondents via face-to-face or telephone interviewing. Evidence suggests such designs may reduce costs and may produce datasets of higher quality than web only designs. However, with proportions of populations using the internet increasing markedly and people becoming less willing to welcome interviewers, in recent years the contributions of web with face-to-face or telephone modes to minimizing non-response biases that justify such a design may have changed. This paper addresses this issue. The main research questions are: Do we still need to follow up web-non-respondents in a second mode to

RQ1: maximise response rates?

RQ2: maximise dataset representativeness?

RQ3: maximise response by under-represented hard-to-reach population subgroups?

RQ4: minimise non-response biases remaining after non-response weighting? And how has this changed over time?

This study uses data from Understanding Society (UK Household Longitudinal Study, UKHLS), where sample members have been offered web interviews with face-to-face or telephone follow-ups of non-respondents. For each survey wave, we use Coefficients of Variation of response propensities to quantify the representativeness of web only and web plus face-to-face or telephone respondents.

Key findings are: 1) follow-ups are still required to maximise response rates and dataset sizes, though impacts have declined; 2) the impact of follow-ups on representativeness has declined, with web and web plus face-to-face datasets not differing; 3) impacts of follow-ups on the under-representation of hard-to-reach population subgroups have become negligible; and 4) impacts of follow-ups on non-response biases remaining after non-response weighting, have similarly declined and are now negligible.

We discuss the implications for survey practice. This paper is the first to investigate if follow-ups are still needed in web surveys in a UK context.

TALK 2: Biological Maturation from Childhood to Adulthood: a Comparison of Preterm and Term-Born Individuals

Presenter: Céline Zeller, University Children's Hospital Zurich

Co-authors: Flavia Wehrle, Oskar Jenni, Nina Lenherr-Taube, Jessica Fervença Ramos, Nadine Jait, University Children's Hospital Zurich

Background: Preterm birth is associated with altered biological maturation. Bone age and height are integrative markers of biological and skeletal maturation as well as pubertal timing, yet longitudinal evidence covering childhood, adolescence, and adulthood remains limited. We investigated whether preterm-born individuals differ from term-born peers in biological maturation from birth to 45 years of age, using longitudinal bone age and height data.

Methods: Data were drawn from the Zurich Longitudinal Studies (ZLS, 2nd cohort), including 117 preterm- and 93 term-born individuals assessed between 3 months and 45 years of age. 1'582 hand X-rays of the left hand were analyzed, and bone age was determined using BoneXpert. Height was measured repeatedly across development. Longitudinal bone age and height trajectories were analyzed using linear mixed-effects models (LMM) accounting for repeated measurements per individual.

Results: LMM revealed significantly advanced bone age in preterm-born individuals (median gestational age 33.5 weeks, IQR \pm 3.7) at ages 8, 9, and 10 years, and trend-level advanced bone age at ages 7, 14, and 18 years. Height trajectories largely overlapped between preterm and term-born individuals in early childhood but began to diverge during adolescence: From age 14 onward, term-born individuals were taller, with significant differences observed at ages 14, 18, and 45 years.

Conclusions: Preterm birth is associated with an accelerated phase of biological maturation mainly during mid-childhood and adolescence. While preterm born individuals show signs of accelerated biological maturation, term-born individuals are taller from adolescence onward. Earlier biological maturation may reflect an earlier onset of pubertal development, potentially shortening the overall duration of growth and thereby contributing to reduced adult height in preterm-born individuals. As accelerated biological maturation has been linked in previous studies to adverse health outcomes later in life, these findings highlight the importance of a life-course perspective when investigating long-term consequences of preterm birth.

TALK 3: Harmonizing the Life Course: GUIDE's Methodological Roadmap for Children's Wellbeing

Presenter: Shuang Su, University College Dublin

Co-authors: Jessica F. Surdey, Seaneen Sloan, Laura K. Taylor, University College Dublin

Strategic investments in children's education, health, and social inclusion are essential for fostering resilient communities and sustainable economic development. Growing Up in Digital Europe (GUIDE) contributes to this as Europe's first comparative cohort study on children's and young people's wellbeing, providing policymakers with high-quality, comparable longitudinal data. Grounded in ecological systems theory, GUIDE's comparative, longitudinal design represents a significant methodological advancement in capturing the longitudinal trajectories of children across Europe. To ensure these scientific innovations are accessible to the wider life-course community, we have developed the GUIDE Book, an open-access roadmap for comparative cohort design.

Drawing on the ten chapters of the GUIDE Book, this paper details a rigorous scientific framework designed to capture the 'child's voice' as a primary methodological innovation in comparative cohort studies. Key elements from several core chapters, including sampling, questionnaire design, fieldwork, cross-national comparability, and sustainability are detailed. We outline the five-step sampling framework developed through a comparative analysis of major European cohorts, which balances robust standardization with the national flexibility required for high-quality probability recruitment. We discuss the development of child-centred instruments using the TRAPD (i.e., Translation, Review, Adjudication, Pretesting, and Documentation) method and extensive cognitive piloting to ensure linguistic and cultural nuance. To safeguard cross-national comparability, we demonstrate the application of Multi-Group Confirmatory Factor Analysis (MG-CFA) to

empirically test for measurement invariance, ensuring that constructs of wellbeing are equivalent across borders and not artifacts of measurement bias.

Furthermore, we discuss the practical implementation of fieldwork through a mix of modern data collection modes, including Computer-Assisted Personal and Computer-Assisted Video interviewing. By integrating these rigorous scientific protocols with a centralized infrastructure, GUIDE provides the evidence base needed to advocate for increased public investment in children, demonstrating long-term returns and ultimately better outcomes for children.

TALK 4: Harmony Meta: A Searchable Register and UK Longitudinal Population Study (LPS) Information Hub

Presenter: Bettina Moltrecht, University College London

Co-authors: Eoin McElroy, Ulster University; Rachel Holland Gomes, University College London; Thomas Wood, Fast Data Science

The UK hosts some of the world's richest data resources, including Longitudinal Population Studies (LPS), Electronic Health Records (EHRs), and administrative datasets. To enhance discoverability, numerous searchable catalogues and search tools have been developed. However, the increasing number of such platforms, along with variations in their metadata, search functions, and interfaces, has created challenges for researchers seeking to identify and compare relevant variables across sources. In this talk, we introduce Harmony Meta, a discovery and data harmonization platform designed to serve as a central linkage point across existing data discovery resources. Harmony Meta integrates with current discovery platforms via publicly available APIs and employs AI-based semantic search to transcend the limitations of traditional keyword-driven systems. We will provide a live demonstration of the Harmony platform and describe our ongoing user-centred design process, including usability testing and iterative refinement. We will also present results from validation studies indicating that Harmony Meta supports efficient, accurate, and reliable variable discovery and harmonization across heterogeneous datasets. Harmony Meta has the potential to become a key component of the UK research data infrastructure by offering a unified, consistent, and intuitive approach to data discovery and harmonization.

TALK 5: Who Consents to Sharing Shopping Data for Health Research? Insights from a Longitudinal Cohort

Presenter: Anya Skatova, University of Bristol

Co-authors: Romana Burgess, Poppy Taylor, Kate Shiells, Mark Mummé, Andy Boyd, University of Bristol

Shopping data capture detailed, objective records of individual diet and lifestyle habits, offering potential insights into early predictors of health and wellbeing outcomes across the life course. Despite widespread interest in using commercial data for research, little is known about whether participants' stated willingness to share personal data translates into actual data sharing over time, and how this may vary across sociodemographic groups.

We used a mixed-methods approach within the Avon Longitudinal Study of Parents and Children (ALSPAC) to examine the relationship between willingness to share shopping data and actual consent. Quantitative analyses linked sociodemographic characteristics with survey responses on willingness to share shopping data (2018, $n = 2142/9230$ invited) and subsequent actual consent to provide loyalty card details for five UK retailers (2023, $n = 511/6170$ invited). Semi-structured interviews (2019, $n = 12$) explored participants' motivations, concerns, and perceived barriers.

Results showed that stated willingness predicted actual consent (adjusted OR = 1.48, 95% CI: 1.16–1.90), indicating that willingness is predictive of actual data sharing. Sociodemographic factors (e.g., high education, employment) and motivations (e.g., societal benefit, scientific interest) were modestly associated with both willingness and consent, and moderated the willingness–consent relationship. Interviews highlighted the importance of trust in the cohort, clear communication about data use, and minimal privacy concerns as barriers.

This study provides novel evidence within a longitudinal cohort that willingness surveys can inform recruitment planning for novel data sources, but do not directly translate into realised participation. Addressing practical barriers, debunking myths about data use, and targeted engagement (e.g., informative materials and outreach events) is likely necessary to narrow the gap between willingness and participation. Findings underscore the importance of targeted engagement strategies to improve representativeness of linked commercial datasets as a complementary resource for understanding trajectories of health and lifestyle across the life course.

8D STREAM: WORK / EDUCATION

INDIVIDUAL RETIREMENT PAPERS

TALK 1: The Health–Retirement Relationship as a Mechanism of Cumulative Inequality: A Systematic Review of Longitudinal Evidence

Presenter: Tillman Claus, University of Bamberg

Co-authors: Carolin Kunz, Dortmund University; Rasmus Hoffmann, University of Bamberg

Across Europe, rising statutory retirement ages reshape later-life transitions under conditions of demographic ageing and fiscal pressure. While extending working lives is framed as a structural response to population ageing, the capacity to remain employed until higher retirement ages and the outcomes of retirement are unequally distributed. Health is central to this inequality: it both influences retirement timing and is influenced by retirement. Yet longitudinal research on the health–retirement relationship remains fragmented into these two phases as largely separate strands, limiting our understanding of how the overall transition structures cumulative (dis)advantage over the life course. We present a systematic review of longitudinal European studies (1990–2025) explicitly examining social heterogeneity in (1) the effect of health on early retirement and (2) the effect of early retirement on subsequent health. Following PRISMA guidelines, five databases were searched for studies testing effect modification by social stratifiers (e.g., education, occupation, income, gender). Rather than pooling average effects, we synthesise patterns of inequality gradients within and across both phases of the retirement transition.

The evidence indicates that early retirement constitutes a stratified life-course turning point. Poor health disproportionately constrains disadvantaged groups, yet advantaged groups are more likely to translate ill health into early exit due to greater financial security. Post-retirement health trajectories also vary by social position: early retirement may shortly stabilise or improve health among lower-status workers, while advantaged groups in the long run appear to profit more.

Although the literature is uneven across stratifiers and health measures, integrating both pathways reveals that early retirement can shortly compensate preexisting health inequalities while in the long run inequalities seem to increase. By conceptualising retirement as a structurally conditioned life-course transition, we highlight its role in shaping inequality dynamics, summarize and interpret heterogeneous findings from previous research, and identify gaps for future longitudinal research.

TALK 2: Can Working Conditions Prevent Early Retirement of Informal Caregivers? Evidence from a Longitudinal Between–Within Analysis

Presenter: Carolin Kunz, TU Dortmund

Co-authors: Klara Raiber, Ellen Verbakel, Radboud University

Background: In critical times for welfare states characterised by population ageing and increasing pressure on pension systems the need for long-term care is rising. Most care is provided by relatives of working age, yet informal caregiving is suspected to increase the risk of early retirement. From a life course perspective, pre-retirement conditions like e.g., working conditions might help prevent early and potentially irreversible labour market exits. Understanding the mechanisms that help informal caregivers to avoid early labour market exit is therefore essential. Previous research suggested that favourable working conditions may play a key role,

leading to our research question: Can favourable working conditions buffer the effect of informal caregiving on early retirement intentions?

Methods: Using the Survey of Health, Ageing and Retirement in Europe (SHARE), we examine if informal caregiving predicts intentions to retire earlier and if this is moderated by working conditions. Applying between–within logistic models, we distinguish whether within-person changes or between-person differences in working conditions are more influential, particularly among individuals transitioning into informal caregiving.

Results: In contrast to previous research, (changes in) informal caregiving played no role in predicting the intention to retire early. Further, we found no statistically significant interactions between changes in caregiving status and working conditions. Independent of caregiving responsibilities, we found that respondents with (increasing) time pressure were more likely to intend to retire early, whereas (rising) recognition, freedom and support were associated with lower probabilities.

Discussion: The findings suggest that improving working conditions is important for reducing early retirement intentions, regardless of the caregiving status. This is particularly relevant in critical times for welfare states, where prolonging working lives is a key policy goal. In the next step, we will distinguish caregiving intensity to account for heterogeneity in caregiving.

TALK 3: Educational Stratification and the Transition into Retirement in Germany: How Cumulative Advantage Meets Institutional Constraints

Presenter: Jessica Ordemann, German Centre for Higher Education Research and Science Studies (DZHW)
Retirement represents a consequential life course transition, marked by many changes. While cumulative advantage (CA) theory suggests that educational inequalities widen throughout life, the institutional design of pension systems may fundamentally alter these trajectories. This study examines how educational attainment shapes income trajectories across retirement transitions in Germany, focusing on whether highly educated experience disproportionate income losses despite their accumulated career advantages. While pension entitlements are earnings-related in Germany, the system incorporates contribution caps that limit both contributions and pension benefits. This creates a structural paradox: highly educated workers accumulate the greatest earnings but may experience the steepest relative income losses when statutory pensions replace employment income. Understanding these dynamics is crucial for assessing old-age inequality as income discontinuities may trigger perceived status inconsistency and its consequences. I use data from the German Socio-Economic Panel Study (SOEP). The analytical sample tracks income trajectories from 20 years before to 10 years after retirement. The analysis includes 9,635 individuals, 4,906 of which retired since 2000. The analysis employs a) a description of income trajectories and b) fixed-effects panel regression to estimate education-specific changes at the retirement transition.

Descriptive findings reveal educational stratification in both earnings and retirement transition dynamics. The most dramatic patterns emerge among the highly educated who exhibit the highest earnings and the highest decline. The regression results quantify these patterns. The baseline retirement effect (no educational degree) indicates an average monthly income loss of €934 upon retirement. The interaction terms reveal a monotonic gradient with each higher educational category experiences progressively larger additional income losses.

These findings reveal how cumulative advantage operates differently across institutional domains. While highly educated workers accumulate substantial preretirement income advantages, Germany's contribution-capped pension system creates higher income losses for those previously. This challenges CA predictions and highlights how institutional structures can attenuate inequality trajectories.

TALK 4: Withdrawn

8E STREAM: LONGITUDINAL STUDY

INDIVIDUAL LONGITUDINAL STUDY 2

PAPERS

TALK 1: Navigating Attrition During Crises: The Experience of the Young Lives Longitudinal Study

Presenter: Maria de los Angeles Molina, University of Oxford

Co-authors: Marta Favara, Alan Sanchez, Kauser Mohsini, University of Oxford

Participant attrition or sample loss is one of the most significant challenges in longitudinal research. This paper documents and discusses sample attrition in Young Lives, a longitudinal study established in 2001 that aims to measure the causes and consequences of childhood poverty. Twenty years later, the focus is on improving our understanding of the factors that promote and constrain equality of opportunity, and social mobility, across the first three decades of life, and between generations, in low- and middle-income countries (LMICs). The study has followed two cohorts of children born seven years apart over 20 years in Ethiopia, India, Peru, and Vietnam. In 2024, the study completed the seventh in-person round of data collection, focusing on participants' transition into adulthood.

Sample attrition is defined as the percentage of participants who were interviewed in the first round and drop out in later rounds because they are either not found, migrated abroad, passed away or refuse to take part. This paper focuses on three key aspects. First, it describes the multiple, evolving prevention strategies implemented by the Young Lives team to minimise participant attrition over time. Second, it describes to what extent these strategies were successful in the context of major crises: the COVID-19 pandemic and armed conflict in Ethiopia. Third, it discusses to what extent the attrition accumulated since the last in-person visit in 2016 might have altered the composition of the original samples across the study countries, introducing possible bias in the analysis on topics related to education and skills, health and wellbeing, employment and family formation.

TALK 2: The Northern Ireland Longitudinal Study: Looking at Population Changes Through Time

Presenter: Estelle Lowry, Queen's University Belfast

Objective: The Northern Ireland Longitudinal Study (NILS) is an administrative data linkage system which has expanded in both breadth and depth, allowing development of new research agendas, delivering insights into the Northern Ireland population and how their lives have changed over time.

Methods: The NILS is a cohort of c515,000 people representing approx. 28% of medical card registrations. It contains linkages with Census 1981 (partial), 1991, 2001, 2011, and 2021 resulting in a rich dataset spanning 40 years. This is bridged by further routine linkages to vital events, and provision of distinct linkage projects enables opportunities for in-depth exploration of health and social care.

Results: The 2021 Census introduced several new questions, alongside those asked for the second or subsequent time offering new opportunities for research topics such as sexual identity, national identity, passports held, religion, demographics, energy-efficient households, and health. We observe an aging population, housing tenure shows considerably higher proportions of shared ownership in later years, and the proportion of those holding a United Kingdom passport only had decreased at the time of the most recent Census. The number of people stating a long-term health condition has also increased. This serves as a valuable tool to examine impacts of the past decade, during which society has faced unprecedented events such as Brexit, the global pandemic, and crises in housing and cost-of-living.

Conclusions: We present an updated cohort profile, showcasing characteristics of the 2021 Census population, alongside highlighting recent research. The NILS aligns with the Scottish and ONS Longitudinal Studies, facilitating cross-UK analysis.

TALK 3: The Trondheim Early Secure Study (TESS): Longitudinal Community Study on Child and Youth Development

Presenter: Vera Skalicka, Norwegian University of Science and Technology

Co-authors: Kristine Rensvik Viddal, Silje Steinsbekk, Lars Wichstrøm, Norwegian University of Science and Technology

The Trondheim Early Secure Study (TESS) is a birth cohort study focusing on mental health, psychosocial development (e.g., self-esteem, emotion regulation), and health behavior (e.g., physical activity, eating, sleep). TESS aims to determine the prevalence and course of common mental disorders, identify etiological factors and outcomes; and describe children's and adolescents' typical development and determinants of individual differences in functioning and health, including social and academic competence, social relationships, self-concept, behavioral and emotional regulation, sexuality, physical activity, eating and sleep, as well as Internet gaming and social media use. TESS (analytical sample: $n \approx 1,092$) has followed the 2003 and 2004 birth cohorts in the municipality of Trondheim and their parents with biennial assessments since age 4 (2007/2008). Of 3,358 parents attending the 4-year-health check (97% response rate), 2,475 consented (82.1% of eligible). Among the 1,250 invited parents, 1,007 families (80.6%; 50.9% girls) were enrolled at the first wave (T1). One parent and the child/adolescent have completed tests, interviews, questionnaires, and observations at ages 6 (T2: $n=802$), 8 (T3: $n=704$), 10 (T4: $n=703$), 12 (T5: $n=666$), 14 (T6: $n=636$), 16 (T7: $n=666$), 18 (T8: $n=631$) and 20 years (T9: $n=777$). The 10th data collection (age 22) is ongoing.

TESS has run successfully for nearly 20 years with minimal selective attrition. Reasons for this relatively low attrition, as well as measures to maintain or increase statistical power will be discussed. In addition to the risk of drop-out, longitudinal studies also face challenges as participants age, requiring updated, age-adapted measures, and attention to emerging development issues (e.g., gaming, social media use, bullying). At the same time, changes to instruments should be kept minimal to preserve the advantages of a longitudinal design. Further, increasing focus on measurement invariance also poses difficulties in prospective studies spanning from childhood to emerging adulthood, which will also be discussed.

TALK 4: What We Heard: Community Consultations with Red River Métis Citizens to Inform the Manitoba Métis Federation's Early Years Longitudinal Study

Presenter: Frances Chartrand, Manitoba Métis Federation

Co-authors: Jackie Schapansky, Leanne Hildebrand, Shoshannah Speers, Jaime Guénette, Mar Pauls, Manitoba Métis Federation

The Red River Métis are a strong and resilient People who have resisted erasure by colonial forces for generations. Consistently, the Red River Métis have been disregarded and excluded across sectors of society. Relatedly, little research has been conducted among the Red River Métis to date. To transform this narrative, the Manitoba Métis Federation, National Government of the Red River Métis, is initiating a groundbreaking and first-ever longitudinal study that follows our children's lives in the early years. The Red River Métis Early Years Longitudinal Study (RRM-EYLS) will explore our children's experiences from birth until age six across a broad range of areas, with a particular focus on Red River Métis culture, heritage, community, and personal development.

Importantly, the RRM-EYLS is by, for, and with Red River Métis Citizens. To uphold this commitment, and because this is a community-based study, consulting with our Citizens is essential to ensuring that their voices are central to our study's design and implementation. Therefore, prior to designing and developing the study, we conducted consultations with Citizens who are involved in the lives of Red River Métis children aged 0- 6.

These consultations were held from January to February 2026, with approximately 1,400 Citizens invited to participate. During this process, we gathered our Citizens' insights regarding their perspectives, priorities, and needs relating to our children and the upcoming RRM-EYLS. In this paper, we present the findings from these community consultations and describe how they have been integrated into our longitudinal study design.

8F STREAM: INEQUALITY

INDIVIDUAL GENDER PAPERS

TALK 1: Gender Differences in the Aging Process: Income and Asset Trajectories in Later Life

Presenter: Sawako Shirahase, University of Tokyo

Japan is the most aged society among advanced economies and one of the most gender-segregated in terms of employment and economic resources. Drawing on cumulative inequality theory, this study examines how life-course advantages and disadvantages shape economic outcomes in later life, focusing on income and assets. Research on socio-economic inequality within social stratification studies has traditionally focused on working-age populations, with extensive attention to work histories during prime working years. However, in Japan, the population aged 65 and over-reached 36 million, accounting for 29.4 percent of the total population in 2025 (Ministry of Internal Affairs and Communications 2025). This demographic shift raises a key question central to cumulative inequality theory: to what extent do socio-economic disparities in later life reflect accumulated disadvantages from earlier work histories, and to what extent are they shaped by processes occurring during old age itself?

This study investigates whether and how the aging process affects economic status differently for men and women, and whether employment status at age 50 conditions later-life trajectories. Using waves 1 through 8 of the J-Aging Panel, a biennial longitudinal survey conducted since 2010 (N = 11,728), I estimate growth curve models of logged personal income and total savings, controlling for marital status and self-rated health.

I first employ growth curve models to examine whether trajectories of income and assets over time differ between men and women. The tentative results reveal distinct age trajectories for income and assets. Income tends to remain stable or decline with age, whereas savings and assets continue to increase over time. Substantial gender differences are observed in both levels and growth patterns. These findings suggest that cumulative inequality operates differently across economic domains: while income disparities reflect earlier labor market stratification, asset accumulation continues to diverge in later life, reinforcing gendered economic inequality in old age.

TALK 2: Gendered Signals in Adolescents' Writing: An Embedding-Based Index and Associations with Later-life Outcomes for a UK Cohort

Presenter: Zerui Tian, University of Oxford

Using the 1958 British National Child Development Study (NCDS), this paper develops a scalable, machine-learning-based measure of gender-atypical language from 10,507 short age 11 essays in which children imagine their lives at 25, and links this early linguistic signal to adult occupational, health, and family trajectories. To capture implicit gendered patterns rather than trivial self-identifiers, I first mask explicit gender cues (e.g., pronouns, gendered titles, names) with a constrained large language model under strict guardrails. I then embed the masked essays using a transformer sentence encoder and train a regularized sex classifier with cross-validation and probability calibration. For each child, the calibrated probability assigned to the non-recorded sex is interpreted as a continuous gender-atypicality score. Across models that adjust only for pre-age-11 covariates (family background, early health, anthropometrics, and cognitive/behavioral indicators), higher gender-atypicality is associated with meaningful—though modest—differences in adult outcomes. In occupational class models (ages 33, 42, and 50), atypicality most consistently predicts a higher likelihood of being in managerial/technical positions at ages 33 and 50, with heterogeneity by sex and sweep. In midlife health, associations are weak at age 42 but emerge at age 50: higher atypicality predicts lower probabilities of reporting excellent health and slightly lower mental wellbeing. In family outcomes, atypicality predicts lower odds of ever marrying and higher odds of ever having had a same-sex partner, with stronger patterns among men; among women, atypicality is more closely related to cohabitation and lower likelihood of ever having children.

Substantively, the findings suggest that gender-typed expression in early adolescence is linked to later stratification, partnership formation, and wellbeing. Methodologically, the paper contributes a transparent “mask–then–embed” pipeline for extracting cohort-specific social signals from noisy historical child writing.

TALK 3: A Systematic Review of Research-Driven Gender Policy

Presenter: Anagh Amanakara Mana, Mahatma Gandhi University

This paper tries to explore the existing methodology of research in political science with the interdisciplinarity of the queer ethnography. Political Science as a discipline now often delves into quantitative or mixed approach of research methodology and has failed to explore the transdisciplinary scope of research methodology which understands the real human issues and the systemic marginalisation imposed on the marginalised population. Queer Ethnography as a method intersecting with theories like Lifeworld and Intersectionality tries to understand the status-quo of queer people in India who comes from the different dis-privileged population like Coastal Community, Latin Christian Community, Dalit Bahujan Adivasi (DBA), etc.

This paper has tried to break the existing rigidity of the social science and explores how connection of different methodologies enhances the scope of research and finds solutions to the existing problem at hand.

TALK 4: Mapping Changes in Sexual Identity and Well-Being in Germany in the Context of Expanding Legal Rights

Presenter: Lynda Sagrestano, German Youth Institute

Co-authors: Sabine Düval, Lisa Hasenbein, Sabine Walper, Emilie Hauser, German Youth Institute

Recent research suggests that people with sexual and gender diverse identities experience lower well-being, possibly due to discrimination. However, the majority of studies rely on cross sectional or short-term outcome measures, limiting our understanding of long-term consequences. Longitudinal data allow us to examine how well-being evolves over time and whether disparities associated with sexual diversity persist across adulthood. The German Family Panel study (pairfam) collected data annually from anchor participants for 14 years, targeting three cohorts, aged approximately 18, 28, and 38 at time of enrolment (2008). In wave 1, approximately 12,000 participants were asked the sex of their current partner (or sex of partner sought), of which 1.72% reported same sex partners. Sex of partner was collected in all subsequent waves, allowing for calculation of partnership inferred sexual orientation. In wave 9 (n=5,127), participants self-reported sexual identity (89.8% heterosexual, 1.3% homosexual, 2.9% bisexual, 6.1% none of the above). The two older cohorts were significantly less likely to identify as heterosexual than the younger cohort. Participants also were asked to categorize their previous partners (exclusively other sex, mostly other sex, equal numbers same and other sex, mostly same sex, exclusively same sex), which was recoded to heterosexual (92.8%) vs. diverse (7.2%), and did not yield significant cohort differences. Well-being was assessed using multiple measures, including life satisfaction, self-rated health, and various aspects of mental health (e.g., depression, anxiety, loneliness). Preliminary analyses of wave 9 data indicate that the oldest cohort reported less life satisfaction than the middle and younger cohorts. Across cohorts, diverse participants reported less life satisfaction than heterosexual participants, controlling for gender. Further analyses will examine relationships among cohort, gender, and sexual identity and associations with well-being over time. Results will be discussed in the context of changing and expanding legal rights for sexually diverse people in Germany.

8G STREAM: HEALTH / WELLBEING 7
INDIVIDUAL MENTAL HEALTH / WELLBEING 2
PAPERS**TALK 1: Childhood and Adolescent Mental Health as Predictors of Young Adult NEET: Insights for Critical Life Transitions**

Presenter: Dominic Kelly, University College London

Co-authors: Habtamu Beshir, Lindsey Macmillan, Emla Fitzsimons, University College London

Young adulthood has long been a critical period for the development and emergence of mental health challenges (Solmi et al., 2022). There are concerns that the current cohort of young adults are experiencing a substantial change in their levels of mental health challenges compared to previous generations (Twenge et al., 2025). Given the strong associations between mental health and NEET (not in education, employment or training) status in young adulthood (Lindblad et al., 2024), the increase in mental health problems in the UK could be associated with concerns about the increase in NEET status among youth. To better understand changes in the relationship between mental health and labour market outcomes over time and cohorts, analysis of rich longitudinal data is required. We leverage nationally representative data on mental health and labour market outcomes reported by ~ 10,000 young adults from the Millennium Cohort Study (MCS), a UK-wide cohort study of young people born between 2000 and 2001. We hypothesise that having childhood and adolescent indicators of mental health problems predict a greater likelihood of being NEET in young adulthood, and that NEET young adults will have comparatively higher rates of mental health problems compared to their peers. Models focus on 1) their parents' reports of their internalising and externalising behaviours over 12 years of childhood, 2) their self-reports of mental health difficulties during adolescence and early adulthood, and 3) their first reports of their labour market outcomes. Where possible, we compare results to an older cohort study, Next Steps, who were born approximately a decade earlier.

Results suggest the importance of intervening early to identify and to support those most at risk of developing chronic mental health problems and/or becoming NEET. The compounding effects of multiple risk factors emphasises the importance of holistic interventions addressing mental health.

TALK 2: Parental Mental Health and Child Outcomes During the Transition Phase

Presenters: Cara Booker / Fatimah Shah, University of Essex

This research examines the intergenerational transmission of mental health from parents to children during the critical transition period of early adolescence. Using longitudinal data from the UK Household Longitudinal Study (UKHLS), I investigate the extent to which parental psychological distress, measured by the GHQ-12, predicts children's socioemotional outcomes as captured by the Strengths and Difficulties Questionnaire (SDQ) at ages 11–12, and whether these associations persist into later adolescence (age 16). The analysis employs pooled OLS and parent fixed effects models to account for unobserved, time-invariant heterogeneity within families. Results show that maternal psychological distress is positively associated with children's emotional difficulties, conduct problems, hyperactivity, and peer relationship problems in pooled models, but these associations attenuate once fixed effects are introduced, suggesting the importance of controlling for stable family characteristics. Notably, children's prosocial behaviour remains negatively and significantly associated with maternal distress even under fixed effects, highlighting the robustness of this domain. Evidence of heterogeneity by parent and child gender indicates that maternal distress is more strongly linked to sons' difficulties, while paternal distress exhibits weaker and less consistent associations. Longterm analyses reveal that early parental distress predicts poorer child mental health at age 16 in OLS models, though these effects are not explained by family fixed effects. Robustness checks using alternative GHQ specifications, item-level decompositions, and children's self-reported happiness scores confirm the main findings. Overall, the results highlight both the importance and limits of parental mental health as a determinant of child socio-emotional development and underscore the role of broader family and environmental factors.

TALK 3: Typical Vocational Rehabilitation Trajectories for People with Mental Illnesses

Presenter: Nancy Reims, Institute for Employment Research (IAB)

Co-authors: Silke Tophoven, University of Applied Sciences Düsseldorf; Angela Rauch, Institute for Employment Research (IAB)

The participation of individuals with mental illnesses within the labour market is a challenge. Vocational rehabilitation (VR) is designed to provide support. However, VR appears to be less effective in supporting people with mental illnesses than people with other disabilities (Reims/Tophoven 2018). Despite the high and growing relevance of mental disorders (WHO 2025), empirical findings on VR in a longitudinal perspective with a focus on this group remain limited – especially for Germany.

Using register data from the German Federal Employment Agency (FEA), the present study focuses on individuals diagnosed with mental illnesses who started VR in 2015 (n=18,712) or in 2018 (n=18,301). The observation period is five years for each cohort. A sequence analysis and a cluster analysis (Ward's method) were conducted.

For both cohorts, the same eight typical clusters can be identified. One cluster pertains to individuals who have undergone vocational training and exhibit high employment rates post-VR. A further group of three clusters has been identified, comprising individuals who have completed short/long-term further training. Two of these result in full-time employment, while one leads to part-time employment – particularly among women. Two clusters are characterised by participants who did not complete VR due to sickness or cooperation problems, or by withdrawal. Another cluster consists predominantly of younger individuals enrolled at the FEA not in receipt of benefits. Finally, another cluster consists of individuals in sheltered training who transition directly to sheltered employment.

In summary, we have identified typical trajectories for individuals with mental illnesses that demonstrate how to (re-)enter the first labour market after VR based on (further/vocational) training. One trajectory leads to the second labour market. Conversely, alternative pathways are characterised by a multitude of challenges, including but not limited to illness, non-cooperation, and the inability to secure or regain employment. These challenges must be addressed more specifically.

TALK 4: Timing Effects in the Association Between Childhood and Adolescent Bullying Victimization with Late Adolescence and Emerging Adulthood Depressive Symptoms

Presenter: Sarah Bakirci, University College London

Co-authors: Andrew D.A.C. Smith, University of the West of England; Jean-Baptiste Pingault, University College London

Background: Bullying victimization poses a significant risk for psychopathology, particularly depression, with lasting effects into adulthood. However, the impact of bullying may vary based on developmental timing. Life course epidemiology proposes three timing hypotheses: (1) accumulation of risk, where additional exposure events increase effect; (2) recency, where proximal events have greater effect than distal ones; and (3) sensitive periods, where specific timing windows increase vulnerability. Despite this framework, little is known about how bullying timing affects adolescence and adulthood depression. This study explores these hypotheses with bullying victimization and adolescence and adulthood depression.

Methods: Using data from the Avon Longitudinal Study of Parents and Children (N=6,782), we applied the structural life course modelling approach (SLCMA) to systematically test the accumulation of risk, recency, and sensitive periods hypotheses. Bullying was measured with the Strengths and Difficulties Questionnaire at ages 4, 7, 8, 9, 11, 13, and 16. Depression symptoms were measured with the Short Mood and Feelings Questionnaire at ages 16.5, 17, 21, 22, and 23. Developmental windows were defined as early childhood (0–5 years), middle childhood (6–10 years), early adolescence (11–14 years), and late adolescence (15–17 years).

Results: Model selection by SLCMA consistently favoured the recency hypothesis across outcome timepoints, such that exposure to bullying was associated with an increase in SMFQ at all ages between 4-16 years, with a

greater increase for exposure to bullying at older ages: a unit increase in bullying victimisation score at age 4 was associated with an increase of 0.188 (95% CI: 0.160 – 0.260) in SMFQ score at age 16.5, while a unit increase at age 16 was associated with an increase of 0.753 (95% CI: 0.640 – 0.867).

Conclusions: Findings suggest that the association between bullying victimisation and depressive symptoms is primarily driven by recency. Early post-exposure intervention is essential to reduce later mental health consequences.

9A STREAM: CHILD / YOUTH DEVELOPMENT SYMPOSIUM

Recent Developments in Child and Youth Cohort Studies (Session 2)

Chair: Alyce Raybould, University College London

Longitudinal cohort studies of children and youth are a core part of the survey infrastructure in many countries, providing a vital evidence base for child and adolescent research including on wellbeing, education and labour market participation. These sessions will cover recent developments, challenges and innovations in child and youth cohort studies. The presentations will cover the scientific content and design of these studies, as well as findings and progress so far.

TALK 1: Insights from Developing an Internet Use Study Within a Longitudinal Study of Adolescents

Presenter: Larissa Pople, University College London

Co-authors: Emla Fitzsimons, University College London; Jess Deighton, Tanya Lereya, Jess Stepanous, Anna Freud; Nicholas Gilby, Colin Gardiner, Christy Lai, Julia Pye, Ipsos

Today's adolescents face distinctive challenges compared with previous generations, growing up amid rapid technological change, shifting social norms, and rising mental health concerns. Growing Up in the 2020s is a five-year longitudinal study of secondary-school children in England, commissioned by the Department for Education and run by UCL, Ipsos, and Anna Freud. At Wave 1, around 7,750 young people aged 12–13 and their parents were interviewed.

An innovative component is the internet use study, which employed a passive data collection app to track mobile phone internet use over four weeks in a subsample of roughly 400 participants in 2025. Participants installed the app on their smartphones, which recorded the websites and applications used and time spent on them. Unlike self-report measures, which can be limited by recall error and lack detail, this approach provides granular, objective data. Summary usage indicators, such as time spent on different types of websites and at different times of day, were linked to the main survey data, enabling analysis of associations between digital engagement and social, psychological, and educational outcomes.

This presentation examines the feasibility and implications of embedding an internet use study within a large-scale longitudinal survey. It outlines the development process, including scientific objectives, study design, and key ethical considerations such as informed consent and safeguarding. A central focus is participation and representativeness, analysing characteristics of young people who consented, downloaded the app, and contributed data, as well as reasons for non-participation. Together, these findings provide insights into response behaviour and data quality in app-based research with young people.

TALK 2: Engaging Early Adults: Methodological Updates to the Growing Up in Scotland Study

Presenter: Helena Wilson, Scottish Centre for Social Research

The Growing Up in Scotland study is a large-scale, prospective longitudinal cohort study commissioned by the Scottish Government which has been running since 2005.

The first birth cohort of children in this study were born in 2004/05 and were 10 months old when the study launched. Data was collected annually until the children reached the age of six, and then at ages 8, 10, 12, 14, 17/18 and 20-21.

For the most recent data collection sweep with young people aged 20-21, several methodological changes were introduced to adapt to the challenges of interviewing young adults. Whereas previous sweeps were primarily face to face, the most recent sweep used a web-first approach for the first time. In this approach, participants were first invited to take part online and only those who didn't respond were visited by an interviewer. Incentives were also offered at the face-to-face phase. The questionnaire covered education, employment, free time, political attitudes, relationships with parents and peers, risky behaviours, mental health and general health. This paper will provide an overview of the delivery of the new methodology and detailed information on fieldwork outcomes. It will evaluate the success of the approaches taken and offer considerations for other studies involving participants at similar life stages.

TALK 3: Rapid Social Change and Emerging Adult Cohorts: How Growing Up in Ireland is Responding to New Challenges and Contexts

Presenter: Eoin O'Mahony, Department of Children, Disability and Equality (Ireland)

Significant change over the last decade has required researchers across Europe to innovate with new ideas to serve policy design. Such changes and the ways in which outcomes are measured must equally respond to these challenges. For longitudinal cross-wave surveys, this means finding a workable balance between continuity and innovation.

Like many longitudinal studies, Growing Up in Ireland faces the challenge of staying consistent with previous waves but sufficiently understanding its policy context. In advance of the next wave of Cohort 08 (20 years old in 2028), we consulted with two stakeholder groups to understand new policy and research questions, as well as understand the range of issues of continuing relevance. The expert group online consultation highly ranked loneliness/isolation and addiction as well as use and the impact of AI. The emerging adult focus groups placed different emphasis on the importance of these issues.

This paper will examine the results of the expert consultation and the focus groups in preparation for questionnaire deployment. It examines how loneliness and isolation amongst emerging adults is ranked highly and identified in the wider literature. Descriptive results from Cohort 98 at 20 data are examined to identify any related issues in social and emotional wellbeing that might aid an understanding of ongoing or heightened loneliness for Cohort 08 at 20, post-pandemic. If a transition to adulthood involves increasing prevalence of socio-emotional and mental health issues, how might we better understand the measurement of loneliness and isolation? The paper ends with some questions about understanding these topics in the wider context of ongoing housing, occupational and economic challenges, which also featured prominently in the consultations.

TALK 4: Generative AI Use in Education: Implications for Educational Opportunities

Presenter: Ben Edwards, Australian National University

Co-author: Jessica Arnup, Australian National University

In this paper we will highlight the latest developments from Waves 3 and 4 of GENERATION, a national youth cohort study in Australia beginning in 2022. A key recent focus of our study is the role of Generative Artificial Intelligence (AI) in education. Some proponents of Generative AI (GenAI) have argued that it may increase access to educational opportunities for those from lower SES backgrounds. On the other hand, advantaged students may have more access to GenAI? However, we have a limited understanding about whether GenAI will increase or decrease educational inequality for young people in the final years of schooling.

Using findings from GENERATION, we examine how students are using GenAI, and whether GenAI use and education policies vary by socioeconomic status. The impact of both frequent GenAI use and GENAI school policies for secondary school completion, grade ranking (ATAR, Australian Tertiary Admissions Rank) and acceptance into university and vocational training in

2025 will be tested using selection models accounting for prior academic achievement, school sector and school SES, parental SES and student demographic characteristics. Models will be estimated separately for students with at least one parent with a university background to test whether the uptake of GenAI widens or narrows educational opportunities.

Initial findings from Wave 3 suggest that GenAI use by students in their senior year was social patterned. Students were more likely to use GenAI weekly for education if they were living in a major city (compared to regionally), attending a private rather than a government school, not having an Indigenous background, having school policies that promoted GenAI use in learning, and having higher levels of extraversion. Implications for educational inequality are discussed.

TALK 4: Key Challenges in Child and Youth Cohort Studies in Australia

Presenter: Sean Martin, Australian Institute for Family Studies

Child and youth cohort studies provide vital evidence, yet they face persistent and evolving challenges. Retaining participants over long timeframes is difficult as children transition into adolescence and adulthood. Competing life demands and survey burden threaten to reduce participation and the representativeness of study populations, including priority population groups.

Drawing on experiences from AIFS-led longitudinal studies in Australia, including the Longitudinal Study of Australian Children, Ten to Men, and Building a New Life in Australia, this paper highlights how these challenges manifest across different study designs and populations. Together, these studies span online data collection, face-to-face fieldwork, and cohorts with culturally and linguistically diverse and humanitarian migration backgrounds. This diversity highlights how methodological approaches influence participant engagement, study burden and inclusion. Maintaining meaningful engagement with adolescents and young adults remains particularly challenging. Traditional survey methods can struggle to stay relevant, while participatory and co-design models require resources not always embedded in funding models. At the same time, studies must balance competing priorities for content inclusion and responding to rapidly changing social and policy contexts without compromising longitudinal consistency and trend analysis.

These challenges are compounded as participants reach adulthood and consent processes need to be revised to reflect young people's growing autonomy, changing family relationships, and expectations and opportunities for data use, including linkage to administrative data. Ensuring consent remains informed, voluntary, and developmentally appropriate is an area of active development across contemporary child and youth cohort studies. This presentation will outline AIFS' experiences with participant retention, engagement, content development, consent and data usage, and highlight emerging innovations in longitudinal study administration aimed at sustaining relevance, inclusion and utility for policy makers, research communities and the broader population.

9B STREAM: HEALTH / WELLBEING 6 SYMPOSIUM

EQUALISE - ESRC Centre for Lifecourse Health Equity: Inequity in Work & Health from a Lifecourse Perspective

Chair: Anne McMunn, University College London

Solutions for supporting employment participation over the life course – among those with chronic conditions and disabilities as well as those with lower levels of participation due to structural inequities – are central to current efforts to improve economic growth and productivity. However, pressing questions remain regarding the effectiveness and inclusivity of support approaches at different stages of the life course, across generational and place-based experiences or for those living in positions of intersectional marginalisation.

EQUALISE: ESRC Centre for Lifecourse Health Equity was established in 2025 to use interdisciplinary, cross-sectoral approaches to identifying evidence-based solutions to the persistent problem of intersectional health inequity in the UK across the lifecourse themes of ‘learning’, ‘work’, ‘care’ and ‘place’.

This symposium will present initial EQUALISE research from our theme on Work and Health with contributions focused on: the role of place-based characteristics in supporting youth employment in the UK, job quality for those with chronic conditions and the role of flexible work in supporting their employment in the UK, and generational changes in gendered employment life courses in England.

TALK 1: Adolescent Mental Health and Young Adulthood NEET Status in the UK: The Moderating Role of Area-Level Deprivation Using Understanding Society

Presenter: Katie Taylor, University College London

Co-authors: Emily Murray, University of Essex; Yvonne Kelly, Niamh Bridson-Hubbard, Baowen Xue, Anne McMunn, Stephen Jivraj, University College London

Young people who are not in education, employment or training (NEET) are a major policy concern in the UK, given their elevated risks of poorer labour-market trajectories and worse physical and mental health across the life course. Adolescent mental health is increasingly recognised as a risk factor for later NEET status, yet this relationship may vary by social context. Young people growing up in more deprived neighbourhoods face additional structural barriers that may amplify the consequences of psychological distress. Despite evidence linking both adolescent mental health and area-level deprivation to NEET outcomes, their interaction has not been systematically examined. This study examines the association between psychological distress at ages 16–17 and (i) ever being NEET between ages 16–24, (ii) age of first NEET episode, and (iii) duration of NEET between ages 16–24. We assess whether area-level deprivation moderates these associations, whether moderation effects vary across birth cohorts, and which domains of neighbourhood deprivation are most influential.

We use data from the UK Household Longitudinal Study with up to 15 years of follow-up, linked to area-level deprivation measures from the Index of Multiple Deprivation at Lower Layer Super Output Area level. Adolescent mental health is measured using the GHQ-12 at ages 16–17. NEET outcomes are modelled using logistic regression (ever NEET), time-to-event models (age of onset), and multinomial regression (NEET duration). Moderation is tested via interaction terms between mental health and deprivation. Missing data are addressed using multiple imputation.

Results will be reported using both conditional and marginal effect estimates to improve interpretability and comparability across models. This study will clarify how neighbourhood deprivation shapes the long-term consequences of adolescent mental health for labour market exclusion, informing more targeted and context sensitive policy interventions.

TALK 2: Does the Use of Flexible Working Influence Disabled People's Work Exit and Wellbeing: Results from Understanding Society

Presenter: Baowen Xue, University College London

Co-authors: Heejung Chung, Constance Beauflis, Kings College London; Anne McMunn, University College London

Background: Flexible working arrangements are becoming increasingly common across industrialised countries. Flexible working refers to when, where, and for how long individuals carry out work-related tasks. In the UK, the statutory 'right to request' flexible working has been progressively expanded over the past decade.

At the same time, the UK government's 80% employment target is challenged by rising economic inactivity, with 2.83 million people aged 16–64 currently out of work due to long-term health conditions. This paper examines how flexible working influences the employment outcomes and well-being of disabled people and those living with long-term health conditions.

Methods: The study draws on data from Understanding Society, the UK Household Longitudinal Study, a nationally representative panel survey of approximately 40,000 households. People have been followed annually from wave 1 to 15 (2009/11 to 2023/25). Flexible working is measured biennially from wave 2. The analytic sample includes individuals who reported a disability or a diagnosed chronic condition at Wave 2. Fixed-effects models were used to assess how uptake of flexible working is associated with employment outcomes and well-being.

Results: Preliminary findings indicate that the use of flexible working among disabled people is associated with better mental health functioning, greater satisfaction with leisure time, and a reduced risk of exiting employment. The next stage of the analysis will explore how these associations vary by gender, type of flexible working arrangement and by severity of illness.

Conclusion: These findings suggest that flexible working may play an important role in supporting the labour market participation and well-being of people with disabilities and long-term health conditions. Further analysis will clarify which types of flexible working are most beneficial and for whom, providing evidence to inform policy and workplace practice.

TALK 3: An Intersectional Study of the Job Quality of Individuals with Health Conditions and Disabilities in the UK

Presenter: Niamh Bridson-Hubbard, University College London

Co-authors: Anne McMunn, Baowen Xue, University College London

Recent UK policy has focused on increasing the employment rate, particularly for individuals with long-term health conditions or disabilities. This effort is in part motivated by the notion that being in work confers good health. However, this assumption overlooks substantial heterogeneity in job quality, and the potential for poor-quality work to exacerbate existing health problems or undermine sustained labour market participation. In this research, inequalities in access to good-quality work are examined among people with differing health statuses, exploring how these inequalities vary across demographic groups and over time. Using Annual Population Survey data, this study analyses employees aged 18–70 in paid work. Health status is classified into four groups: no long-term condition, non-limiting condition, limiting disability, and severely limiting disability, with additional disaggregation by type of main condition where sample sizes permit. Job quality is measured using both individual components and a multidimensional index aligned with the CIPD Good Work Index, capturing dimensions such as pay, contractual security, working time, progression opportunities, managerial support, and workplace treatment. Analysis proceeds in three stages. First, descriptive analyses document differences in job quality across health and disability groups, including distributions of individual job-quality components and temporal trends. Second, multivariate and logistic regression models examine associations between health status and job quality, exploring effect modification by gender, age, ethnicity, education, and place. Third, interactions between disability status and survey year are used to assess whether inequalities in access to good-quality work have widened or narrowed since before the pandemic. By situating

job quality within a lifecourse-informed framework, this research highlights how health-related labour market inequalities may accumulate and persist.

The findings will contribute to debates on healthy working lives, disability employment policy, and the conditions under which paid work supports – or undermines health.

TALK 4: Gendered Lifecourse Employment Trajectories and Cardiovascular Disease in England

Presenter: Heyi Zhang, University College London

Co-authors: Baowen Xue, Anne McMunn, University College London

Background: Understanding employment status as a recognised social determinant of cardiovascular health is crucial. Existing research frequently relies on narrow observation windows, limiting our understanding of the impact of long-term employment patterns. Moreover, trajectory studies often overlook unpaid caregiving, thereby obscuring the structural drivers of gendered employment patterns. This study addresses these gaps by incorporating caregiving into a comprehensive lifecourse analysis of gendered employment trajectories across generations. This lays the groundwork for future research evaluating how gendered employment histories influence later life health outcomes such as cardiovascular disease risk.

Objective: This study aims to (1) derive typologies of gender specific employment trajectories spanning ages 14 to 50 in England; and (2) examine how these gendered typologies differ across generations.

Methods: We utilised the Life History Interviews collected in Waves 3 and 11 of the English Longitudinal Study of Ageing (ELSA). Sequence Analysis was conducted to construct typologies of gender specific employment trajectories and examine generational shifts.

Results: (1) We identified six distinct trajectories for men and nine for women. Trajectories for men were highly homogeneous, differentiated primarily by the age of labour market entry. Trajectories for women exhibited greater heterogeneity, characterised by transitions between full-time work, part-time work, and unpaid care, with longer durations spent in caregiving roles. (2) Younger generations demonstrated increased diversity in employment statuses and greater complexity in individual trajectories compared to older cohorts.

Conclusion: The identified typologies in the current study reveal significant gender and generational differences in employment patterns. These findings provide a robust foundation for our forthcoming analysis, which will estimate the associations between these gendered trajectories and later life cardiovascular disease incidence and mortality.

9C **STREAM: METHODS / DATA**

INDIVIDUAL METHODS / DATA 3

PAPERS

TALK 1: Analyzing Life Course Tempo via Sequence Analysis

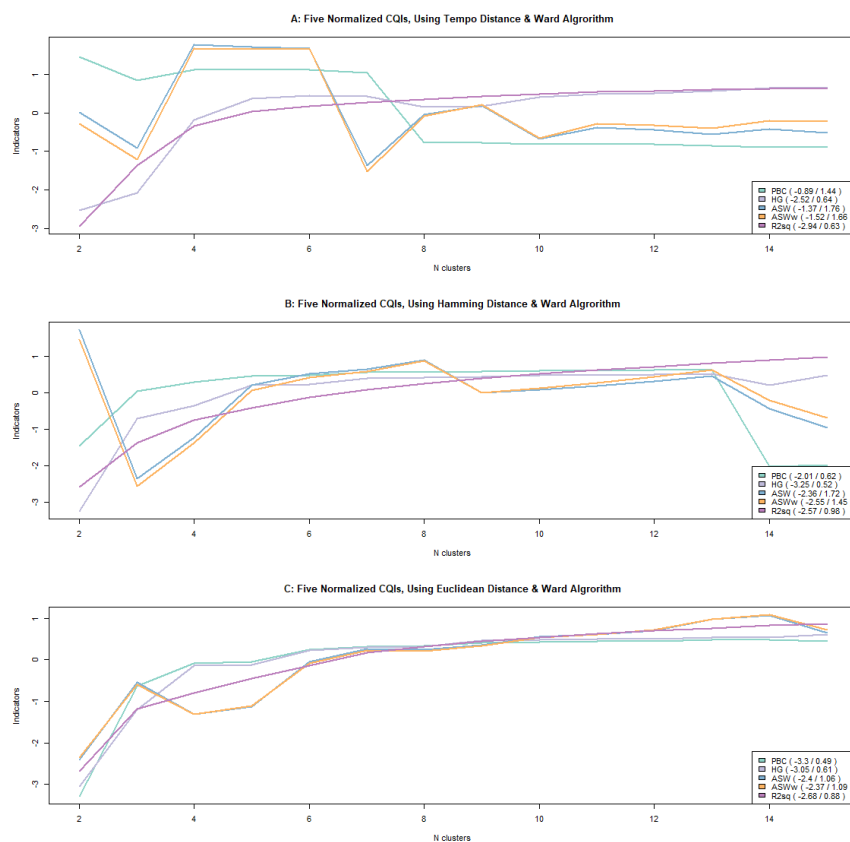
Presenter: Tim F. Liao, University of Illinois at Urbana-Champaign

Co-authors: Ting-Syuan Lin, University of Illinois at Urbana-Champaign; Gilbert Ritschard, University of Geneva; Chinchun Yi, Academia Sinica

In this paper, we propose a sequence analytic method for analyzing life course tempo, a major demographic concept yet to be formally captured or modelled. We proceed with a conceptual definition and a method for measuring it. The method yields three indicators, a cross-sectional, a longitudinal, and a pairwise dissimilarity tempo measure between life course trajectories. We showcase with a toy example illustrating the difference between the tempo measures and timing- and duration-based measures. We then present an empirical study of Taiwanese young people's family formations, using data from the Taiwan Youth Project (2000–2017). Tempo is central for understanding family formation processes. The empirical example demonstrates that only by

focusing on tempo can family formation dynamics in this group of Taiwanese young people be well captured, analyzed, and modelled via a series of sequence analytic steps including a visualization, a comparison between migration groups, a cluster analysis (see example figure), and two regression analyses—one focusing on the four clusters from the cluster analysis and the other on the longitudinal tempo measure. Therefore, we contribute to the literature by conceptualizing and measuring life course tempo as a micro-level phenomenon and by analytically distinguishing it from timing and duration of life course events. (A full paper is available upon request.)

Example Figure: A Comparison of Cluster Quality Index Plots for the Taiwanese Data Using Tempo, Hamming (for Timing), and Euclidean (for Duration) Distance Measures



TALK 2: Reconstructing Family Formation Processes from Administrative Co-residence Records in Spain (2006-2023)

Presenter: Humberto Jiménez, Universitat Pompeu Fabra

Co-authors: Francesc Belvis, Universitat Pompeu Fabra

Transitions to adulthood in Europe have become increasingly delayed and diversified, with adverse social and psychological consequences for young people. In Southern European countries such as Spain, housing constraints, labour market instability, and limited welfare support shape young adults' pathways to autonomy. These conditions affect the family formation process, conceptualized as the sequential progression through residential emancipation, partnership formation, and entry into parenthood. Despite its centrality in life-course research, empirical analyses of family formation remain constrained by the limited suitability of longitudinal data for capturing household arrangements and family status over time.

This paper addresses the methodological challenges of studying family formation using large-scale administrative registers from the Spanish Continuous Sample of Working Lives (MCVL), which lack explicit information on kinship relations and partnership status. We focus on young adults who entered the formal labour market in 2006 and reconstruct their family formation process over 18 years, inferring states from the age–sex composition of annual co-residents. To validate this approach, we use external survey data to develop and assess a predictive model using the 2021 Survey on Essential Characteristics of the Population and Housing (ECEPOV), which contains explicit kinship and partnership information for a comparable cohort. Model validity is assessed using Cohen’s kappa before application to MCVL data. The operationalization framework specifies equivalence rules between observed kinship status and family formation stages, outlines required assumptions, and addresses ambiguous situations. The paper contributes a transparent and theoretically grounded methodological approach for studying family formation processes using previously underexploited administrative data.

TALK 3: Identifying Turning Points in Early Adult Life

Presenter: Katie Spoon, Stanford University

Co-authors: Joao M. Souto-Maior, Bernardo Mackenna, Stanford University

Life-course inequalities emerge from sequences of interdependent events across multiple domains of life. Yet much longitudinal research examines education, employment, family formation, and financial stability in isolation. As a result, we lack a system-level understanding of how the timing and sequencing of early adult experiences across these domains combine to produce inequalities in midlife outcomes. Using 14 years of panel data from the National Longitudinal Study of the High School Class of 1972 (NLS-72) in the U.S., we examine how transitions across education, work, and family domains jointly structure life trajectories beginning at age 18. Rather than modeling single transitions (e.g., college completion or first birth), we represent each year as a bundle of up to 100 co-occurring life events and construct longitudinal sequences that capture both ordering and timing across domains. Using network science methods, we then identify recurrent trajectory types and characterize where paths that appear similar begin to diverge and limit the set of possible midlife outcomes.

This framework allows us to ask: Which combinations of education, work, family, and financial transitions are associated with midlife differences in life satisfaction, health, and financial stability, and for whom? At what points do trajectories become difficult to reverse? And how do gender, race, and socioeconomic background shape exposure to different trajectories? By modeling early adulthood as a structured, multidomain process, this study highlights how cumulative (dis)advantage unfolds through nuanced sets of many transitions that accumulate and constrain future options.

TALK 4: Withdrawn

9D NO SESSION

9E STREAM: LONGITUDINAL STUDY

INDIVIDUAL LONGITUDINAL STUDY 3 PAPERS

TALK 1: Fluctuations in Subjective Well-Being Across the Life Course: Evidence from 20 Years of TREE Data

Presenter: Jenny Chesters, University of Melbourne

Co-author: Andres Gomensoro, University of Bern

Research indicates that levels of subjective well-being vary over the life course due to personal and community factors. Analysis of cross-sectional data, based on birth cohorts, indicates that age has a complex relationship with levels of subjective wellbeing, demonstrating a u-shape curve. Young people generally report high levels of subjective well-being during secondary school and as they transition into post-school study, training and/or employment. Levels of subjective well-being are lower for those aged in their late 30s to mid-50s, but higher for retirees. In this paper, we report the results of analysis of panel data from the TREE (Transition from Education to Employment) project in Switzerland spanning 20 years to examine life course effects on levels of subjective well-being for one cohort of Swiss residents. Drawing on data from TREE1 participants who were initially recruited as part of the OECD (Organisation for Economic Cooperation and Development) PISA (Programme for International Student Assessment) in 2000 when they were aged 15 years, we control for personal factors (such as sex, migrant status, family type, parental education, and health status) and life course milestones (employment status, marital status, and parent status) that have been shown to affect levels of subjective well-being.

Our results indicate that health status is the most consistent predictor of levels of subjective well-being with those experiencing poor health reporting lower levels of subjective well-being than those in good health throughout the life course. From age 25 onwards, marital status becomes an important predictor: those who were living with a partner enjoyed higher levels of subjective well-being. Employment status is also a consistent predictor from age 25 onwards: the unemployed reported lower levels of subjective wellbeing than those engaged in employment. When we additionally include parent status, we find that parents report lower levels of wellbeing.

TALK 2: Social Change and Worries Revisited: A 40-Year Longitudinal Study with German Peace Movement Activists

Presenter: Ajita Srivastava, Constructor University

Co-author: Klaus Boehnke, Constructor University

The present research investigates the effects of social change on the lifespan development of worries among a generation of German activists who participated in peace movement activities during the nuclear war threat of the mid-1980s. Social change is the shift in societal structures that triggers cumulative psychological adaptations. This research is part of a larger panel survey by the second author on 'Life Under Nuclear Threat' currently spanning the time period between 1985 and 2025. It has since tracked participants' psychological responses across various macro-scale social change events, ranging from the nuclear war threat to European integration, the Arab Spring, and, most recently, the COVID-19 outbreak. Worries have been measured as micro (self-directed) and macro (societal) concerns across various life domains (health, relationships, security, economic, etc.) over 12 waves from adolescence to middle adulthood. We predict that repeated stressful social change events will significantly affect the development of worries. The relationship between social change and the development of worry was assessed in two studies.

The first study aimed to assess the effect of early-age activism on the development of general micro- and macro-level worries. Preliminary results indicate a significant effect of adolescent activism on the longitudinal development of micro- and macro-level worries. The second study aimed to assess the development of life domain-specific worries. The initial results show intermittent age-graded and environmental variation in the development of the life domain of worries across the overall sample, including activists and non-activists. The findings have implications for coping, well-being, and resilience.

TALK 3: Validating a Measure of Trait-Based Coping for Use in Ageing Population Studies: Findings from The Irish Longitudinal Study on Ageing

Presenter: Brendan O'Maoileidigh, Trinity College Dublin

Co-authors: Silvin Knight, Siobhan Scarlett, Rose Anne Kenny, Cathal McCrory, Trinity College Dublin

Background: Ageing is often accompanied by accumulating stressors, including bereavement, social isolation, financial insecurity, discrimination, and chronic illness, that can affect health and wellbeing. Coping can be an important cognitive and behavioural strategy in managing stress outcomes. The Coping Inventory for Stressful Situations-Short Form (CISS-SF) measures trait-based coping. Originally conceptualised as a three-scale index: Task-Oriented, Emotion-Focused, and Avoidance, later evidence supports decomposing Avoidance into Social Divergence and Distraction. This study evaluated the structural and concurrent validity of the CISS-SF in an ageing population.

Methods: The analytic sample included 5,350 participants to the Wave 3 sweep of TILDA data collection (mean age 66.5 years; 55.7% female). Confirmatory factor analysis was used to compare three and four-factor models using full information maximum likelihood estimation. Convergent validity was assessed against loneliness, quality of life, perceived stress, worry, depressive symptoms, and self-reported hypertension. Normative means were estimated by sex in 5-year age intervals using post-stratification and inverse probability weighting.

Results: Internal consistency and reliability of the various scales was acceptable ($\alpha = .74-.89$; $\omega = .86-.88$). The four-factor model showed superior fit to the data (RMSEA=.05, CFI= .94, TLI= .93) and explained 49.0% of variance (vs 46.7%). Women scored higher on Emotion-Focused (18.9 vs. 16.5), Avoidance (18.8 vs. 15.5), and Social-Divergence (9.1 vs. 7.4). Task-Oriented coping declined with age (25.7 at 50 years to 21.4 at 80+). Task-

Oriented and Social-Divergence correlated with better psycho-social health outcomes, Emotion-Focused correlated with poorer health outcomes. Distraction was associated with higher stress.

Conclusions: The CISS-SF shows acceptable metrics for use with ageing population samples. The four-factor model was found to provide superior fit. Coping style was found to vary across age and sex, indicating changes in coping style in later life.

TALK 4: Natural Disasters and the Demand for Health Insurance

Presenter: Francis Mitrou, The University of Western Australia

Co-author: Ha Trong Nguyen, The University of Western Australia

Amidst growing concerns over heightened natural disaster risks, this study pioneers an inquiry into the causal impacts of cyclones on the demand for private health insurance (PHI) in Australia. We amalgamate a nationally representative longitudinal dataset with historical cyclone records, employing an individual fixed effects model to assess the impacts of various exogenously determined cyclone exposure measures. Our findings reveal that only the most severe category 5 cyclones significantly increase the likelihood of individuals acquiring PHI in both the concurrent and subsequent years. Furthermore, the effect diminishes as the distance from the cyclone's eye increases. The largest estimated cumulated impact amounts to over 5 percentage points, representing approximately 11% of the sample mean and aligns with documented effects of certain PHI policies aimed at enhancing coverage. Furthermore, our findings withstand a series of sensitivity assessments, including a placebo test and three randomization examinations. Moreover, the cyclone impacts are more pronounced for younger demographics, individuals of higher socioeconomic status, and inhabitants of coastal or historically cyclone-affected areas. Additionally, after ruling out income, transfers, health status, and premiums as mechanisms, our study furnishes suggestive evidence that cyclone-induced home damage and heightened psychological stress are plausible pathways through which cyclones increase PHI uptake.

9F STREAM: INEQUALITY

INDIVIDUAL MIGRATION 2 PAPERS

TALK 1: Adding an Immigrant Sample to the HILDA Survey

Presenter: Nicole Watson, University of Melbourne

In household panel surveys, new entrants are added to the sample when they join the household of an ongoing sample member. However, new immigrants identified through this mechanism are not representative of all immigrants. To maintain contemporary representativeness of the population, new samples of immigrant are required. The coverage of the sample for the Household, Income and Labour Dynamics in Australia (HILDA) Survey (which last added a general refreshment sample in 2011) was approximately 93% of the population in 2023. Since then, a new immigrant sample has been added in 2024 and 2025. This represents an important improvement to the HILDA Survey sample as recent immigrants are quite different from the existing sample. They are much younger than the Australia-born population, and even when age is taken into account, they are more likely to be married, settle in capital cities (especially in inner city areas), and work fewer hours per week. Further, second generation immigrants are likely to have higher education attainment. Therefore, including recent immigrants into the sample is essential for ensuring the sample representativeness in the short- and long-term.

After conducting a trial in 2023 of the selection and recruitment process, 1100 immigrant households were added to the sample across a two-year period. Administrative data was used to obtain a sample of primary applicants who were granted a permanent residency visa and settled in Australia after 2011. Address details were updated through an administrative source. The fieldwork for this sample occurred alongside the ongoing HILDA fieldwork which presented opportunities but also challenges. In this presentation, I will discuss the fieldwork outcomes, representativeness of the achieved sample, and learnings for the next immigrant sample planned for 2028.

TALK 2: Immigrant Fathers' Parental Leave Uptake in Finland: Responses to Policy Reforms (2007–2022)

Presenter: Sumia Akter, University of Turku

Co-authors: Satu Helske, Katrin Schwanitz, Milla Salin, University of Turku

The aim of the study is to explore how immigrant fathers in Finland have used parental leave over time, in response to policy reforms implemented in 2007, 2010, 2013 and 2022. We further address an underexplored aspect by examining how partners' country of origin influences fathers' leave-taking, while considering the moderating role of their employment status. Integration theories argue that social norms from the country of origin may influence how immigrant groups adapt to gender norms in the host country, thereby shaping their engagement with its family policy.

To explore these dynamics, we utilize enriched Finnish register data from 2006 to 2024 and International Social Survey Programme (ISSP) survey data of 2002, 2012 and 2022 module on Family and Changing Gender Roles. Our analysis approaches the issue from two perspectives by employing random-effects panel regression. First, at the macro level, we analyse how policy reforms affect immigrant fathers' leave-taking patterns. Second, at the micro level, we examine fathers' leave uptake, focusing on both partners' country of origin—accounting for the moderating effect of their employment status.

Preliminary findings indicate that immigrant fathers take only about half as many leave days as native Finnish fathers. Further analyses will show how parental leave reforms, both partners' origins as well as their employment status as a moderator influence these patterns. The results will clarify whether reforms targeting gender-equality at home and in the workplace have been equally effective for immigrant fathers or whether participation remains limited among certain groups.

TALK 3: Staying Where You Are Welcome? Local Political Climate and Changes in Ukrainian Refugees' Settlement Intentions

Presenter: Karelis Olivo Rumpf, Federal Institute for population research (BiB)

Co-authors: Marcel Lubers, Meta van der Linden, Utrecht University

Whether refugees intend to settle long-term in their receiving countries has become a central concern in contemporary Western migration-receiving societies. Conceptualizing settlement as a two-way process, this study highlights the role of the receiving society by investigating how local (municipal) political climates influence refugees' feelings of welcome, and, in turn, their settlement intentions – whether to stay, return, live transnationally, or move onward (internationally or internally). This interdisciplinary approach moves beyond earlier work on the importance of refugees' degree of structural integration and the conditions within the receiving country, focusing on how the local political environments and refugees' subjective perceptions jointly shape their settlement plans. Drawing on six waves of the BiB/FReDA-panel survey (August/October 2022–May 2025), we follow up to 9,277 Ukrainian refugee panelists who arrived in Germany after February 2022, comprising two cohorts sampled in the first (n = 5,292) and fifth wave (n = 3,985), sampled from a total of 368 municipalities. We link the survey data to contextual indicators of far-right vote share from the GERDA dataset. This allows us to assess how both regional variation (between-municipality differences) and temporal shifts (within-municipality differences) in the local political climate shape refugees' perceived reception and, in turn, their settlement intentions.

Using multi-level mediation models with multinomial regression, we integrate longitudinal survey data with contextual political and social indicators to advance understanding of the role of the receiving-society reception climate in driving Ukrainian refugees' mobility trajectories. The findings contribute to debates on the two way-process of integration and the role of receiving-society reception in their settlement.

TALK 4: The "Waiting Room" of Displacement: Involuntary Immobility Among South Sudanese Refugees in Gambella, Ethiopia

Presenter: Martina Boaretto, University of Florence

Refugee mobility is often framed as a linear journey from origin to destination. However, for South Sudanese refugees in Ethiopia, the reality is increasingly a non-linear and multidirectional process of "waithood", a prolonged suspension of life trajectories. Drawing on the aspirations-capabilities framework (Carling, 2002; De Haas, 2021), this paper examines the phenomenon of involuntary immobility, where structural constraints and a lack of conversion capabilities hinder high aspirations to migrate. The study is based on original mixed-methods fieldwork conducted in the Nguenyiel Refugee Camp (Gambella) between November 2025 and January 2026, a period marked by acute regional insecurity and aid reductions. Data sources include a quantitative survey (n=130), Life History Calendar (LHC) interviews (n=13), and consultations with humanitarian stakeholders (n=23). The LHC approach allows for a deeper understanding of how aspirations evolve in response to external constraints and how they translate over time into actual movement or forced stasis.

Preliminary findings suggest that the camp acts as a "waiting room" that actively erodes mobility capital. While aspirations for onward movement or return remain high, the current humanitarian model, designed for mere subsistence, prevents refugees from accumulating the economic resources necessary to finance mobility, creating a profound "capability trap".

This paper argues that "waiting" is not a passive state but a structural imposition. By denying economic agency, current aid models actively produce immobility, forcing refugees into a legal and social limbo. They remain active agents with high aspirations for social mobility, yet they lack the structural opportunities to convert these desires into life course progression. This contribution addresses the persistent North-centric bias in migration research by illustrating how involuntary immobility reshapes the life courses of refugees within the Global South.

9G **STREAM: HEALTH / WELLBEING 7**
INDIVIDUAL FERTILITY
PAPERS

TALK 1: Correlation Between Infertility Treatments and Employment Status Among Married Japanese Women

Presenter: Risa Hagiwara, Meikai University

With the increasing trend of late childbirth, infertility treatment has garnered global attention, and Japan is no exception. However, infertility treatments are time-consuming and financially, physically, and mentally burdensome. As treatments advance, the physical and mental burdens increase, leading women to abandon treatment or leave their jobs. This study uses individual-level data from the “National Fertility Survey” (2002, 2005, 2010, 2015, and 2021) of the National Institute of Population and Social Security Research to explore the balance between infertility treatment and employment among married Japanese women. The contributions of this study are as follows. First, it compares women who undergo infertility treatment with those who do not, which has not been widely studied. Second, it considers the preferences of women regarding children and careers. Participants who responded with “no intention to have children” were excluded from the analysis. In addition, for the robustness check, I estimated a limited sample of women who worked in the previous year. Such women are likely to continue their jobs because of state dependence—the persistence of employment status in dynamic multinomial choice behavior. The analysis revealed a significant positive correlation between infertility treatment and non-regular employment. Regular employment and self-employment did not correlate with infertility treatment. Given that infertility treatment is costly and challenging to balance with work, there is a trend toward choosing non-regular employment with flexible and less time-consuming working styles.

TALK 2: Fertility Expectations, Life Conditions and Timing of First Parenthood: A Comparative Life-Course Analysis Using Two Waves of GGS II

Presenter: Alberto Taviani, Université de Strasbourg

The transition to first parenthood has become an increasingly selective and delayed process in many European countries. While the desire to have children remains widespread, its realization is often postponed or forgone, raising questions about the role of structural constraints in shaping reproductive trajectories. Following a life-course perspective, this paper examines entry into first parenthood as the outcome of the articulation between fertility expectations and key lifecourse domains.

The analysis relies on newly available longitudinal data from the second edition of the Generations and Gender Survey (GGS II), focusing on countries for which two waves are currently available: the Czech Republic, Estonia, and Norway. These countries offer contrasted institutional contexts in terms of welfare regimes, housing markets, and family policies, while sharing a common trend toward delayed fertility.

Using event-history models with age as the time scale, the paper analyses the transition to first birth among childless women. Fertility expectations are captured through childbearing intentions and expected family size, while structural conditions include partnership status, employment situation, and housing tenure. By measuring explanatory variables prior to observed births, the analysis limits reverse causality and focuses on the conditions under which expectations are translated into behavior.

Preliminary results suggest that, across countries, living in a cohabiting partnership remains the strongest accelerator of entry into parenthood, outweighing the effect of fertility expectations alone. Housing stability, particularly homeownership, further facilitates the realization of childbearing plans, whereas employment status shows more heterogeneous and context-dependent effects. In addition, expecting only one child is associated with a relative postponement of first birth compared to the dominant two-child model. Overall, the findings underline that entry into first parenthood remains a highly conditional life-course transition, shaped less by fertility intentions alone than by the sequencing and consolidation of key adult-life transitions.

TALK 3: A Woman-Centered Biosocial Interactive Theory of Historic Fertility Decline

Presenter: Guang Guo, UNC Chapel Hill

Co-author: Zhenhuan Fang, UNC Chapel Hill

Background: We begin with our first proposition based on the biological observation that women are sole childbearers and primary child-rearers. This implies (1) nearly all factors influencing fertility operate through women; (2) we must look for key individual-level drivers of fertility decline in women. This reasoning leads to our second proposition: despite biological differences in reproduction, women possess inherent life aspirations that are essentially similar to those of men. Historically, these aspirations were largely suppressed, with relentless childbearing and childrearing becoming women's destiny. However, as modernization fosters gender equality granting women greater awareness of alternative life paths and reproductive autonomy - a sharp fertility decline becomes inevitable. We argue that this dynamic is the most fundamental driver of fertility decline.

The anti-natalist forces driving the decline are counterbalanced by enduring pronatalist ones, resulting in a largely irreversible fertility equilibrium in low-fertility countries. We demonstrate the explanatory power of our model through examples, and contrast it with existing theories. Given the root cause of fertility decline, we advocate for gender-equity programs as a long-term strategy to positively disrupt the current below-replacement fertility equilibrium. Such equity requires acknowledging and fairly compensating women for their disproportionately heavy reproductive role.

Contributions: By recognizing the biological centrality of women in reproduction, we (1) develop a novel theory that explains the historic fertility decline and sheds light on the current fertility swing in low-fertility countries; (2) identify a fertility equilibrium produced by competing natalist forces; (3) propose a gender-equitable, long-term fertility strategy.

TALK 4: From Desire to Reality: Understanding the Impact of Adverse Reproductive Experiences on the Individual Fertility Gaps Among Women in Germany

Presenter: Jasmin Passet-Wittig, Federal Institute for Population Research - BiB

Co-author: Nadja Milewski, Federal Institute for Population Research - BiB

This study investigates whether and to what extent adverse reproductive experiences contribute to women's individual fertility gap – the difference between their desired and realized number of children ten years later. Many women have adverse reproductive experiences during their childbearing years, and many do not achieve the number of children they desire. While the contribution of socio-economic factors to the fertility gap has been extensively studied, the role of adverse experiences has received less attention.

We draw from the concept of “reproductive careers” which highlights the interconnectedness of various types of reproductive experiences, attitudes, and behaviors across reproductive life courses, including “non-transitional” experiences such as infertility, miscarriage, and induced abortions. Referring to the life course perspective and the value of children approach, we pay particular attention to different age-parenthood constellations at first observation.

Using data from the German family panel pairfam, fertility desires of women aged 15-17, 25-27, and 35-37 at first observation are compared and followed for a decade, covering almost the full reproductive life span of women from 15 to 47 years. The average fertility gap declines with age and is larger among childless women than among parents. Multivariable analysis of the fertility gap by the three types of adverse experiences and controlling for partnership status, education and migration background, reveals associations mostly for mothers. Mothers 35-37 years at first observation who experienced miscarriage have an elevated risk of a fertility gap. Abortion increases the risk of not realizing the desired number of children while perceived infertility decreases it among mothers age 25-27.

Overall, we find that the separate contribution of infertility, miscarriages, and abortions to the individual fertility gap varies depending on women's life stage as reflected by age-parenthood constellations. This study highlights the complexity of women's reproductive experiences and how these are intertwined, ultimately affecting realized fertility.

SLLS JOHN BYNNER DISTINGUISHED SCHOLAR AWARD LECTURE

Living Under Time: Rethinking Life Courses as Lived Temporal Relations

Presenter: Richard A. Settersten, Jr., Oregon State University

(Winner of the 2025 SLLS John Bynner Distinguished Scholar Award)

Life course research is fundamentally about time—yet rarely about how people live under it. The field has focused on when transitions occur, how sequences unfold, and how trajectories can be mapped. But it has left underexamined how individuals are positioned in relation to time itself, influencing what can be done, when, and on what terms. This paper advances a new framework for understanding contemporary lives, focusing on temporal conditions that must be actively navigated. To capture these conditions, it develops six concepts that together reorient how temporal relations are understood: Time In and Time Out, Time Between, Time Until and Time Left, and Time Since and Out of Time. These concepts do not refine duration or extend linear models; they identify qualitatively distinct temporal relations that are socially produced, evaluated, and consequential. This paper does not claim that lives have only recently become complex; rather, it shows that the social organization of time has shifted, making these conditions more widely present and affecting how temporal relations are structured and interpreted.