



SLLS ANNUAL CONFERENCE 2024

Inequalities Across Life Courses and Generations: Interdisciplinary Perspectives

24 - 26 September / University of Essex, UK



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Our work is driven by the Universities of Bristol and Edinburgh, in collaboration with SeRP UK, Swansea University, University of Leicester and UCL. The National Core Studies Programme is enabling the UK to use health data and research to inform both our near and long-term responses to COVID-19 as well as accelerating progress to establish a world-leading health data infrastructure for the future.

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ABSTRACT BOOK

In order of conference programme

KEYNOTE 1

Higher Education Sorting and Social Mobility

Presenter: Monica Costa-Dias, University of Bristol

Co-authors: Jack Britton, University of Bristol; David Goll, University College London

Education is a main facilitator of social mobility, and higher education (HE) plays a major role in this. But while returns to HE are large, they also vary widely with the characteristics of programmes, students and how they align. This paper investigates the role of HE sorting to explain heterogeneity in returns. Using rich administrative data for England, we document that students from disadvantaged backgrounds are less likely to enrol in HE than equally skilled higher SES peers, particularly in the most selective programmes, and that low SES is associated with lower wages conditional on education and skills. To investigate the drivers of these gaps, we develop a life-cycle model of education, labour supply and earnings that allows for a rich characterisation of heterogeneity in the skills that students have and that different educational programmes provide. A key feature of our model is that students and programmes meet in a matching market in equilibrium, where sorting is determined. Exploiting geographical and cohort size variation, we can separate the preferences of students and programmes and identify the returns to heterogeneous programmes. Our model reproduces empirical patterns accurately. Using our model, we find that students from poorer backgrounds benefit more from investing in HE than better off students, but benefit less from enrolling in more selective programmes. We also find that low SES students are less willing to pay for a match that promises higher future earnings. However, students' preferences cannot fully explain differences in HE sorting by SES. Rather, systematic differences in skills and admission rules that favour better off students also play a role. Counterfactual analysis of HE policies shows that demand side policies subsidising tuition fees or incentivising investments in STEM are insufficient to move the needle on social mobility; supply side policies could potentially be highly effective.

1A STREAM: HEALTH & WELLBEING 1

SYMPOSIUM

Across Time and Place: Three Examples of International Longitudinal Multi-Cohort Studies

Chair: Thomas Steare, University College London

Discussant: Praveetha Patalay, University College London

SUMMARY: Our symposium brings together longitudinal research focused on inequalities and risk factors for mental health and wellbeing, and whether these are consistent or vary across countries, therefore investigating both the role of the micro- and macro-levels on individuals' outcomes. Our first two talks will discuss inequalities in (i) adolescent mental health, and in (ii) earnings and employment across gender. These studies primarily use data from low- and middle-income countries which are underutilised in life course research, despite most of the world's population living in them. Our final two talks explore the heterogeneity of the association between risk and protective factors with mental health and wellbeing outcomes. The third talk will discuss the causal effect of engagement in arts and cultural groups on older adult's wellbeing, and how this differs in the UK and Japan. Our final talk will present results from a study across the UK and Chile on the concurrence between objective and subjective indicators of neighbourhood safety, and whether these are associated with children's mental health. The studies span a breadth of ages across the life course, including childhood, adolescence, and later life, and will be of interest to researchers from a broad range of disciplines.

TALK 1: Are Socio-Economic Inequalities in Mental Health Equal Across Countries? Longitudinal Analyses of National Adolescent Cohort Studies

Presenter: Thomas Steare, University College London

Co-authors: Mesele Araya, University of Cambridge; Revathi Ellanki, University of Oxford; María Elena Medina-Mora Icaza, National Autonomous University of Mexico; Santiago Cueto, Pontifical Catholic University of Peru; Emily Garman, University of Cape Town; Hai-Anh H. Dang, World Bank; Gemma Lewis, Praveetha Patalay, University College London; Sara Evans-Lacko, London School of Economics and Political Science; Kelly Rose-Clarke, King's College London

Background: Socio-economic inequalities are widely observed in adolescents across different health outcomes, including mental health. In the UK, adolescents that report being from a low socioeconomic position, typically experience lower levels of wellbeing and higher severity of mental health symptoms. These inequalities are often assumed to be universal across countries, however even in countries of similar wealth and development, the magnitude of socio-economic inequalities in adolescent mental health differ. Longitudinal research has primarily focused on a small number of countries in Europe and North America, and typically neglects regions where the vast majority of the world's adolescents live. Analyses across a broader range of countries may help identify context-specific drivers of socio-economic inequalities in adolescent mental health and highlight the potential cross-country heterogeneity in the magnitude of mental health inequalities.

Methods: Parallel analyses have been conducted across eight countries: Australia (Longitudinal Study of Australian Children), Mexico (Mexican Family Life Survey), South Africa (National Income Dynamics Study), the UK (Millennium Cohort Study), Ethiopia, India, Vietnam, and Peru (Young Lives). Exposures include both objective (income and consumption expenditure) and subjective (perceived wealth) measures at age 14-16, with the outcome, internalising symptoms, measured at 17-19.

Results: I will present results from the analyses of each cohort, comparing effect sizes for objective and subjective economic position within and across countries. Analyses highlight differences between countries in the magnitude of mental health inequalities according to socio-economic factors.

Conclusion: The findings and their implications for how we understand socioeconomic inequalities in mental health and for evidence generation across a diverse set of contexts will be discussed.

TALK 2: Arts and Cultural Group Participation and Subsequent Wellbeing: A Comparison of Older Adults in Japan and England Using Doubly Robust Estimators

Presenter: Jessica Bone, University College London

Co-authors: Taiji Noguchim, Hei Wan Mak, Daisy Fancourt, Tami Saito, University College London

Introduction: Arts engagement could support the wellbeing of aging populations globally. However, the social gradient in engagement may have led to an overestimation of its impact on wellbeing. Research is predominantly from Western countries, leaving it unclear whether arts engagement can support wellbeing in Japan, where arts are differently valued and engaged with. We tested whether community arts and cultural groups influenced subsequent subjective and social wellbeing in Japan and England.

Methods: We harmonized data from the Japan Gerontological Evaluation Study (JAGES; 2016-2019) and the English Longitudinal Study of Ageing (ELSA; 2014-2018). We included participants aged ≥ 65 (JAGES $n=9,511$; ELSA $n=3,133$). Using inverse probability weighted regression adjustment, we estimated the causal effect of arts and cultural groups on subsequent life satisfaction, happiness, depressive symptoms, and social support, independent of demographic, socioeconomic, and health-related confounders.

Results: In JAGES, group participation was associated with higher odds of life satisfaction and higher social support scores. In ELSA participants aged ≥ 65 , group participation was only associated with higher depressive symptoms. However, in the full ELSA sample aged ≥ 50 , group participation was only associated with higher social support scores.

Conclusion: Arts and cultural group participation may enhance life satisfaction and social wellbeing in Japan, perhaps with more consistent benefits than in England. Facilitating participation in arts and cultural groups could help older adults to maintain a social support network, which may further benefit their health.

TALK 3: Neighbourhood Safety and Children's Mental Health: A Cross-National Cohort Study in the UK and Chile

Presenter: Charlotte Constable-Fernandez, University College London

Co-authors: María Francisca Morales Larrazabal, University of Edinburgh; Jane Maddock, Praveetha Patalay, University College London

Poor mental health amongst children and young people is a global public health concern. Depression, behavioural disorders and anxiety are among the leading causes of illness and disability among young people. Physical features of the environment, including neighbourhood safety and crime, may contribute to the multifactorial aetiology of mental disorders. However, it is unclear if safety and crime are associated with mental disorders in children across countries. This study aims to examine the concurrence between objective and subjective indicators of neighbourhood safety in the UK and Chile. We further aim to investigate associations between neighbourhood safety and children's mental health and whether these associations are moderated by sex or socioeconomic position (SEP). Participants come from the Millennium Cohort Study (MCS) and Encuesta Longitudinal de Primera Infancia (ELPI), nationally representative studies of children's development in the UK and Chile respectively. The Index of Multiple Deprivation (IMD) crime domain and Reported Crime Incidence, measured with Police.Data.UK, have been linked to participant geographical identifiers in the MCS. Reported crime frequencies from Chilean police data has been linked to ELPI participants. Both cohorts incorporate subjective measures of neighbourhood safety. Mental health measures include internalising and externalising problems and wellbeing reports. Measures will be harmonised to allow co-ordinated analyses across cohorts. Associations between neighbourhood safety and mental health will be quantified using regression models. To estimate whether differences are moderated by child sex and SEP (parent education, parent employment, income quintiles), interaction terms will be added.

1B STREAM: RESEARCH METHODS 1

SYMPOSIUM

Advances in Sequence Analysis

Chair: Matthias Studer, University of Geneva

SUMMARY: Sequence analysis (SA) is one of the key approaches to study processes and trajectories from a life-course perspective. It provides a holistic view of trajectories by creating a typology that can be then used in subsequent analyses or simply to describe these trajectories. This symposium regroups new developments of the framework illustrated using relevant applications, including:

- A review of missing data handling in SA to create a typology of trajectories. This study further proposes new methods and highlights the underlying sociological assumptions of each approach.
- An original study on school-to-work transition in Switzerland during the Covid pandemic using administrative data. This study introduces the use of “noise clustering” in SA and discuss its sociological relevance. It further uses newly developed methods to handle large databases and adapt noise clustering to it.
- An evaluation of several data driven parameterizations of optimal matching distances (and its extensions) using simulations.
- An innovative combination of Dynamic Sequence Complexity Indices with fixed effect models to study the evolution of the complexity of trajectories over the life course.

TALK 1: Clustering with Missing Data in Sequence Analysis

Presenter: Kevin Emery, University of Geneva

Co-author: Matthias Studer, University of Geneva

Missing data has been identified as one of the main challenges for sequence analysis (Piccarreta and Studer, 2019). Longitudinal data are particularly prone to missing data, because of nonresponse, attrition or censoring for instance. At the same time, missing data can have a strong impact on any longitudinal analysis. To date, several proposals to deal with missing data have been made, but there is no universally accepted one. Complete case analysis involves ignoring trajectories with any missing values, which can result in data loss and biased outcomes. Alternatively, missing values can be treated as additional states, although this approach introduces unwanted similarity between the cases with missing information. Halpin (2016) proposed considering missing as a state that is maximally different to any other state, including others missing. The main drawback of this method is that trajectories with many missing tend to be considered as outliers, far from any other trajectories. Studer (2013) proposes to use inverse probability weighting. Finally, proposals have been made to use multiple imputation in conjunction with clustering. Along this line, Halpin (2016) proposed to stack all imputed datasets before proceeding to the clustering itself. However, such a strategy underestimates the uncertainty of the cluster analysis step, which might produce different results for each imputed dataset. This study aims to evaluate these propositions using simulations and theoretical evaluations before drawing clear guidelines for sequence analysis users. In addition, we further aim to adapt recent proposals in the cluster analysis literature for missing data handling to sequence analysis. Among others, we explore the use of consensus clustering to aggregate the multiple imputation results (Basagaña et al., 2013; Bruckers et al., 2017; Faucheux et al., 2020).

TALK 2: School-to-Work Transition Following an Apprenticeship During the COVID-19 Pandemic

Presenter: Leonhard Unterlerchner, University of Geneva

Co-author: Matthias Studer, University of Geneva

The COVID pandemic and its associated measures had an unprecedented impact on our societies. Several studies highlighted that young people might have been especially affected, particularly those entering the labor market. This study aims to document the medium-term impact of COVID measures on young people leaving Vocational Education and Training (VET), which is followed by 60% of the pupils, in more than 200 occupations. Using a large administrative database, the study follows the school-to-work transition of young individuals who got a VET degree in Switzerland in three cohorts to highlight the change associated with the pandemic. VET is often depicted as providing a quick and smooth transition into employment. However, we show that the speed and ease of this transition vary considerably according to the occupation and the associated economic sector of the VET degree. Our study further highlights that some VET degrees were more strongly affected by the COVID-19 crisis, while in others, individuals were more likely to pursue further education. Methodologically, the study introduces the use of “noise clustering” in sequence analysis and discuss its sociological relevance to identify atypical trajectories. It further adapts this “noise clustering” approach for large databases using the CLARA algorithm. It finally relies on multilevel models to study the variations between the occupations of the VET degrees.

TALK 3: Recovering State Spaces from Transition Rates

Presenter: Brendan Halpin, University of Limerick

There is little theory about how to parameterise sequence analysis, for example, how to define the substitution matrix that determines state space similarity for algorithms like Optimal Matching. Many analysts seek data-driven methods to avoid the theoretical problem, often by using a function of the transition rates. While transition tables and substitution matrices have analogous structures, transitions and substitutions are distinctly different phenomena. Nevertheless, the intuition that more similar state pairs will have more transitions is attractive. This research addresses the question whether, if transition rates were driven by a pattern of spatial proximity, we can reliably infer the spatial structure from the transition rates. To do this, we simulate patterns of transitions within random 2D spatial structures, where transitions are governed by proximity and the configuration of the states in the simulated space. We then test how well estimating substitution costs from the transition rates can recover the

random spatial structure. The standard approach, using $(2 - p_{ij}) - p_{ji}$, works relatively poorly, but a range of other measures (which use more of the cells of the transition matrix) perform better. Since the data generating process is driven by only the spatial configuration, it is far simpler than real life processes, lacking both individual heterogeneity and memory, but it is a good test of whether transition-rate based substitution matrices can capture the configuration - under favorable conditions - which they must do if they are to use transitions to inform us about similarity -- under real-life conditions. Based on the simulation performance, recommendations are made about which measures are likely to be more effective in real-life sequence analysis. The measures discussed are made available in a Stata add-on.

TALK 4: Children's Family Life Course Complexity and Consequences for Educational Outcomes in the UK

Presenter: Martin Gädecke, Nuffield College, University of Oxford

Co-authors: Carla Rowold, Nuffield College; Zachary van Winkle, Sciences Po - Paris

Research has established the negative association between parental union dissolution, mostly divorce, on their children's educational outcomes. However, theoretical arguments emerging from the life course perspective claim that overall family stability might be more important than single transitions, such as union dissolution. Recently, it has been suggested to measure children's family stability using Dynamic Sequence Complexity Indices based on their parents' partnership history. This methodological advancement enables tracking the ages at which children's family lives become more complex and when they begin to stabilize once more. Uniquely rich survey-register data for England, linking Understanding Society with the National Pupils Database, allows us to follow not only family stability but also the educational outcomes, such as standardised test scores, of children over time. Similar to the literature on union dissolution, we apply Fixed-Effects regression models to account for time-constant unobservable confounders when estimating the link between family stability and educational outcomes. First, we use various Sequence Complexity Indices to measure family stability. Second, we apply them as main covariates in different Fixed-Effects regression models and compare their effectiveness with the transition to union dissolution. To our knowledge, we are the first to combine the Dynamic Sequence Complexity Indices with panel regression techniques. The results will shed light on the long-standing question of whether union dissolution directly impacts children's outcomes or if it is the overall family stability in the long run that plays a more significant role. Consequently, the findings of this study will not only inform future research but also have immediate implications for family policies.

1C STREAM: EDUCATION 1 SYMPOSIUM

Mapping Educational Trajectories Over the Lifecourse: The German National Educational Panel Study (NEPS)

Chair: Manja Attig, Leibniz Institute for Educational Trajectories

SUMMARY: The German National Educational Panel Study (NEPS) collects data on the development of educationally relevant competencies and educational trajectories. The NEPS is carried out by a nation-wide interdisciplinary scientific network of researchers. A total of seven starting cohorts have been drawn, comprising more than 70,000 participants from the first year through to late adulthood, as well as more than 50,000 context persons (e.g., parents and teachers). The aim of this symposium is to introduce

the study design, data collection and future plans for three starting cohorts of the NEPS: 1) the Newborn cohort (Starting Cohort 1), which has been running for 12 years by now, 2) the newly established cohort of 5th graders (Starting Cohort 8), which started in 2022 and focuses on students in secondary school, their families and their learning environment, and 3) the adult cohort (Starting Cohort 6), which has been running since 2010 and will be renewed in 2025. The last presentation gives an insight into the data handling and accessibility of the published data for all starting cohorts of the NEPS. The different starting cohorts of the NEPS provide a rich database on educational development in Germany and can be freely used for research purposes.

TALK 1: Education from the Crib On: The Potential of the Newborn Cohort of the German National Educational Panel Study

Presenter: Markus Vogelbacher, Leibniz Institute for Educational Trajectories

Co-authors: Manja Attig, Leibniz Institute for Educational Trajectories; Sabine Weinert, University of Bamberg

The acquisition of educationally relevant competencies starts early in life (Damon & Lerner, 2006). Hence, during the first years of life, the foundation for later educational processes and trajectories is formed (Belsky et al., 2007). However, even at this early age, substantial and growing disparities in educational attainment are evident (e.g., Hart & Risley, 1995). For the investigation of this crucial life phase in Germany, the Newborn Cohort of the German National Educational Panel Study provides longitudinal data for 3,500 representatively drawn newborns and their families (Attig, Vogelbacher & Weinert, 2023). Starting in 2012, 12 waves have been administered, and data from 10 waves have been published as a scientific use file by now. The assessments in the Newborn Cohort included observational measures (in the first waves; e.g., semi-standardized parent-child interaction to measure the quality of the home learning environment; a habituation-dishabituation task to gather information on processing and learning resources), the measurement of domain-specific and domain-general competencies on tablets (beginning at age 3; e.g., children's vocabulary, mathematical and science competencies, executive functions, working memory), as well as data from parent's and educator's interviews. The questionnaires cover the structure, processes, and orientations of the children's learning environments. Further, individual characteristics of the parents, e.g., parental stress, and of the child, e.g., temperament, socio-

emotional competencies, and health, were assessed. Overall, the Newborn Cohort provides the opportunity to investigate educational competencies and trajectories from the first year onwards, including information about their learning environments. The talk will provide an overview of the study design, measurement methodology, as well as potentials and examples for research using the data.

TALK 2: New Starting Cohort 8 of the NEPS: Education for Tomorrows World

Presenter: Magdalena Pratter, Leibniz Institute for Educational Trajectories

Co-authors: Lena Nusser, Ilka Wolter, Leibniz Institute for Educational Trajectories

In recent years, both schools and society have undergone significant changes. Digitalization, inclusion and integration are transforming not only our daily lives, but also educational institutions. The objective of the new Starting Cohort 8 (SC8) is therefore to gain more insight into recent developments and identify options for action in the field of education. The comparison with the already available NEPS data, especially Starting Cohort 3, provides an internationally unique perspective on educational trajectories from secondary school onwards. The SC8 started in fall 2022 with Grade 5 students from all school types. The sample will be surveyed annually thereafter using computer-based questionnaires as well as various competence tests (e.g., digital competence, civic literacy, mathematics, and reading competence). Parents, teachers, and school heads are also regularly surveyed in order to understand not only the students' development, but also their learning environment and context. A special feature of the starting cohort is the twofold connection with the IQB Trends in Student Achievement via administering and linking identical test instruments between the studies. The design of SC8 considers the specificities of schools as well as individual educational biographies. While the core of the survey programme is the same for all students and context persons, specific adaptations and accommodations are implemented. Students in special schools receive a shortened and adapted design. Students who have left the participating NEPS school (due to changing school, dropping out) are surveyed individually in a customized design. This allows to track irregular educational biographies resulting from school transfers and to analyse post-school decisions and careers. Overall, the SC8 provides new opportunities to gain insights into educational equity, identity formation and social engagement.

TALK 3: Design and Content for the Renewal of the Adult Cohort of the German National Educational Panel Study (NEPS)

Presenter: Markus Nester, Leibniz Institute for Educational Trajectories

The NEPS, like many other established panel studies, faces the issue of panel attrition and the aging of panellists. Therefore, it is important to renew the NEPS adult cohort from 2025 onwards to cover the entire period of adulthood again. This will help us to ensure that we have sufficient numbers of participants for the analysis of cohorts and life course-related questions. To enable comprehensive and long-term mapping and research of transitions from education and training to the labor market, we plan to add online surveys, recurring refreshing, and regular inclusion of younger participants. This will also aid in studying the effects of structural changes in German society, including demographics, educational expansion, technological advancements, and particularly, digitalization. In addition, we aim to strengthen analysis options about the effects of unforeseeable social changes on education and educational returns, such as those caused by the coronavirus pandemic. Furthermore, we plan to enhance the possibilities for panel analyses and causal questions in terms of content and design. However, these goals are set against the challenges of the current survey landscape, including falling realization rates and rising costs. To meet these challenges, the NEPS adult survey plans to implement new field access via online recruitment, an adaptive incentive concept as well as slightly extended panel spacing. Specifically, we aim to recruit adults aged 21 and above for the adult cohort and add new participants to the already surveyed cohorts up to the age of 50. This will help us achieve a minimum cohort size of 300 people per birth year. Additionally, we will survey selected competence domains more frequently than before and introduce a new knowledge test.

TALK 4: Longitudinal Analyses in Educational Research and Beyond: NEPS Data and Services for Researchers

Presenter: Lydia Kleine, Leibniz Institute for Educational Trajectories

Co-author: Daniel Fuss, Leibniz Institute for Educational Trajectories

The data portfolio of the German National Educational Panel Study (NEPS) comprises the panel studies of six starting cohorts so far – newborns, kindergarten children, fifth-graders, ninth-graders, first-year students at universities, and adults. These studies have been running for more than 10 years (another one – known as SC8 – was recently launched in 2022). The carefully prepared Scientific Use Files provide research data on competence development, educational processes and returns of education together with rich context information about the formal, non-formal and informal learning environments. But the NEPS universe covers even more data resources. Particularly noteworthy is NEPS-ADIAB, the linkage of survey and competence data with administrative data on the individual employment and income history. The Research Data Center at LfBi (RDC) is responsible for making this data portfolio available free of charge for scientific purposes. The RDC also offers numerous services to familiarize researchers with the complex data and to support them in their work. These services range from documentation materials, video tutorials and online trainings to tools for variable searches and a forum for direct interaction. A key challenge is the data security-compliant provision of the partly very sensitive data. There are three access options with different levels of protection and data anonymization available – download from the website, remote desktop on a secure server environment and onsite use in the data security room at LfBi. Prerequisite for any access is the conclusion of a data use agreement. The talk will give an insight into both the data and services offered by the RDC. Particular attention is given to the ways of accessing the NEPS data and the application process.

TALK 1: Domains of Early-life Risk and Obesity-Hypertension Comorbidity: Findings from the 1958 National Child Development Study and the 1970 British Cohort Study*Presenter: Sebastian Stannard, University of Southampton**Co-authors: Ann Berrington, Simon Fraser, Rebecca Hoyle, Nisreen Alwan, University of Southampton; Shantini Paranjothy, University of Aberdeen; Rhiannon Owen, Swansea University*

Single early-life exposures affect obesity and hypertension. However, research should investigate joint causality of multiple determinants of ill health. We identified exposures across five early-life domains, explore their association to obesity and hypertension, and model hypothetical prevention scenarios. We used data from 17,415 participants in the 1958 National Child Development Study (NCDS) and 17,196 participants in the 1970 British Cohort Study (BCS70). The outcome was measured obesity (BMI over 30) and measured or self-reported (BCS70 only) hypertension (BP over 140/90 mmHg) at ages 42 (NCDS) and 46 (BCS70). Early-life domains included: 'antenatal, neonatal and birth', 'developmental attributes', 'education', 'socioeconomic' and 'parental and family environment'. Confounders included parental separation, parental death and ethnicity. Logistic regression and population attributable fractions (PAFs) explored the relationship between domain risk scores and combined obesity-hypertension. In unadjusted models, greater risk scores across the five domains were associated to obesity-hypertension. For the NCDS, in adjusted models, there remained a significant association between the 'antenatal, neonatal, and birth' and 'socioeconomic' domains and obesity-hypertension. For the BCS70, there remained a significant association between the 'education' domain and obesity-hypertension. Adjusted PAFs using NCDS data suggested a 44% reduction in obesity-hypertension if those with highest risk scores in the 'antenatal, neonatal, and birth' domain had a risk score of 0, and a reduction of 48% in obesity-hypertension if those with highest risk scores in the 'socioeconomic' domain had a risk score of 0. BCS70 data suggested for the 'education' domain a 39% and 36% reduction in obesity-hypertension if those with highest risk scores had a risk score of 0 or 1, and a 42% and 39% reduction in obesity-hypertension if those with a risk score of 4 had a score of 0 or 1. Targeted prevention interventions aimed at certain early-life domains could have a significant impact on obesity-hypertension prevalence.

TALK 2: Demographic, Socioeconomic and Lifecourse Risk-Factors for Internalized Weight Stigma*Presenter: Amanda Hughes, University of Bristol**Co-authors: Stuart W. Flint, University of Leeds; Ken Clare, Leeds Beckett University; Antonis A. Kousoulis, Global Mental Health Action Network; Emily R Rothwell, Greater Manchester Mental Health NHS Foundation Trust; Helen Bould, Laura D. Howe, University of Bristol*

Background Obesity is highly stigmatized, with negative obesity-related stereotypes widespread across society. Internalized weight stigma (IWS) is linked to negative outcomes including poor mental health and disordered eating. Previous evidence examining population groups at higher risk of experiencing IWS comes from small, nonrepresentative, cross-sectional samples. For the first time, we describe risk factors across the lifecourse using data from a large, general population birth cohort. Methods In the Avon Longitudinal Study of Parents and Children (ALSPAC), we explored differences in IWS at age 31 years by sex, ethnicity, socioeconomic factors in childhood and adulthood, and sexual orientation. We consider the impact of family, peer, and wider social influences in adolescence, and bullying in childhood, adolescence and adulthood, adjusting for body mass index (BMI) and confounders. Results In models adjusted for potential confounders and BMI in childhood, adolescence, and adulthood (N=4060), IWS was higher for females (standardized beta: 0.54 S.D. $p < 0.001$), sexual minorities (0.17 S.D. higher, $p < 0.001$), and less socioeconomically advantaged individuals (0.18 S.D. higher ($p < 0.001$) for participants whose mothers had minimum or no qualifications, compared to a university degree). The social environment during adolescence and young adulthood was important: IWS was higher for people who at age 13 years felt pressure to lose weight from family 0.13 S.D. $p = 0.005$, and the media (0.18 S.D. $p < 0.001$) or had experienced bullying (0.26 S.D. $p < 0.001$ for bullying at age 23 years). Discussion Internalized weight stigma differs substantially between demographic groups. Risk is elevated for females, sexual minorities, and socioeconomically disadvantaged people, which is not explained by differences in BMI. The family environment during adolescence, bullying, and pressure to lose weight from the media may have long-lasting impacts on adult IWS. These may be fruitful avenues for intervention to reduce IWS and its consequences.

TALK 3: Social Exclusion and Health Behaviours: Insights from a Longitudinal Study of Irish Young People*Presenter: Olivia McEvoy, Trinity College Dublin*

Much of the burden of disease in high-income countries is attributable to harmful health behaviours (HHBs). Evidence suggests that these behaviours may be better understood if analysed as clusters of behaviours rather than individually. Using a nationally representative longitudinal sample of 6,216 young people living in the Republic of Ireland, we identified four clusters of HHBs, using latent-class analysis. We then examined whether there were distinctive risk profiles for different clusters of HHBs, using multi-nominal logistic regression. Our analyses covered three waves of data from 2007 to 2016. Experiencing persistent, as opposed to periodic or no, poverty was predictive of lifestyle-type behaviours (poor diet, physical inactivity and high screen-time) and reporting oppositional values was predictive of substance use behaviours (smoking and underage-drinking). Our results provide further empirical evidence for Fundamental Cause Theory, whilst also supporting our proposed theory that the experience of social exclusion that accompanies the experience of poverty prompts 'resistance' behaviours.

TALK 4: Do Different Levels of Severity of Food Insecurity Affect Mental Health? Individual Fixed-Effects Analysis During the Covid-19 Pandemic

Presenter: Marina Kousta, King's College London

Co-authors: Karen Glaser, King's College London; Rachel Loopstra, University of Liverpool

While the link between food insecurity and mental health is established, few studies use longitudinal data or investigate whether different levels of food insecurity lead to poorer mental health. Utilising five waves of the Understanding Society Covid-19 Survey, we evaluated the mental health effects of food insecurity (N=67,554). The validated General Health Questionnaire (GHQ)-36 score, and the GHQ-12 (caseness, ≥ 4) captured mental health. Food insecurity measures reflected varying levels of severity, from milder (access to healthy food) to moderate (cutting/skipping meals) and severe (hunger and food bank use). We employed Two Way Fixed Effects (TWFE) linear regression models, adjusted for various time-variant confounders. Sensitivity analyses tested the results' robustness using a lower GHQ-12 threshold (≥ 3). Hunger was associated with a 1.26-point increase in GHQ-36 score ($p=0.010$, CI: 0.56, 1.94), whilst using a food bank ≥ 4 times was associated with a 2.14 increase ($p=0.033$, CI: 0.28, 3.99). Using a food bank ≥ 4 times also increased the probability of GHQ-12 caseness by 11% ($p=0.020$, CI: 0.03, 0.20), whereas cutting/skipping meals increased the probability by 12% ($p=0.030$, CI: 0.02, 0.22). In sensitivity analyses, using a food bank ≥ 4 times increased the probability of GHQ-12 caseness by 12% ($p=0.010$, CI: 0.05, 0.19) whilst cutting/skipping meals increased probability by 11% ($p=0.020$, CI: 0.02, 0.20). Remaining food insecurity measures did not demonstrate any significant associations. To our knowledge, this is the first longitudinal, nationally representative study employing robust fixed effects models to assess the potential causal impact of food insecurity on mental health. We found that milder manifestations of food insecurity were not associated with poor mental health, unlike more severe forms like hunger or food bank use. Our findings suggest that policies that address food insecurity could have wider positive impacts on mental health inequalities.

1E **STREAM: EMPLOYMENT** **INDIVIDUAL** **Employment & Family** **PAPERS**

TALK 1: Long-Term Consequences on Family Outcomes of Taking Paternity Leave in the UK Millennium Cohort Study

Presenter: Anne McMunn, University College London

Co-authors: Baowen Xue, Yvonne Kelly, Margaret O'Brien, University College London

Background: Previous studies using the UK Millennium Cohort Study have shown greater parental involvement in the short-term amongst fathers who take paternity leave but have not tracked whether this increased involvement persists over time. This study investigates whether father's leave-taking around childbirth is associated with their involvement as well as child and parent mental health, and parental relationship quality across children's primary school years. We also investigate whether associations differ by household income.

Methods: This study uses the Millennium Cohort Study waves 1 (9 months) to 6 (age 14) amongst intact couple families with singleton births and who have available information on father's leave-taking around the time of childbirth (N=12,949). We use multilevel mixed-effects linear regression for analysing the association between fathers' leave taking at the time of childbirth and longitudinal trajectories in fathers' engagement, child socioemotional development, maternal and paternal relationship quality and maternal and paternal psychological distress. We adjust for a range of baseline and time varying covariates. We used interaction terms between paternal leave and household income to investigate differences in associations by income.

Results: Compared to working fathers who took leave around the time of childbirth, working fathers who didn't take leave showed consistently lower levels of involvement at all waves, although the association was weaker and attenuated at age 11. This association was stronger in lower income households. Father's leave taking at birth was associated with better relationship quality, but only until the child was 5 for father reports and 7 for mother reports. Father's leave taking at birth was not associated with long-term trajectories in child socioemotional development or parental psychological distress in this study.

Conclusion: Policies which encourage uptake of parental leave for fathers in low-income households, may have lasting benefits for fathers' engagement through the primary school years.

TALK 2: A Father's Journey: The Impact of Commuting Times on Quality Time Spent with Children

Presenter: Stefanie Hoherz, Federal Institute for Population Research (BiB)

In contemporary western societies, the challenge of balancing work demands with family responsibilities is increasingly significant. This study focuses on a less examined yet crucial aspect: the impact of fathers' commuting times on the time spent in interactive activities with their children. This focus is especially pertinent considering fathers often have longer commutes and are traditionally less highlighted in family dynamics research, despite their crucial role in child development and well-being. Utilizing data from the UK Household Longitudinal Study (2010-2020) and employing both fixed-effects and random-effects models, this study investigates the experiences of fathers with a range of commuting lengths and from different socio-economic backgrounds. In the broader context, commuting emerges as a significant daily activity that consumes substantial personal time and energy for most employees. The UK is of particular interest, due to its high number of dual-earner couples, persistent 'long working hour culture', and men's relatively long commutes, which might make it difficult for them to juggle responsibilities in both

spheres. This study acknowledges a growing trend among fathers to actively engage in their children's lives, despite traditionally spending less time with them compared to mothers. Our findings reveal a notable threshold: fathers with commutes exceeding one hour each way tend to engage less in enriching activities, such as outdoor pursuits, family dinners, and meaningful conversations with their children. This suggests a struggle to maintain quality time with children beyond this commuting duration. Among the diverse findings, the study also observes variations across different socio-economic groups. Interestingly, fathers from lower socio-economic backgrounds face additional challenges in balancing commute times and quality interaction with their children. This research significantly contributes to life course studies, underscoring the necessity of including fathers' roles and diverse socio-economic contexts in shaping family dynamics and informing family-friendly policies for enhanced child development.

TALK 3: Parental Leave and Maternal Well-being: Exploring Dynamics, Disparities, and Partner Influence in the British Context

Presenter: Aneesa Qadri, University of Oxford

The transition to parenthood, while often deeply rewarding, frequently entails a significant hiatus from the workforce, particularly for mothers. This period of leave is characterized by notable shifts in employment dynamics and domestic responsibilities, potentially resulting in diminished satisfaction within marital relationships, financial challenges, and conflicting roles. This pioneering study, conducted within the context of the United Kingdom, employs longitudinal data from Understanding Society to explore the ramifications of parental leave on maternal mental health and overall well-being. Moreover, the research investigates whether the effects of leave on mental health vary across distinct groups of mothers delineated by pre-birth job characteristics, including full-time or part-time employment and industry sectors. Additionally, the study examines how fathers' utilization of parental leave impacts mothers' well-being. The findings indicate that maternity leave correlates with heightened depression and reduced life satisfaction, particularly among those who took fully unpaid leave. Notably, mothers employed full-time prior to childbirth experienced a decline in psychological well-being, while those in managerial and professional roles exhibited more favourable outcomes compared to those in intermediate and routine sectors. Furthermore, the research reveals that in heterosexual households, the uptake of parental leave by spouses corresponds to a decrease in depressive symptoms among mothers and positively influences their health, leisure time, and overall life satisfaction.

TALK 4: Welfare States, Family Dynamics, and Individual Characteristics: Comparing Work and Childcare Trajectories of Parents Within and Across Welfare Regimes

Presenter: Maximilian Reichert, Erasmus University Rotterdam

Co-authors: Tom Emery, Erasmus University of Rotterdam; Alzbeta Bartova, KU Leuven University

Welfare states, family dynamics, and individual characteristics: Comparing work and childcare trajectories of parents within and across welfare regimes
Question: How is the labour market attachment and childcare usage of couples shaped after childbirth by country and individual level factors? Problem/approach: Female labour market participation suffers after childbirth, more so for low SES, and across the board more so than male labour market participation. The between country differences are largely shaped by social policy and norm context. The theoretical approach of this paper combines a life course perspective applied to welfare regime outcomes. The interest of this paper lies first in the country or welfare state level structural differences shaping work-childcare trajectories. Second, it lies in the individual level circumstances that shape work-childcare trajectories, such as SES, gender, or household configuration. Analytical Strategy: The EU-SILC be used to create several welfare regime specific typologies of European work-childcare trajectories. These typologies will be used to assess which within welfare regime groupings follow which working hour - childcare trajectories. Multichannel sequence analysis will be applied to micro data, with three linked sequences per household, spanning 4 years post childbirth: Father's working hours Mother's working hours Formal childcare usage Expected results: These family sequences will be clustered within each welfare regime to attain a typology of regime specific work-childcare trajectories. This enables regime level descriptive comparisons of 'typical' work-childcare trajectories. Individual level data will be used to assess the prevalence of specific social groups in specific clusters (SES, household composition). This enables a comparison of welfare regime trajectories and outcomes both within and across regimes.

1F **STREAM: SOCIAL DISADVANTAGE** **INDIVIDUAL Socio-economic Disadvantage** **PAPERS**

TALK 1: Socio-Economic Status, School Performance and University Participation: Evidence from Linked Administrative and Survey Data from Australia

Presenter: Wojtek Tomaszewski, The University of Queensland

Co-authors: Ning Xiang, Matthias Kubler, The University of Queensland

Despite being a target of various policy interventions across developed countries, disparities in higher education participation among students from different socioeconomic backgrounds remain persistent. Whilst previous literature has outlined the processes through which parental resources can shape students' educational decisions and pathways, the evidence remains scarce on how the effects of social origin on the participation in higher education vary along the academic performance distribution. Utilising multilevel models applied to largescale longitudinal administrative data from a cohort of secondary students in Australia linked to survey data on post-school destinations (n=21,772), this study explores how the participation in higher education varies along the students' performance distribution by their social origins. Our results show that the effects of social

origins on university participation are most pronounced in the middle of the academic performance distribution and taper off towards either end. Consideration is also given to exploring different ways to capture socio-economic status (SES) (i.e., through parental education and occupation) as an indicator of social origins. The results show that parental education serves as a better predictor of students' university participation than does parental occupation. The paper discusses the implications of these findings for educational policies aimed at increasing university participation among individuals from low-SES backgrounds.

TALK 2: Grandparental Socioeconomic Conditions and Grandchild Mental Health: The Mediating Role of Parental Socio-economic and Psychosocial Factors

Presenter: Baojing Li, Stockholm University

Co-authors: Ylva B. Almquist, Can Liu, Lisa Berg, Stockholm University

Different grandparental socioeconomic conditions might be a source of unequal distribution in mental health among grandchildren through multiple plausible ways – and many of those are likely to manifest in the parental generation. However, little attention has been given to the role of socioeconomic and psychosocial factors in the parental generation relevant for such associations. This study aims to disentangle the effect of grandparental socioeconomic conditions on grandchild mental health explained (indirect effect) or unexplained (direct effect) by socioeconomic and psychosocial factors in the parental generation, and potential differences by lineage and grandchild gender. Drawing on the Stockholm Birth Cohort Multigenerational Study, we included 25,621 unique lineages by grandchild gender, centered around 11,299 individuals born in 1953 (G1, parental generation), their 22,598 parents (G0, grandparental generation), and 24,707 children (G2, grandchild generation). Structural equation modeling was utilized. Within the measurement models, low income, non-employment, and overcrowding were treated as indicators of the latent construct “socioeconomic status” for G0s and G1s. Single parenthood, psychiatric disorders, and criminality were considered as indicators of the latent construct “psychosocial status” for G1s. For the structural models, we tested for mediation on whether the effect of grandparental socioeconomic status on grandchild psychiatric outcomes is mediated through parental socioeconomic and psychosocial factors. We first fitted a general model for the whole analytical sample, and then performed multiple group analysis across the four lineage-G2 gender combinations. Results indicated both direct effect of grandparental socioeconomic conditions on grandchild mental health, and indirect effect mediated through socioeconomic and psychosocial factors in the parental generation for the whole analytical sample. While only indirect effect mediated through psychosocial factors in the parental generation has been replicated for each of the four lineage-G2 gender combinations. This study provides the first multigenerational evidence for parental socioeconomic and psychosocial factors relevant for associations between grandparental socioeconomic conditions and grandchild mental health.

TALK 3: Life Course Socioeconomic Position and Cognitive Aging in Later Life: A Scoping Review

Presenter: Stéphane Cullati, University of Fribourg

Co-authors: Mengling Cheng, Stefan Sieber, University of Lausanne; Lore Van Herreweghe, KU Leuven University; Aswathikutty Gireesh, University College London; Kenneth F. Ferraro, Purdue University; Stéphane Cullati, University of Fribourg

How socioeconomic position (SEP) throughout the life course is related to cognitive health in later life is not well understood. This scoping review examined the association between life course SEP and cognitive function in later life in observational studies – considering cognition both as a cross-sectional level and as a longitudinal decline, and by cognitive domains – and assessed whether the empirical evidence supported life course models. The review focused on studies in the general population having measured cognition in the second half of life (45+). 42 studies (21 datasets) were included representing 595,276 participants (201,375 across unique datasets) from 46 countries. With regard to cognitive level, studies showed consistent associations with various measures of SEP at several life course stages, namely childhood/adolescence, middle age, and old age, with consistent findings across cognitive domains. These associations were generally robust to confounding and mediator factors. With regard to cognitive decline, studies showed inconclusive associations with SEP across life course periods and cognitive domains, and between women and men. According to life course models, the review found evidence to support the sensitive period, pathway, and the accumulation models, but not for the critical period model. For education being a pathway factor in the association between childhood/adolescence and later-life cognition, we found both direct and indirect support (potential mediator). In conclusion, SEP throughout life has a robust association with later-life cognitive level, but not decline. The mechanism of this association may involve multiple patterns (sensitive period, pathway, and accumulation), but not the critical period.

TALK 4: The Socio-economic Consequences of Loneliness: Evidence from a Nationally Representative Longitudinal Study of Young Adults

Presenter: Bridget Bryan, King's College London

Co-authors: Louise Arseneault, King's College London; Timothy Matthews, University of Greenwich;

Katherine Thompson, Purdue University

The negative health consequences of loneliness have led to increasing concern about the economic cost of loneliness in recent years. Loneliness may also incur an economic burden more directly, by impacting socioeconomic position. Much of the research to date has focused on employment status which may not fully capture socioeconomic position and has relied on cross-sectional data, leaving questions around the robustness of the association and reverse causation. The present study used longitudinal data to test prospective associations between loneliness and multiple indicators of social position in young adulthood, specifically, whether participants who were lonelier at age 12 were more likely to be out of employment, education and training (NEET) and lower on employability and subjective social status as young adults. The data were drawn from the Environmental Risk (E-Risk) Longitudinal Twin Study, a birth cohort of 2,232 individuals born in England and Wales during 1994–1995. Loneliness and subjective social status were measured at ages 12, 18 and 26. Employability and NEET status were assessed at age 18. Findings indicate that greater loneliness at age 12 was prospectively associated with reduced employability and lower social status in

young adulthood. The association between loneliness and lower social status in young adulthood was robust when controlling for a range of confounders using a sibling-control design. Results also indicate that loneliness is unidirectionally associated with reduced subjective social status across adolescence and young adulthood. Overall, our findings suggest that loneliness may have direct costs to the economy resulting from reduced employability and social position, underlining the importance of addressing loneliness early in life.

2A STREAM: HEALTH & WELLBEING 1

SYMPOSIUM

Recent Developments in Exploring the Social-Biological Transitions (1)

Chair: Stéphane Cullati, University of Fribourg

(SLLS Interdisciplinary Health Research Group session)

SUMMARY: The eighth symposium, organised by the SLLS Interdisciplinary Health Research group (IHRg), will focus on recent research at the intersection of social and biological data in the area of social-biological transitions. Presentations will highlight advances in longitudinal and life course research on health biomarkers, including allostatic load, inflammatory markers, genes, brain, metabolic and cardiovascular markers, microbiomes, and mortality. These investigations aim to clarify the links between biological indicators and social exposures across various life course stages, historical periods, and countries. Discussions will focus on the impact of stress, whether social, economic, or physical/environmental, and resource scarcity across economic, relational, and cultural domains. The symposium will explore the temporal aspects of exposure throughout the life course and investigate their influence on biological health. Key topics will include the intricate interplay between epigenetic factors and gene expression, unravelling the mechanisms linking stressors and resource deprivation to biological health. By assembling diverse approaches and focal points representative of high-quality research in this field, the symposium aims to contribute to the development of a shared scientific framework. This will foster collaboration and advance our collective understanding of the intricate interconnections between social and biological determinants of health.

TALK 1: Intersectional Inequalities in Allostatic Load: Data from the UK Household Longitudinal Study

Presenter: Ebenezer Essien, University of Stirling

Co-authors: Paul Lambert, Heather Price, Tony Robertson, University of Stirling

Introduction: The human body is exposed to social, economic, and environmental inequalities across the lifecourse resulting in physiological wear-and-tear (allostatic load/AL), with higher AL associated with disease and mortality. However, individuals with multiple, marginalised social positions are likely to be most negatively affected, but studies have typically focused on individual social strata rather than intersectional impacts. This study aims to investigate how such intersectional inequalities are related to AL.

Methods: The Understanding Society/UK Household Longitudinal study (UKHLS), which follows over 100,000 participants from 40,000 households across UK, was utilised here. The analytical sample was 7,329 from waves 2 and 3. AL was constructed of 10 biomarkers across a range of physiological systems and operationalised using the z-score method. Intersectionality was measured by participant's intersectional social identities (sex, age, socioeconomic position (NS-SEC), educational status, ethnicity, and long-standing illness) and analysed using Multilevel Analysis of Individual Heterogeneity Discriminatory Accuracy (MAIHDA).

Results: The unadjusted or 'simple intersectional' model VPC statistic showed a fairly large proportion of the overall variance in AL occurred between intersectional strata (rather than within strata) (21%). When adjusted for socio-demographic main effects, model 2 ('multiplicative model) identifies what effects remain when the additive effects are accounted for. Here, the PCV statistic was 91%, highlighting that additivity explains the intersectional variation reasonably well.

Conclusion: Intersectional inequalities in physiological wear-and-tear (as measured by AL) are present in the UKHLS sample, but these inequalities appear to be acting mainly as an additive accumulation of disadvantages in the likes of gender, age and educational status, rather than multiplicative effects of these characteristics.

TALK 2: Adverse Employment Histories, Later Stress at Work, and Allostatic Load

Presenter: Morten Wahrendorf, University of Duesseldorf

Co-author: Johannes Siegrist, University Duesseldorf

Adverse employment histories have been associated with allostatic load (AL), and exposure to chronic stress at work and related physiological stress responses have been proposed as a socio-biological pathway. This presentation uses baseline data from the French population-based CONSTANCES study, with data from 44,189 participants, and examines the direct and indirect effects (via stress at work) of previous adverse employment history on AL. Adverse work histories are assessed retrospectively in terms of precarious, discontinued and disadvantaged work histories between the ages of 25 and 45. Work stress and AL are measured at baseline in terms of effort-reward imbalance, and we use a composite allostatic load score based on 10 biomarkers. We conduct causal mediation analyses based on a potential outcome approach (adjusted for age, educational attainment, partnership situation and sex) to decompose direct and indirect effects (via stress at work) of employment history on AL. Preliminary results suggest that adverse employment histories and work stress are both associated with higher AL, and that only a small part of the effect of employment histories is due to mediation by work stress. This is consistent with a risk accumulation model in which both history and job stress are independently associated with higher AL.

TALK 3: Intragenerational Social Mobility and Allostatic Load in Older Ages: Exploring Gender Differences with the Constances Cohort

Presenter: H el ene Colineaux, INSERM, Universit e de Toulouse

Co-authors: Constance Beaufile, Michelle Kelly-Irving, Emmanuelle Cambois, Inserm

This article examines the associations between intragenerational social mobility, i.e. individuals' history of socio-occupational class during their adult life, and allostatic load (AL) and their variation between men and women. We draw on data from a sample of 66,228 individuals aged 55 to 69 years in the French Constances cohort, which includes detailed past occupational histories and health information. We used sequence analysis to identify 10 common patterns of socio-occupational trajectories between ages 20 and 55. These patterns describe individual's social classes throughout their careers and indicates whether they experienced stable, upward, or downward career movements. AL was calculated by averaging the z-scores of cardiovascular, metabolic and inflammatory biomarkers. "Sex" refers to the binary administrative category obtained from social security. We used a g-computation method to describe AL by career trajectory and sex category (interaction analysis), looking for a social gradient in each sex category and then, to explore the effect of: social category at the beginning of the career, non-employment, and downward and upward career movements. We controlled for age, geographical origin, childhood social class, educational attainment and experience of a health issue before age 18. Overall, we observe a significant social gradient of AL in both sex categories. The most advantaged social class (skilled, highly skilled) at the beginning of the career as well as upward movement from low-skilled occupations, which are more frequent in men, are associated with a lower (more favourable) AL for both men and women. Nonemployment, which is particularly frequent among women, is associated with a higher AL. We also found a much higher AL associated with downward movement from low-skilled to unskilled social class, especially for men. This work suggests the contribution of intragenerational occupational mobility in the construction of the gender health gap.

TALK 4: Primary and Secondary Allostatic Processes in the Context of High-Stress Work: A Multigroup Moderation from the English Longitudinal Study of Ageing

Presenter: Thomas O'Toole, University of Manchester

Co-authors: Christopher J. Armitage, Martie Van Tongeren, University of Manchester; Kim Dienes, Swansea University

Evidence suggests that chronic cortisol excess may precede the development of an allostatic load, and that this association is influenced by the level of work stress. This study aims to investigate associations between hair cortisol concentration and the development of systemic allostatic load cross-sectionally and at a lag of four years, stratified by level of effort-reward imbalance. The sample consisted of respondents from the English Longitudinal Study of Ageing (ELSA) employed, with hair cortisol measurements at wave 6, and allostatic load markers at waves 6 and 8 (n=411; 64% female). Hair cortisol was used as a measure of total cortisol expression over the preceding two months. Allostatic load was modelled as a count-based index using nine markers; three per system, across the immune, metabolic and cardiovascular systems. This model was then grouped by a median-cut effort reward-imbalance scale (0.83); regression pathways were compared between groups using Chi-Squared tests of difference. Results show that higher hair cortisol concentrations predict an increase in immune and cardiovascular allostatic load cross-sectionally, and a metabolic allostatic load at a lag of four years. While non-significant, there were interpretative differences found between high and low effort-reward imbalance groups for hair cortisol concentration as a predictor of concurrent cardiovascular allostatic load and longitudinal metabolic allostatic load. Findings indicate a temporality to the accumulation of allostatic load, and that the "tipping point" between allostasis and allostatic load may lie within the ability of the HPA axis to regulate the cardiovascular system concurrently, with longitudinal consequences for metabolic syndrome indicators.

2B STREAM: RESEARCH METHODS 1

SYMPOSIUM

Establishment of Refreshment and Special Samples in Longitudinal Household Studies

Chair: Olena Kaminska, University of Essex

SUMMARY: Longitudinal studies have a challenge to not only be representative of a population at the time of their start, but also to continue representing the population through its changes over time. Boosts are therefore a necessary tool, not only to compensate for attrition, but also to include new entrances to a population, such as immigrants. Representative and efficient selection of such subgroups is therefore important. In this symposium we discuss a number of sampling challenges and their solutions in the context of three household surveys: the Household, Income and Labour Dynamics in Australia (HILDA), Socio-Economic Panel (SOEP) in Germany, and Ukrainian Longitudinal Household Panel (UKRAINS) in Ukraine. The symposium will cover immigrant boost (HILDA), sampling of Ukrainian refugees in Germany (SOEP), general population boosts (SOEP), and challenges of setting up a panel and maintaining its representation in war-influenced context in Ukraine (UKRAINS).

TALK 1: Trialling a New Way to Add an Immigrant Top-Up Sample to the HILDA Survey

Presenter: Nicole Watson, University of Melbourne

In household panel surveys, new entrants are added to the sample (on a temporary or ongoing basis) 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) is now approximately 93% of the population. This fraction will only continue to decline if nothing is done to augment the sample. Further, 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, excluding recent immigrants can have both short- and long-term consequences for sample representativeness. In 2023, we trialled the use of administrative data to obtain a sample of 400 primary applicants who were granted a permanent residency visa and settled in Australia after 2011. Address details are updated through via Australia's publicly funded universal health care system. The fieldwork for this sample occurred over a four-month period, alongside part of our ongoing HILDA fieldwork. Through this trial, we tested the selection process, the quality of the contact information available, the challenges and benefits of running this recruitment alongside the ongoing sample fieldwork, and the likely response rates. The trial has been quite challenging, with lower contract rates and in-scope rates than anticipated. In this presentation, I will present the learnings from this trial and discuss plans for a future immigrant sample.

TALK 2: Exploring Nationwide Household Sampling: Random Routes vs Residents - Registration Office Approach

Presenter: Felix Süttmann, DIW Germany

Co-authors: Hans Walter Steinhauer, Florian Griese, Sabine Zinn, SOEP and German Institute for Economic Research Berlin

The German Socio-Economic Panel (SOEP) initiated in 1984 has relied heavily on the 'Random Routes' method for sample formation, where respondents are chosen randomly in predetermined areas following a fixed walking rule. These areas are defined by ADM networks, which are spatial divisions of electoral districts in Germany based on regional characteristics. Despite its effectiveness, the Random Route method is time-consuming and costly due to address collection delays and the need for manual recording. An alternative method, the Resident's Registration Office (RRO) sample, has emerged as a more efficient option. However, challenges persist, such as limited household composition data available from registration offices. Since 2022, SOEP has utilized RRO to refresh its household sample, conducting large-scale survey boosts with 5000 households (in 2022) and 6000 households (in 2024). This experience has provided insights into stratification and clustering for oversampling specific population groups or regions. This paper offers a comprehensive comparison of Random Route and RRO sampling for building household samples. It delves into the organizational structure, registration processes, and data accessibility of the German residents' register. Additionally, it presents methodologies for inferring household compositions from RRO data based on certain assumptions. In summary, while Random Routes have been a staple of SOEP's sampling methodology, the shift towards RRO sampling offers notable advantages in efficiency and cost-effectiveness. By leveraging the strengths of both methods, SOEP aims to enhance the quality and representativeness of its household samples, contributing to more robust socio-economic research in Germany.

TALK 3: Navigating Challenges: A Comprehensive Approach to Sampling Ukrainian Refugees in Germany Using Population Registers

Presenter: Hans Walter Steinhauer, DIW Germany

Co-author: Sabine Zinn, SOEP and German Institute for Economic Research Berlin

The Socio-Economic Panel Study (SOEP) aims to furnish data on German private households for comprehensive social dynamics statistics. An ongoing challenge is to capture abrupt societal shifts, like the significant influx of Ukrainian refugees in 2022. In response, SOEP, alongside three partners, executed an extensive survey, the IAB-BiB/FReDA-BAMF-SOEP Survey, interviewing approximately 12,000 Ukrainian refugees across Germany. This survey employed a random sampling method. Sampling refugees from German registers primarily relies on the population register and the Central Register of Foreigners. Combining both registers offers an ideal data foundation for forming migrant samples, including Ukrainian refugees. However, challenges arise due to disparities in access, timeliness, and data quality between the two registers, managed by different authorities for distinct administrative purposes. While the Central Register of Foreigners promptly provides refugee data, it lacks address information. Conversely, the population register supplies address data but lacks timely refugee information. Consequently, the IAB-BiB/FReDA-BAMF-SOEP study adopts a two-phase sampling design utilizing both registers to ensure comprehensive longitudinal data. However, neither register inherently furnishes refugee household compositions, posing a challenge for SOEP's household-focused approach. Our presentation delves into the intricacies of sampling refugees from various registers, addressing challenges and considerations for establishing comprehensive and representative refugee samples in Germany. We explore registration procedures, data accessibility within registers, and techniques for stratification and clustering. Additionally, we assess register coverage and compare their consistency over time, offering insights into refining sampling methodologies and enhancing data accuracy for refugee studies in Germany.

TALK 4: Immediate and Long-Term Challenges in Sampling for a Household Longitudinal Panel in Ukraine in the Context of War

Presenter: Olena Kaminska, University of Essex

This paper discusses an ambition to start a new household longitudinal panel in Ukraine during the on-going war with a careful account of the current situation and potential population developments. In the context of a lack of up-to-date administrative population information, large population shifts in the beginning of the full-scale war, and potential substantial future population movements, sampling for a longitudinal panel needs to be implemented with care. Additionally, a household definition becomes less straightforward in the context of so many split households, for example when wives (with or without children) have left the country for safety and husbands stayed behind (because of legal restrictions), or when one of the household members is in current military service. We start with a definition of a household, moving towards a definition of a current population of Ukraine, and following with a plan to keep representation of the population as it may forgo different changes in the short-term and longer-term future. Sampling plan has a vision of representing a population for next decades, accounting for different scenarios of population changes.

2C STREAM: EDUCATION 1

SYMPOSIUM

English Millennials Mapped: How Are Adults Aged 32 Faring in 2022-2023?

Chair: Morag Henderson, University College London

SUMMARY: This symposium will introduce you to the new data from Next Steps at age 32 (collected between 2022-2023), highlighting some research opportunities using this data which captures early adulthood experiences. In this session a team of researchers will introduce some initial findings, providing insight into many aspects of the participants' lives with a focus on three substantive areas: money; work and parenthood. The first paper documents how adults in England are faring in a cost-of-living crisis, including an analysis of their financial health and financial literacy. The second paper looks at links between health, gender, ethnicity and labour market attachment among English midlife adults. The third paper investigates the mechanisms behind gender and parenthood pay gaps and how these relate to job quality; and the fourth paper shows results on how parents are faring with respect to their mental health relative to non-parents.

TALK 1: Describing the Financial Health of Adults in England During the Cost-of-Living Crisis

Presenter: Morag Henderson, University College London

Co-authors: Vanessa Moulton, Alison Fan-Wei Wu, University College London

The paper documents how adults in England are faring in a cost-of-living crisis, including an analysis of their financial health and financial literacy. Making use of subjective financial health and objective measures of their actual savings, debts, and financial wealth, we identify the characteristics of those who are not faring well during this cost-of-living crisis, with a particular interest in how financial literacy is associated with these outcomes. Using descriptive statistics and multivariable regression analyses our initial results show that women fare less well than men in terms of financial health; those who have degrees fare better in terms of objective and subjective financial health; financial literacy is associated with better subjective financial health and on some dimensions of objective financial health.

TALK 2: Exploring the Associations Between Health, Intersectionality of Gender and Ethnicity and Labour Market Attachment Among English Midlife Adults

Presenter: Alison Fang-Wei Wu, University College London

Co-author: Morag Henderson, University College London

Improving labour market attachment has been one of the UK government's policy priorities. The inactive and unemployed population accounts for 12% of the aged 25-40 population. This means that reducing marginal or no attachment, namely unemployment and economic inactivity, in the population are vital targets. Although existing policies have been developed to reduce the number of inactive or unemployed individuals, the rates for both statuses have remained similar level across recent years. Also, the persistent inequalities of some demographic backgrounds, such as minoritised ethnic groups, lead to the urgent to identify groups at risk. Here, we employ the multidisciplinary framework by Cagliesi et al. (2017), which allows us to explore what individuals' characteristics might be associated with their labour market participation. Moreover, a large longitudinal cohort study, Next Steps, will be utilised as this cohort has documented contemporary life experiences among adults in England. We focus on young adulthood because this is a critical period for long-term labour market participation. Our initial findings show that previous health status is associated with current labour market attachment. Moreover, labour market attachment varies across combinations of gender and ethnicity. Specifically, Pakistani/Bangladeshi women are the most likely to be detached, while Black men experience a higher risk of unemployment. Education, gender attitude, marital status, and having children account for some degrees of this intersectionality of gender and ethnicity in labour market attachment. Findings will inform tailored service provision to address disparities and promote inclusive economic opportunities.

TALK 3: Gender and Parenthood Gaps in Pay Amongst 32-Year Olds

Presenter: Bozena Wielgoszewska, University College London

Co-authors: Alex Bryson, Claire Crawford, Heather Joshi, University College London

Gender differences in human capital and the division of domestic responsibilities are common explanations of the gender pay gap. However, in recent decades female labour market participation has increased, women have overtaken men on educational attainment and men are thought to take an increasing share of childcare responsibilities. In this study, we investigate the mechanisms behind gender and parenthood pay gaps and how these relate to job quality amongst "Millennials", born in 1989-90, when they are age 32. Preliminary results indicate that women significantly outperform men in terms of educational attainment, and those who are parents by age 32 have lower education, on average, than those who are not. While the full-time employment rates are comparable amongst childless women and childless men (75% and 74% respectively), there are substantial differences amongst parents with 76% of fathers but only 40% of mothers employed full time. The raw 6% gender pay gap amongst the childless men and women increases to 9% when accounting for their individual and family characteristic, including human capital, but decreases to 8% when also accounting for subjective and objective job characteristics. Amongst parents these characteristics have the opposite effect – the raw gender pay gap of 22% decreases to 15% after accounting for human capital but increases to 20% once job characteristics are accounted for. This significant gender pay penalty, especially for mothers, despite gender convergence in educational attainment, has important policy implications.

TALK 4: Parental Mental Health in Britain: Findings from Next Steps Age 32

Presenter: Rosie Mansfield, University College London

Co-author: Morag Henderson, University College London

Research indicates a decline in parental mental health over time. However, there are no up-to-date statistics on parental mental health in the UK and a lack of studies comparing parents with non-parents. The current study aimed to fill this gap by providing a state of the nation report on parental mental health at age 32 in Britain using data from the Next Steps birth cohort (1989-90). First, we explored what factors predicted parent status and parent's age when first child was born to understand whether there was any bidirectional relationship between mental health and decisions around family formation. These results also informed the covariates used in the main models. Next, we produced descriptive statistics for parent mental health vs. non-parent mental health and ran multivariable regressions predicting mental health by parent status while controlling for demographic, socioeconomic and health characteristics. To capture aspects of inequality regarding parental mental health and identify possible protective factors, we ran additional models for parents focusing on demographic, socioeconomic and health characteristics as well as parent specific factors e.g., single parent status, age of children, social support. For all research questions, analyses were stratified to understand gender and ethnic differences. Using longitudinal data from Next Steps enabled a lifecourse perspective on parental mental health, improving understanding of the extent to which early life inequalities influence decisions about family formation and parent's life stage, which, in turn, shape the extent to which parenthood is a determinant of mental health.

2D STREAM: HEALTH & WELLBEING 2

SYMPOSIUM / PANEL

Population Research UK: A National Initiative Aimed at Maximizing the Use and Benefits of UK Longitudinal Population Studies (LPS)

Chairs: Alissa Goodman, University College London; Nicholas Timpson, University of Bristol

SUMMARY: This session will introduce Population Research UK (PRUK), a new initiative which aims to maximise the use and benefits of UK longitudinal population studies (LPS) across social, economic and biomedical sciences. The UK is a world leader in population research, bolstered by its unique collection of longitudinal population studies. Individually, the studies have made substantial contributions to the advancement of social and health sciences and together, they have the power to uncover the drivers behind major societal challenges and provide a potent tool for basic science application.

In January 2024, a PRUK Hub Leadership Team was appointed, led by University of Bristol in collaboration with University College London, University of Bradford, University of Swansea and ScotCen. The PRUK Hub aims to create community engagement through a 'PRUK Forum' to create joined-up thinking across the UK's longitudinal population studies and infrastructure providers. The community includes longitudinal studies and their participants, infrastructure providers, researchers, research groups and policy makers in national, local, and devolved government who use the research findings to inform policy.

In consultation with the community, the PRUK Hub will commission activities, that aim to enhance and complement the UK's key longitudinal infrastructures to result in better, easier to use data resources for social, economic and biomedical science, and will drive change including through five work streams: data discovery, data access, data linkage, training, coordination/advocacy, and additionally, through a collaboration and innovation fund.

This is the first public-facing event for PRUK and our primary aim is to initiate a dialogue about how the longitudinal research community's voice can be heard in the shaping of PRUK's agenda and activities, and its plans for commissioning. Three invited speakers will demonstrate the scientific value and potential that can be achieved when LPS researchers and studies coordinate activity and work together. The panel will then explain the aims of PRUK, and open to the floor for questions and for discussion from the community. Ultimately, we are keen to foster a vibrant and inclusive research community, promoting open science practices, and addressing emerging research challenges and welcome comments and questions as we move towards the opening activities of this new enterprise.

TALK 1: Migration and Labour Market Performance: A Task-Based Approach

Presenter: Maria Popova, Brunel University London

This study provides novel insights into migrants' labour market performance in Germany, employing a task-based analytical approach in line with Autor et al. (2003) and Spitz-Oener (2006). Examining the regional task-based occupational distribution among native, first, and second-generation migrants in Germany using convergence regressions and random coefficients models on data from the representative Socio-Economic household survey (SOEP) from 1985 to 2020, this study reveals three main findings. First, there is a discernible shift towards cognitive task-based occupations. Second, occupational convergence between migrants and native Germans is observed across all job tasks, (routine manual, routine cognitive, non-routine manual, non-routine analytic). Lastly, we observe regional heterogeneity among federal states in terms of convergence between natives and migrants, highlighting the influence of geography on labour market dynamics in Germany.

TALK 2: Labor Market Outcome of University-Educated Migrants in Australia: The Relevance of Cultural and Linguistic Distance

Presenter: Mark Western, The University of Queensland

Co-authors: Tomasz Zajac, Wojtek Tomaszewski, Nikita Sharma, The University of Queensland

Many theories attempt to explain disparities in the labour market outcomes of migrants. Segmented assimilation theory was a watershed because it recognised that different groups of immigrants had different pathways and outcomes reflecting factors like human capital, family structure and local social context in the host society. This paper contributes to recent research in that has focused on the role of cultural and lifecourse characteristics is differentiating immigrant employment focus. We examine the impact of length of time in Australia, and cultural and linguistic distance between Australia and country of origin, on the employment outcomes of migrants who obtain university degrees in Australia. The paper uses a customised, whole-of-population, linked public sector dataset for all domestic undergraduate students who graduated from an Australian university between 2005 and 2015 (n=800,618, including 141,890 foreign-born individuals). Our data and methods allow us to eliminate some unmeasured sources of heterogeneity with respect to migrant education, and to pursue finely grained distinctions between immigrant groups associated with cultural and linguistic distance, and time in-country.

TALK 3: Investigating Migrants' Earning Trajectories: How Does Health Shock Influence Earnings?

Presenter: Waseem Haider, University of Turku

Co-author: Elina Kilpi-jakonen, University of Turku

Objectives: Existing studies highlight a significant earnings gap between migrants and natives, particularly for non-Western migrants, but rarely examine how health shocks impact migrant earnings. By utilizing full population register data and an objective measure of health, our study explores how health shocks differently affect earnings across various ethnic backgrounds and how earnings trajectories over time vary based on health shock and ethnic background.

Methods: The study population included individuals aged 25 to 58 years living in Finland in 2007. We determined their health status between 2009 and 2010 and followed their earnings from 2011 to 2018. To isolate the effect of health shock on earnings, individuals were matched by migrant status and health shock within each country group. Growth curve models were used to analyze earnings trajectories and estimate the average marginal effect of health shock on earnings by ethnic background and gender.

Results: In the unmatched dataset, health shock significantly reduced earnings for all groups except those from refugee-exporting countries. This effect disappeared in the matched sample, indicating that baseline differences in confounder characteristics influenced the observed impact. We also found that longer stays in the host country led to higher earnings, while mental health conditions were associated with lower earnings.

Conclusions: Although the average marginal effect of health shock was not statistically significant in the matched sample, our study still found a significantly greater positive effect of time on the earnings trajectories of individuals who did not experience a health shock.

2F

STREAM: SOCIAL DISADVANTAGE

INDIVIDUAL PAPERS Social Mobility

TALK 1: Social Mobility and Parenting: Examining Associations in a Prospective Longitudinal Study

Presenter: Samiha Islam, University of Pennsylvania

Co-authors: Sara R. Jaffee, University of Pennsylvania; Jasmin Wertz, University of Edinburgh

Parenting is an important determinant of children's developmental outcomes. Parenting practices are also socioeconomically stratified such that parents from higher socioeconomic backgrounds tend to use parenting practices linked to better developmental outcomes. However, it is not well-understood whether changes in socioeconomic status across the life course affect parenting practices. The present study examined whether patterns of social mobility, or changes in social class from childhood to adulthood, were associated with differences in warm-sensitive and cognitively-stimulating parenting. Data were analyzed from 719 parents (52.3% female) and their 3-year-old children based in Dunedin, New Zealand, who had been prospectively followed from childhood into parenthood as part of the Dunedin Multidisciplinary Health and Development Study. Results showed that upwardly mobile parents engaged in more warm-sensitive ($d = 0.43$) and cognitively-stimulating ($d = 0.48$) parenting compared to parents who had always been socioeconomically disadvantaged. However, they engaged in less warm sensitive ($d = -0.31$) and cognitively-stimulating ($d = -0.47$) parenting compared to parents who had always been socioeconomically advantaged. Most of these differences persisted when accounting for pre-existing differences between parents, including in parents' own experienced parenting and cognitive and self-control skills in childhood. The findings for downwardly mobile parents mirrored those for upwardly mobile parents, such that these parents engaged in levels of warm-sensitive and cognitively-stimulating parenting that were intermediate to the two groups of parents who remained stable in social class. Our findings show that upward mobility is associated with the greater adoption of parenting practices that promote children's development, suggesting that policies to increase upward mobility may benefit multiple generations. However, they also show that in addition to parents' adult social class, the social class they experienced as children had a lingering impact on their parenting, emphasizing the importance of taking a life-course perspective on parenting.

TALK 2: Parental Social Background and Reasons for Intergenerational Co-Residence Among Young Adults: New insights from the UK GGS

Presenter: Ann Berrington, University of Southampton

Co-author: Brienna Perelli-Harris, University of Southampton

Young adults' transitions to residential independence have increasingly been delayed over the past few decades. Covid-19 and the cost-of-living crisis are likely to have accelerated this delay and changed norms regarding the acceptability of intergenerational co-residence. A previous lack of data means that hitherto it has been unclear whether co-residence represents a choice or constraint, and how this differs by gender and social background. For some young people, co-residence is a positive choice, for example if they are living rent-free so that they can save up to afford rent or a deposit. Others will be living with their parent(s) because they simply cannot afford to live away. Experiences of leaving and returning to the parental home differ according to the resources available, and hence it is important to consider experiences according to parental socio-background. Using data collected within the 2022/23 UK Generations and Gender Survey we find that reasons given for co-residence vary by age. In comparison with those aged 25 and above, those aged 18-24 are more likely to give the response that they are happy living with their parent(s)/not ready to move out (25% males and 28% of females), or to cite the convenience of living at home (16% males and 10% females). Those aged 25 and above are more likely to report economic reasons for co-residence. We find that the importance of economic reasons is similar according to parental socio-economic background, with roughly half of the sample of young adults saying that they are living with a parent either because they cannot afford to leave home or are saving up for housing costs. Those from more advantaged backgrounds were, however, more likely to give "convenience" as a rationale for living with a parent. We consider these findings in terms of inequalities in transitions to adulthood.

TALK 3: Does Getting a Degree Improve Social Mobility? An Analysis of Intergenerational Income Mobility in the UK

Presenter: Esme Lillywhite, University of Strathclyde

Co-authors: Edward Sosu, Marion Henderson, University of Strathclyde

Parental income can strongly influence the income of children in adulthood. While educational attainment explains part of this intergenerational association, the extent to which income mobility is moderated by education is less explored. This paper examines to what extent the intergenerational income association between individuals and their parents varies by education, and the extent to which this variation is similar across gender in the UK. To do so, it first estimates rank-rank slope coefficients using data from the British Household Panel Survey, covering 1,165 individuals born between 1977-1993, confirming the existence of an intergenerational income persistence. The application of the Karlson-Holm-Breen decomposition reveals that educational level mediates intergenerational mobility. However, interaction tests show that a moderation effect does not exist, and degree holders do not experience greater mobility than those without degrees, in contrast with US-based findings, and the common belief that higher education is linked with higher mobility. Most analyses, across various measures, yield statistically insignificant moderation effects of education for both men

and women. Potential explanations and implications are then discussed. This paper and its findings challenge the assumption that policies promoting higher education expansion alone can improve income mobility. It underscores the need to explore complementary policies alongside educational expansion to enhance equal opportunities for young people in the UK.

TALK 4: Life Course Social Mobility and Parenthood: Counterfactual Estimates of the Motherhood Class Penalty in Britain

Presenter: Giacomo Vagni, University of Essex

The aim of this paper is to estimate the causal effect of the birth of a first child on women's occupational class trajectories: the Motherhood Class Penalty. Using data from the British Cohort Study 1970, we combine sequence optimal matching to other forms of matching to construct counterfactual class trajectories of mothers in the UK. We find that the birth of the first child increases mothers' downward counterfactual mobility and has a negative effect on access to professional positions. We estimate a counterfactual penalty of about 15% for low professional occupations. In other words, we would observe 15% more women in a low professional class in the absence of the Motherhood Class Penalty. We estimate a 5% penalty for top occupations (high professional). We find that women in professional occupations have the highest likelihood of returning to a similar occupation after birth, while women in working-class occupations have the highest chance of being permanently out of the labour market after birth. The Motherhood Class Penalty represents a large loss of human capital for society in general as we estimate that many women simply permanently drop out of the labour market after birth in Britain. We conclude by discussing the potential mechanisms behind the penalty.

3A STREAM: HEALTH & WELLBEING 1

SYMPOSIUM

Recent Developments in Exploring the Social-Biological Transitions (2)

Chair: Stéphane Cullati, University of Fribourg (SLLS IHR Group session)

SUMMARY: The eighth symposium, organised by the SLLS Interdisciplinary Health Research group (IHRg), will focus on recent research at the intersection of social and biological data in the area of social-biological transitions. Presentations will highlight advances in longitudinal and life course research on health biomarkers, including allostatic load, inflammatory markers, genes, brain, metabolic and cardiovascular markers, microbiomes, and mortality. These investigations aim to clarify the links between biological indicators and social exposures across various life course stages, historical periods, and countries. Discussions will focus on the impact of stress, whether social, economic, or physical/environmental, and resource scarcity across economic, relational, and cultural domains. The symposium will explore the temporal aspects of exposure throughout the life course and investigate their influence on biological health. Key topics will include the intricate interplay between epigenetic factors and gene expression, unravelling the mechanisms linking stressors and resource deprivation to biological health. By assembling diverse approaches and focal points representative of high-quality research in this field, the symposium aims to contribute to the development of a shared scientific framework. This will foster collaboration and advance our collective understanding of the intricate interconnections between social and biological determinants of health.

TALK 1: Toward a Conceptual Framework of Health and its Operational Definition: An Application in the 1958 British Birth Cohort

Presenter: Camille Joannès, CERPOP Université de Toulouse (Inserm)

Co-authors: Hélène Colineaux, Gregory Guerneq, Raphaële Castagné, Michelle Kelly-Irving, CERPOP Université de Toulouse (Inserm)

How to convert the multidimensional concept of Health into a measurable observation applicable to life course research? Health can be conceptualised as an ability to adapt and self-manage. We aimed to (i) construct an Overall Health Measure (OHM) by using indicators based on the conceptual framework of health reserves, (ii) evaluate the association between this OHM and subsequent health outcomes and (iii) assess our method's reliability. Data are from 7,043 individuals of the National Child Development Study. An impaired/medium/optimal OHM was constructed by the sum of three selected indicators at 44-45y: chronic widespread pain (CWP), clinical interview schedule (CIS-r), and allostatic load (AL). We modelled the relationships between the OHM, each OHM indicator taken separately, and subsequent self-rated health (SRH) and mortality, using Cox and logistic regressions. We also performed sensibility analyses. Impaired OHM was associated with all-cause mortality (HR_{impaired}= 2.74 [1.86; 4.05]) and an increased risk of poor SRH (OR_{impaired} = 7.50 [6.29; 8.95]). The OHM had a greater effect on the SRH estimates than each OHM indicator separately (ORAL medium=1.82 [1.59; 2.09]; ORAL high=2.74 [2.37; 3.16]; ORCIS-r= 5.20 [4.45; 6.08]; ORCWP= 2.85 [2.53; 3.21]). CIS-r and AL were also associated with premature mortality (HRAL medium= 1.82 [1.27; 2.61]; HRAL high= 3.10 [2.19; 4.40]; HRCIS-r=1.77 [1.22; 2.56]; HRCWP=1.32 [0.98; 1.76]). The sensibility analyses conducted assessed the robustness of our method. We proposed a method for measuring mid-life Health as the result of a life course adaptation process, using the concepts of health reserves. This method may be applied and further developed within the field of positive epidemiology.

TALK 2: Association Between Characteristics of the Childhood Environment and Mid-Adulthood's Health, and the Role of Educational Attainment: Findings from Two British Population-Based Birth Cohort Studies

Presenter: Raphaële Castagné, CERPOP Université de Toulouse (Inserm)

Co-authors: Gauthier Pereira, Lola Neufcourt, Marine Maurel, Camille Joannès, Michelle Kelly-Irving, Cyrille Delpierre, Raphaële Castagné, CERPOP Université de Toulouse (Inserm)

It is well established that adverse childhood experiences are associated with adult onset of chronic diseases; however, few studies have comprehensively investigated other aspects of the childhood environment that are potentially relevant to health outcomes later in life. We used data from two British birth cohorts: The National Child Development Study and the British Cohort Study. We assessed associations between 19 measures of the childhood environment relative to seven domains: (1) social exposures, (2) material exposures, (3) family exposures, (4) child rearing and parenting exposures, (5) family instability exposures, (6) parental health exposures and (7) childhood health exposures and three health outcomes in mid-adulthood: biological health score (BHS), self-rated health and mental health. BHS was defined using nine biomarkers measured from blood samples and representing three physiological systems. Perceived health was self-reported with a single question and adult mental wellbeing was measured using the Warwick-Edinburgh Mental Wellbeing Scale. We further explored the role of education as a potential intermediate variable in these associations. Twelve common variables covering all domains of the childhood environment, except parental health, were associated with the three outcomes when regression models were adjusted for cohort study and sex in the combined dataset. Nine remained associated with the three outcomes after considering education as an intermediate variable. These results suggest that a wide range of factors in the childhood environment can influence health decades later, over and above their influence on education, and that prevention/support could be envisaged for these factors.

TALK 3: Association Between Timing of Motherhood and Prospective Cardiovascular Health Risk Factors: A Twin Study

Presenter: Verena Schneider-Dowsett, University College London

Co-authors: Rebecca Lacey, St. George's University of London; Giorgio Di Gessa, Anne McMunn, University College London; Ruth Bowyer, Claire Steves, King's College London

Background: Evidence suggests that early transition into parenthood is associated with worse health later in life. Social and behavioural pathways and early-life confounding factors only partly account for these associations; residual confounding may remain.

Aims: To investigate the relationship between age at first childbirth and cardiovascular (CV) risk factors (BMI, android/gynoid fat ratio, blood pressure, lipid profile) and confounding stemming from shared environmental and genetic influences in women aged ≥ 50 years from the Twins UK cohort.

Methods: 1,350 women (357 di-, 318 monozygotic twin pairs) had data on age at first birth, at least one outcome and selected covariates. Generalised estimation equations were used to analyse (i) individual-level crude associations of age at first birth with the outcomes, (ii) diand monozygotic between and within-family estimates, (iii) covariate adjusted associations.

Results: Individual-level results indicate that, compared to having a first child at 25- 29 years, women with age at first birth ≤ 20 had higher mean BMI, android/gynoid fat ratio, blood pressure, triglycerides, and lower levels of high-density lipoprotein (HDL) cholesterol, however confidence intervals were wide. Considering within-family estimates, effect sizes were not sustained for most outcomes, suggesting partial confounding by early environmental factors.

Conclusions: Confounding due to family-level factors plays a role in the link between age at first birth and CV risk factors. Age at first birth may be associated with higher CV health risk later in life. However, larger twin samples are needed to assess these findings' significance and robustness to confounding.

TALK 4: Do Gene-Environment Interaction and Gene-Environment Correlation Help Us Understand the Roles of Socio-economic Disadvantage and Neurodevelopment in Poor Mental Health?

Presenter: Anna Dearman, University of Essex

Co-authors: Pascal Vrtička, Jamie Moore, Meena Kumari, Leonard Schalkwyk, University of Essex

Mental health outcomes are complex, resulting not only from genetic and environmental factors, but also from the interaction between them. Previous gene-environment interaction (GxE) studies suggest that mental health outcomes can be partially explained by genetic factors in combination with stressful events and socioeconomic position (SEP) at different stages in the life course. Complicating these relationships, gene-environment correlation (rGE) suggests that individuals with higher genetic risk may be more likely to experience disadvantaged SEP and other stressors. In studies of GxE and rGE, genetic risk is often calculated with respect to illnesses such as major depression and schizophrenia, but genetic risk can be estimated in other ways. Neurobiological traits which may contribute to poor mental health - such as structural, functional and molecular traits - can be proxied using genetic data. Here we present preliminary analyses on the interactions between neurobiological genetic risk factors and SEP in adolescence and adulthood, and how these relate to mental health in Understanding Society, a representative UK population sample. In future work, we will seek to replicate our findings in an independent sample.

3B STREAM: RESEARCH METHODS 1

SYMPOSIUM

Methodological Innovations in the Centre for Longitudinal Studies Cohorts

Chair: Matt Brown, University College London

SUMMARY: The Centre for Longitudinal Studies (CLS) is home to multiple generations of nationally representative cohort studies that follow the lives of tens of thousands of people. Our survey methods programme is developing innovative ways to enhance the utility of the data we collect by maximising response, maintaining representation, and improving data quality. Our applied statistical methods research aims to maximise the quality of the analyses conducted using our study data by providing guidance for handling missing data, dealing with measurement error, and making causal inferences. This symposium showcases some of the methodological innovations from recent sweeps of the 1958 National Child Development Study, the 1970 British Cohort Study, Next Steps and the Millennium Cohort Study. We will also present the guidance we have developed for handling missing data when analysing data from the cohorts.

TALK 1: Experience of Using Video Interviewing in the National Child Development Study and the 1970 British Cohort Study

Presenter: Carole Sanchez, University College London

Co-authors: Sebastian Kocar, Matt Brown, Carole Sanchez, Martin Wood, Kate Taylor, University College London

Using video interviewing to conduct social surveys is relatively new but interest in this mode accelerated considerably during the COVID-19 pandemic when in-person interviews were not feasible. At the time of the outbreak in March 2020, the 1958 National Child Development Study (NCDS) was in-field with the Age 62 Survey and the 1970 British Cohort Study (BCS70) Age 50 Survey was in development with fieldwork due to launch. Both surveys were planned to be conducted face-to-face. Ongoing uncertainty with regard to future infection rates and associated restrictions made it difficult to gauge when resumption of face-to-face visits would be possible. The surveys are long, complex and involve cognitive assessments and health measurements which made switching to web or telephone data collection difficult. It was felt that video-interviewing had the potential to be the best way forward. We conducted a series of successful pilots which explored the feasibility of conducting the interviews via video prior to launching both surveys with a video-only approach. Once restrictions were lifted, face-to-face interviewing was re-launched but video continued to be offered as an alternative mode for those unwilling to be visited at home. Across the two surveys over 5,000 interviews were conducted by video. This represents the most large-scale use of video-interviewing in a major social survey in the UK. In this paper we will present findings on the impact of use of video interviewing on response rates, sample composition and data quality. We will conclude by considering the future potential of video interviewing as a mode of data collection for population surveys.

TALK 2: Methodological Innovations in the Next Steps Age 32 Survey

Presenter: Matt Brown, University College London

Co-authors: Tugba Adali, Morag Henderson, University College London; Stella Fleetwood, Ipsos

Next Steps follows the lives of around 16,000 people in England born in 1989-90, collecting information about education and employment, economic circumstances, family life, physical and emotional health and wellbeing, social participation and attitudes. The study began in 2004 when participants were 14. Participants were surveyed annually till 2010 then in 2015-16 at 25. This paper describes key methodological innovations from the recently completed Age 32 Survey (2022-2023) which sought to maximise participation rates, and the scientific utility of the data collected. Mode: As per all recent sweeps, the Age 32 Survey used a mixed mode approach. Participants were invited to take part online, with non-respondents followed up by interviewers. In addition to home visits, interviewers could offer other remote modes including video interviews and self-completion via tablet. We will present findings related to the take-up of the various modes. Methodological experiments: Experiments were conducted to evaluate two approaches to increasing response. The first experiment examined the impact of offering higher incentives to prior wave non-respondents. At the end of fieldwork participants were re-invited to take part online. The second experiment examined whether offering an abbreviated questionnaire at this stage was more successful at boosting response than offering the full questionnaire. A further experiment evaluated two approaches to collecting occupation data. Results of these experiments will be briefly described. Saliva for DNA extraction: Saliva samples for DNA extraction were requested for genetic research. Collecting samples in a remote survey is challenging. We will describe the process and present findings on consent and return rates. Cognition: An important development for Next Steps was the inclusion of a cognitive test for the first time – the Backward Digit Span, which measures working memory. We will describe how this test was implemented in the mixed mode survey and present some early findings.

TALK 3: To Switch, or Not to Switch? Evidencing the Differences Between Face-to-Face (F2F) and Sequential Mixed Mode (Web≫ F2F) to Inform the Mode Decision on the UK Millennium Cohort Study Age 23 Survey

Presenter: Larissa Pople, University College London

Co-authors: Matt Brown, Lucy Haselden, Emla Fitzsimons, University College London; Nicholas Gilby, Kirsty Burston, Emma Rimmington, Ipsos

In recent years longitudinal studies have made increasing use of mixed mode data collection strategies, especially those involving the web. The main drivers of this trend are concerns about falling response rates and increasing survey costs for face-to-face surveys, together with rising levels of internet coverage and usage in the population. The UK Millennium Cohort Study (MCS) is a multi-disciplinary longitudinal study following the lives of around 19,000 children born in 2000-2002 across the UK. The 8th sweep, the Age 23 Survey is underway and involves a long (60 minute), complex questionnaire which includes cognitive

assessments, the collection of consents for administrative data linkage and other elements. Participants are highly mobile and living busy lives. Tracking is a challenge and maximising engagement at this critical transition point is vital to the ongoing success of the study. All previous sweeps were conducted face-to-face but is now the right time to switch to a web-first mixed mode approach? Qualitative research with participants shows that some express strong preference for the convenience and flexibility of web completion whilst others suggest that interaction with interviewers has been an important aspect of their participation in the study which they would not wish to lose. The potential impact on response is unclear, and the decision will undoubtedly affect measurement and costs too. To inform the decision we conducted an experiment in the first phase of fieldwork in which half of participants were invited to take part face-to-face and half were first invited to take part via web with non-respondents followed up face-to-face. In this paper we explore the impact of the mixed mode approach, relative to face-to-face, on response rates (overall and to the separate elements), sample composition, measurement, data quality, interview length and costs and describe the mode decision taken for the Age 23 Survey.

TALK 4: How to Handle Missing Data and Restore Sample Representativeness in Longitudinal Surveys

Presenter: Richard Silverwood, University College London

Co-authors: Martina Narayanan, Brian Dodgeon, George B. Ploubidis, University College London; Michail Katsoulis, Ipsos

Non-response is common in longitudinal surveys. Missing values due to non-response means less efficient estimates because of the reduced size of the of the analysis sample, but also introduce the potential for bias since respondents are often systematically different from non-respondents. Principled methods of missing data handling, such as multiple imputation or inverse probability weighting, are usually required to obtain unbiased estimates in such settings. We have implemented a systematic data-driven approach to identify predictors of non-response at each wave of data collection across the national longitudinal cohort studies run by the Centre for Longitudinal Studies (CLS). Predictors of non-response can be straightforwardly used as “auxiliary variables” (variables not in the substantive model of interest) in analyses using principled methods of missing data handling to help reduce bias due to missing data. We will present findings from our recent work across several of the CLS cohorts (1958 National Child Development Study, 1970 British Cohort Study, Next Steps), including the use of linked administrative data. We will demonstrate that with careful analysis it is possible to largely restore sample representativeness despite the presence of selective attrition by leveraging the rich information previously collected on cohort members.

3C STREAM: EDUCATION 1

SYMPOSIUM

An Interdisciplinary Perspective on Educational Inequalities Across the Lifecourse

Chair: Inga Simm, German Youth Institute (DJI)

SUMMARY: Educational inequalities faced by children and adolescents underscore systemic problems in our society, revealing how discrepancies in access to quality education are often rooted in broader challenges on the individual, institutional and societal level. While cross-sectional data shows inequalities, longitudinal data can contribute explanatory models to this understanding. This symposium presents educational disparities across the lifecourse, using data from three distinct household panels, each focusing on different age groups. Collectively, our work explores the impact of contexts and conditions on educational inequalities. In Talk 1, we scrutinize the inequalities in met and unmet demand for Early Child Education and Care (ECEC) from birth to the transition to primary school. The household panel, unlike school-based datasets, allows the inclusion of individuals not enrolled in ECEC. Talk 2 examines the subject from a sociological perspective, considering children’s participation in ECEC and its quality to address social inequalities on a meso level. Talk 3 focuses on children aged six to seventeen, exploring inequalities in non-formal education through sport club participation. Talk 4 investigates educational and employment trajectories of young adults in Germany. Employing an interdisciplinary approach, the symposium provides psychological, educational, and sociological insights into the educational inequalities faced by children and adolescents.

TALK 1: Reporting on ECEC in Germany: How Can the Demand be Met?

Presenter: Kerstin Lippert, German Youth Institute (DJI)

Co-authors: Katrin Hüsken, Theresia Kayed, Johannes Wieschke, Susanne Kuger, German Youth Institute (DJI)

For over 15 years, the expansion of childcare services in Germany has been strongly promoted by the Federal Government through different laws and investment programmes. However, given the different traditions in West and East Germany and thereby different starting points, the need for a spot in ECEC still varies by federal states and regions. In order to be able to control the expansion precisely and create places where they are needed, a good and regular monitoring of the parental usage of and demand for childcare services is essential. In this context, we examine ECEC careers of children from birth to the transition to primary school in Germany in a longitudinal study. Our focus is on the issue of unmet demands of institutional childcare, i.e. on parents who cannot use a spot in ECEC despite stating that they are in need of one. We investigate which sociodemographic or regional variables affect the probability of being able to obtain a spot in ECEC, how supply and demand have changed over time, and analyse transitions, e.g. from kindergarten to school. The investigation is based on a large annual panel survey, the “DJI-Kinderbetreuungsstudie” (KiBS), on parents’ decisions regarding the care of their children in Germany. Children under the age of three have been surveyed since 2012, older children since 2016, with each wave resulting in up to 33,000 interviews. We apply

logistic regressions that also take into account interaction effects in order to determine how certain correlations are affected by different contexts. Preliminary findings indicate that particularly families with a migration background and lower education have troubles meeting childcare demands.

TALK 2: Youth Welfare and ECEC Providers: Shaping Inequalities in ECEC Quality in Germany?

Presenter: Diana D. Schacht, German Youth Institute (DJI)

Co-authors: Melina Preuss, Lisa Ulrich, German Youth Institute (DJI)

The participation of children in early childhood education and care (ECEC) and its quality are crucial factors for addressing social inequalities. However, the decentralization of ECEC responsibility from national to local actors in Germany has led to significant regional disparities in provision and quality. A foundational, yet untested assumption within this research is that local policies and administrations by the youth welfare offices and providers of ECEC facilities shape ECEC provision and quality. This study fills this gap by examining the influence of local policies and administrations by both local actors on ECEC provision and quality, focusing on staff-child ratios and supply-demand ratios for childcare slots (under and over 3 years). Utilizing a conceptual model grounded in ECEC micro-meso-macro and the context-input-process-effect frameworks, we employ multilevel modelling techniques to analyze, for the first time, survey data linking information from childcare facilities, youth welfare offices, and ECEC providers in Germany while considering institutional, state, and district-level characteristics. Findings indicate variations in ECEC quality by youth welfare offices (ICCs for staff-child ratios 4%, for supply-demand ratios for childcare slots for children under 3 years 14%, and for children over 3 years 15%) and providers (respective ICCs 20%, 20%, and 22%). We identify several policies and administrations that correlate with high-quality ECEC, such as parental representatives' involvement and staff-child ratios, while full staffing of all positions at the ECEC provider positively correlates with supply-demand ratios for childcare slots for children under 3 years. However, local policies and administrations by youth welfare offices and ECEC providers explain – together with state, district, and institutional controls – only a marginal share of these outcomes (7-21 % (Pseudo)-R²). Nonetheless, the study offers valuable insights for policymakers and practitioners, aiding the prioritization of policies and administrations to enhance ECEC quality and mitigate inequalities in Germany.

TALK 3: Education Inequalities in Participating in Sports and Physical Activities

Presenter: Susanne Kuger, German Youth Institute (DJI)

Co-authors: Inga Simm, Christine Entleitner-Phleps, Anja Linberg, German Youth Institute (DJI)

Involvement in sports and physical activities is widely associated with individuals' health and wellbeing advantages across their life course. Providing children with the space and opportunity to move, play, and exercise increases the likelihood of them being active and healthy. Currently, sports clubs in Germany have the highest number of members in a long time. Yet there is a lack of research about inequalities in participating in sports clubs in and out of school. This paper presents research using data from the Growing Up in Germany study to describe children's participation in extra-curricular activities, including sports clubs. Participation has been captured at three timepoints from 6 to 17 years of age, using both parental and child self-reports. With this information we explored how the financial situation, maternal education and migration background impact participation and dropout rates. Results indicate differences in participation by maternal education and migration background as barriers to participation. The 2019 study indicated that roughly 80 percent of children engage in physical activities 1-2 times a week, with a positive correlation between higher socioeconomic backgrounds and increased activity. Notably, the commitment to sports remained strong during the pandemic in 2021, with correlation coefficients of .32 for children and .43 for adolescents. First multivariate analyses reveal that there is a meaningful link between greater involvement in sports and physical activities and diverse socio-economic backgrounds.

TALK 4: Educational and Employment Trajectories of Young Adults in Germany: Differences and Commonalities in Turbulent Times

Presenter: Markus Nester, German Youth Institute (DJI)

Co-author: Madlain Hoffmann, Leibniz Institute for Educational Trajectories

As in many Western societies, structural and politically induced changes in the labor market, as well as technological and sectoral shifts in the world of work, have put pressure on young individuals hoping for stable careers and reliable prospects for life planning. In general, we assume that the educational and employment biographies of young adults and adolescents in Germany nowadays are characterized by interruptions, greater variability, and fragmentation. A growing number of training or study phases after school will consist of multiple episodes. For example, school leavers may start an apprenticeship in the service sector, stop it, and finally complete their training in the medical sector. The former majority pattern of 'normal biographies' is supposed to be eroded and increasingly dissolving. To test whether these assumptions hold, we utilized the educational and (initial) employment trajectories of young adults in Germany starting in Grade 9 in 2010 and followed them over ten years. These trajectories were compared and typified using standard methods of sequence analysis. The analysis is carried out separately for those in academic vs. non-academic school tracks. It includes information on gender, social background (parents' education and SES), as well as school grades, aspirations, and school degrees in the year of graduation. The longitudinal data basis for this analysis is the Starting Cohort Grade 9 of the National Educational Panel Study (NEPS). Preliminary results indicate unstandardized transitions for a substantial part of the young adult population. Only a minority of students immediately enter vocational training or university (of applied sciences) after leaving school. A larger part enters vocational training or university (of applied sciences) after an interruption.

TALK 1: Disentangling the Interplay Between Genes, Cognitive Skills, and Educational Level in Adolescent and Young Adult Smoking: The TRAILS Study

Presenter: Heiko Schmengler, Utrecht University

Co-authors: Albertine J. Oldehinkel, Catharina A. Hartman, Ilja M. Nolte, University of Groningen; Wilma A.M. Vollebergh, Gonneke W.J.M. Stevens, Margot Peeters, Utrecht University; Joëlle A. Pasman, Karolinska Institute

Recent studies suggest that smoking and lower educational attainment may have genetic influences in common. However, little is known about the mechanisms through which genetics contributes to educational inequalities in adolescent and young adult smoking. Common genetic liabilities may underlie cognitive skills associated with both smoking and education, such as IQ and effortful control, in line with indirect health-related selection explanations. Additionally, by affecting cognitive skills, genes may predict educational trajectories and hereby adolescents' social context, which may be associated with smoking, consistent with social causation explanations. Using data from the Dutch TRAILS Study (N = 1581), we estimated the extent to which polygenic scores (PGSs) for ever smoking regularly (PGSSMOK) and years of education (PGSEU) predict IQ and effortful control, measured around age 11, and whether these cognitive skills then act as shared predictors of smoking and educational level around age 16, 19, 22, and 26. Second, we assessed if educational level mediated associations between PGSs and smoking. Both PGSs were associated with lower effortful control, and PGSEU also with lower IQ. Lower IQ and effortful control, in turn, predicted having a lower educational level. However, neither of these cognitive skills were directly associated with smoking behaviour after controlling for covariates and PGSs. This suggests that IQ and effortful control are not shared predictors of smoking and education (i.e., no indirect health-related selection related to cognitive skills). Instead, PGSSMOK and PGSEU, partly through their associations with lower cognitive skills, predicted selection into a lower educational track, which in turn was associated with more smoking, in line with social causation explanations. Our findings suggest that educational differences in the social context contribute to associations between genetic liabilities and educational inequalities in smoking.

TALK 2: Drinking Patterns in the Older Population in Sweden: Trends and Life-Course Trajectories by Gender and Education

Presenter: Neda Agahi, Karolinska Institutet

Co-author: Erika Augustsson, Karolinska Institutet

Introduction: Alcohol consumption has increased in the older population, but who is drinking more? Making use of unique longitudinal data, this study investigates trends in alcohol consumption in the older population 77+ in Sweden over the last 30 years, and the trajectories of alcohol consumption over the life-course in the latest cohort of older adults, born 1935-44. Focus is placed on gender and educational differences.

Material and methods: The Swedish Level of Living Survey (LNU) and the linked Swedish Panel Study of Living Conditions of the Oldest Old (SWEOLD) were combined, spanning 1968 through 2021. Trend analyses used data from SWEOLD (ages 77-107, 1992-2021), and life-course trajectories used a combination of LNU and SWEOLD to follow individuals between ages 24- 87 for proportion of drinkers and 55-87 for weekly drinking.

Results: The proportion of drinkers increased among men, women and people with low education, while it remained stable among people with higher education. Gender and educational differences in alcohol habits have diminished over time. While weekly drinking has become more common in all other groups, the proportion of men who consume alcohol weekly has declined slightly since the early 2000s. Over the life-course of the latest cohort (1935- 44), the proportion of drinkers is stable at around 85% from age 25 to 65, and then starts to go down. This decline is similar in all groups. In contrast, trajectories for weekly drinking show an increase after age 60/65, suggesting a retirement effect, to then decrease again after 70/75. This decrease is much steeper among people with low education.

Discussion: Recent cohorts of older people drink more frequently, and drinking habits are largely kept over the life-course. Those that continue drinking in later life have more frequent drinking habits surrounding retirement. At older ages, socioeconomic differences in drinking increase, possibly reflecting health inequalities.

TALK 3: Trends in the Association Between Heavy Episodic Drinking and Generalized Anxiety Symptoms Among Adolescents Between 2013-2023 in Finland: School Health Promotion Study

Presenter: Noora Berg, Finnish Institute for Health and Welfare

Co-author: Olli Kiviruusu, Finnish Institute for Health and Welfare

During the past decades, alcohol use has decreased among adolescents, but on the contrary, there are indications that anxiety symptoms have increased (at least among girls). These diverging trends set interesting opportunities to examine whether the strength of the well-known correlation/comorbidity between alcohol use and anxiety has also changed. This study aims to examine changes in associations between heavy episodic drinking (HED) and generalized anxiety symptoms among adolescents in Finland from 2013 to 2023. The aim is also to examine these trends within subgroups by age, sex, immigrant status/origin, and socioeconomic status. Data from the Finnish School Health Promotion Study between 2013-2023 covered 872968 participants

aged 13-20. Generalized anxiety was measured using GAD-7 (range 0-21) and heavy episodic drinking was measured as reported heavy drunkenness once a month or more often vs. less than once a month. In preliminary analyses, yearly prevalence estimates were analysed. Yearly associations between anxiety and HED were analysed using logistic regression. The anxiety symptoms increased (mean (sd) 3.9 (4.4) to 5.5 (5.5)) and HED decreased from 18.1% to 11.9% between 2013 to 2023. The association between anxiety symptoms and HED was very stable during the study period ORs (95% CIs) ranging between 1.05 (1.04-1.06) and 1.07(1.06-1.08). The proportion of those with both HED and moderate to severe anxiety symptoms ranged from 2.9% in 2013 to 3.6% in 2023. During the past decade, diverging trends in generalized anxiety symptoms and heavy episodic drinking have not changed the association between them. The comorbidity of these health concerns has remained rather stable in adolescents.

3E STREAM: EMPLOYMENT

INDIVIDUAL Employment & Gender PAPERS

TALK 1: A Longitudinal Investigation of the Development of Gendered Occupational Aspirations

Presenter: Delma Byrne, Maynooth University

Introduction The persistence of occupational sex-segregation in European labour markets is well established, despite an increase in educational attainment among women and more progressive attitudes in societies (DiPrete and Buchmann 2013; Platt and Parsons 2017). In the Irish context recent research has paid attention to the ways in which parents and teachers evaluate boys' and girls' math attainment different, contributing to the reproduction of gender inequality in math attainment, and potentially access to high-skill, high-status occupations (McCoy, Byrne and O'Connor, 2021). In this paper I extend this research field in the Irish context by examining how far the future labour market orientations of girls and boys differ, the changes that occur across childhood, and the factors that contribute to changing labour market orientation. The paper draws on data from the Growing Up in Ireland (GUI) 08' Cohort, a nationally representative longitudinal study of children in Ireland. These data and longitudinal data analysis techniques can be used to answer the following questions:

- How do occupational aspirations change between the ages of 9 and 20?
- Is there a reduction in gendered occupational aspirations over these stages of development?
- What are the individual and structural factors that contribute to increased or reduced gendered occupational aspirations over the early lifecourse from middle childhood to young adulthood?

Existing Research and Theoretical Framework Existing research on occupational aspirations among children during middle childhood and adolescence draws from a range of disciplinary perspectives, across a range of institutional contexts. Such studies find that gender-typical aspirations are more common during the early rather than the later stages of adolescence (Basler, Kriesi and Imdorf, 2021). Several social psychology and cognitive theories point out the importance of individual characteristics such as self-concept in occupational development and choice. Bandura et al., (2001) argue that belief in one's own ability influences achievement choices directly. Previous research finds that children with higher levels of self-concept are more likely to aspire to more lofty aspirations. Based on these perspectives from psychology, we expect that children with greater levels self-concept/cognitive development are more likely to opt for higher status occupational aspirations, while those with lower levels of emotional well-being may be less likely to do so. However, rational choice theory drawn from sociological thought leads us to a different hypothesis. It argues that when costs and benefits are taken into account, gender-typical occupational aspirations for both sexes is more likely, irrespective of self-concept or cognitive attainment. Socialisation theories, theories of social reproduction and rational choice theory each argue that normative expectations arising from family (but also peer and wider society) are likely to have an influence on occupational aspirations. According to these theories, a key role is played by the socioeconomic background of the family which has both a direct and indirect family on educational decisions and occupational outcomes (Sewell, Haller and Portes 1969; Gugushvili et al. 2017). Based on these theories we expect that children from families with higher levels of resources in terms of employment, parental education levels and parental expectation to attend university will be more likely to aspire towards higher-status and more gender integrated occupations than gender-typical occupations. Finally, more recently sociological research finds that gendered occupational aspirations among children during middle childhood and adolescence are shaped by context including both school level and local labour market characteristics (Malin and Jacob 2019; Basler, Kriesi and Imdorf 2020; Häggglund and Leuze 2021). Here we place emphasis on studies that highlight the role of schooling, showing that academic track pathways lead to less gender-typical aspirations than vocational track pathways (Basler et al., 2020). Other research finds that local labour market opportunities are also determinants of occupational aspirations for boys and girls (Malin and Jacob 2019). Here we expect that gender typical occupational aspirations are more common among young people with fewer academic educational opportunities and Data The analyses are based on the child cohort of the Growing Up in Ireland study, which is a nationally representative sample of children living in Ireland. The GUI child cohort (cohort '98) is a study of approximately 9,000 nine-year-olds, representing about 1 in 7 of the nine-year olds resident in Ireland between August 2007 and May 2008. These children and their families have been followed-up over time, when children were aged 13, and 17/18 and age 20. A key strength of these data is that occupational aspirations are measured when the cohort are measured at age 9, age 13, age 17/18 and age 20. In this paper occupational aspirations are linked to the gender-typicality of occupations using labour force data. That is, children's occupational aspirations are linked to labour force data, allowing to differentiate between male-dominated, female-dominated and integrated occupations, as well as the nature of these professions. The GUI also include rich data on a range of independent variables which have been identified in the literature as key determinants of both occupational aspirations. These include individual level characteristics such as sex, measures of cognitive ability and measures of wellbeing,

as well as family characteristics (parental education, family structure, household income, parental educational expectations) and school-level processes (measures of curricular differentiation) in shaping occupational aspirations. After descriptive analyses are presented, the analytic approach draws on methods of longitudinal analyses using repeated measures and fixed/random effects allowing to study how the presence of gendered occupational aspirations changes over time, and the factors associated with promoting or reducing gendered occupational aspirations. Emerging Findings This research programme is currently in process, so the analyses for this specific paper are not yet complete. This paper represents the third and final research paper from a programme of research on the development of (gendered) occupational aspirations. An earlier paper presented at the annual Growing Up in Ireland conference in Ireland has shown that by age 9, girls are more likely than boys to identify an occupational aspiration and are more likely to aspire towards a professional occupation (see also Platt and Parsons 2017). For the development of professional occupational aspirations, both socio-economic family background (maternal education) and individual characteristics (sense of self) are key determinants. However, there are clear gender differences in the relationship between individual characteristics and professional occupational aspirations, as high self-concept appears to boost boys (but not girls) towards professional occupations. In line with rational choice theory, how boys and girls evaluate their aspirations is likely to be shaped by their expected success in the professional world. While a majority of children at age 9 indicate that they are aiming for an integrated rather than gender-typed occupations, in line with previous research, boys are more likely to aim for a gender-typical occupations than girls (Basler et al, 2021). The results suggest that maternal education is a key mechanism to reduce gendered reproduction – as high levels of maternal education, help boost girls towards male dominated or gender atypical occupations.

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TALK 2: Variants of Gender Bias and Sexual-Orientation Discrimination in Career Development

Presenter: Nicholas Litsardopoulos, Institute of Employment Studies (UK)

Co-author: George Saridakis, University of Kent; Andrew E. Clark, Paris School of Economics

It has been suggested that LGB+ (lesbian, gay, bisexual, or other sexual orientation) workers face similar 'glass ceiling' effects as those traditionally found for heterosexual women (Frank 2006). However, traditional heterosexual gendered labour-stereotypes, with men being more active in the labour market than women, may not apply to non-heterosexually oriented individuals (Aksoy, Carpenter, and Frank 2018). Furthermore, Aksoy, Carpenter, and Frank (2018) find that over the 2012–2014 period there was no significant difference in earnings between gay and heterosexual men, or lesbian and heterosexual women, in the UK when demographic controls were included in the model(s) but note that there is still an earnings penalty for bisexual men. Bryson (2017) similarly finds that bisexual men earn less than heterosexual men (in some instances up to 31 percent less), regardless of occupational categories. The UK's economy is characterised by market liberalisation, low taxation, and flexible regulations. In this kind of liberal marketplace, lesbian women may well compete for jobs not only with heterosexual women, but also with heterosexual men, gay men, and people beyond the traditional binary gender dichotomy. Previous longitudinal studies follow data modelling that does not include cross-gender comparisons (for example, that of lesbians compared to bisexual men). We use a nationally representative dataset that includes a large sample of sexual-orientation minorities to investigate gender bias and sexual-orientation discrimination in career progression. Our findings are consistent with previous work noting that protective legislation for gay and lesbian sexual identities have increased the cost of discrimination and contribute to the improved socioeconomic status of a substantial number of people in these minority groups. However, these gains have not been shared with other minority groups in the LGB+ community, which still have some of the lowest probabilities of holding managerial jobs, and higher probabilities of appearing in lower socioeconomic classes.

TALK 3: Navigating Life Under a Four-Day Workweek: A Multimethod, Gendered Life Stage Examination of Employees' Temporal Strategies and Well-being

Presenter: Youngmin Chu, University of Minnesota

Co-authors: Phyllis Moen, University of Minnesota; Juliet Schor, Wen Fan, Boston College

The combination of both technological and organizational policy changes is upending work at a pace not seen since the Industrial Revolution. We examine the time-work strategies of workers whose employers are trying out an increasingly popular innovation, the four-day workweek. How do workers strategize work-life boundaries when moving to a 4-day, 32-hour arrangement (with full-time pay)? Which of these arrangements best facilitates a sense of work-life fit and well-being? Drawing on qualitative data on 109 employees in three small organizations and quantitative data on 854 employees in 54 companies in the U.S. and Canada, we

examine workers' shifting time-work strategies in blurring or conversely sharply defining the boundaries between their jobs and the rest of life under a four-day workweek policy. We theorize that these strategies influence well-being through changes in work-life fit and non-work time preferences, revealing variations across gender, life stages, and their intersection. In the interview, we detected four time-work strategies: 1) shifting gears, 2) blocking out, 3) limited responses, and 4) (re)organizing tasks. Employees with children, regardless of gender, are more inclined to utilize strategies such as blocking out and (re)organizing tasks to integrate their childcare responsibilities. Women with children tend to adjust their career plans to remain within their companies and find it easier to allocate time for self-care. Older workers without children are more apt to meld time spent on work and personal activities, in contrast to segregating the two by workers with children and younger workers more generally. In addition, looking at before and after four-day trial surveys six months apart, we find work-family conflict decreases significantly among workers under 40 with children at home, particularly for those who did not work or less than three hours on Fridays.

TALK 4: Acculturation to Gender Norms: Employment Trajectories by Migrant Origin After the Transition to Parenthood in Finland

Presenter: Sandra Buchler, Goethe-Universität Frankfurt am Main

Co-author: Elina Kilpi-Jakonen, University of Turku

Employing the transition to parenthood and the length of parental leave as a proxy, we examine how children of immigrants acculturate to the gender norms of the country of destination. In order to look at processes of acculturation and variations therein, we will analyse differences according to generational status, including age at migration, length of residence, as well as country of origin. To explain differences between groups, we control for other correlates associated with the length of parental leave, including employment before the birth and education level. Taking a couple-level perspective, we also examine the migration status of the father. Further, we examine the influence of the maternal employment status when respondents were teenagers. Full population register data from Statistics Finland is used to analyse first births occurring between 1995 and 2015 to partnered women born between 1975 and 1995. Initial findings from linear mixed models show that our expectations regarding acculturation are confirmed: the second generation tends to be closest to the majority, followed by the childhood migrants, while the largest differences are observed among the youth migrants. We find that education and employment are important for explaining differences in employment months, while having a partner and subsequent children are more important for the use of parental leave. Women with foreign-born partners work fewer months after a first birth and are more likely to be on parental leave than any of the other group, highlighting the importance of conducting couple-level research.

3F STREAM: SOCIAL DISADVANTAGE

INDIVIDUAL Childhood to Adulthood: Socio-Economic/Emotional PAPERS

TALK 1: Factors Associated with Children's Responses to Peer Victimization in the Growing Up in New Zealand Longitudinal Cohort Study

Presenter: Sophie Stephenson, University of Auckland

Co-author: Kane Meissel, Elizabeth Peterson, University of Auckland

The negative outcomes of childhood victimisation and bullying across the lifespan are numerous and well documented. This is particularly problematic in Aotearoa New Zealand, where the rates of childhood bullying are some of the worst in the world (Mhuru & Ministry of Education, 2021). However, these outcomes may vary depending on how the child responds to the victimisation. Understanding the individual, family and social factors associated with their choice of response can help to explain why children respond in the ways that they do. While some longitudinal studies have examined factors associated with children's responses, these have rarely been conducted with large samples, and rarely representing the diverse ethnic and socioeconomic context of Aotearoa New Zealand. This paper draws on data gathered by the Growing Up in New Zealand study. This longitudinal birth cohort study comprises an ethnically and socioeconomically diverse sample of more than 5,000 children. At age eight, these children were asked how they would respond to two peer victimisation scenarios: one physical and one relational. We present linear mixed model analyses of the factors associated with children's assertive, avoidant and aggressive responses. These include socioeconomic factors, gender, ethnicity, the child's feelings of self-worth and their history of victimisation, together with whether children's responses differ based on the type of victimisation. Preliminary results indicate that, in line with prior studies, children's responses varied based on their gender and history of victimisation. Additionally, two factors that have rarely been studied were also associated with different responses. These include the type of peer victimisation scenario and the children's feelings of self-worth. Understanding how these factors contribute to children's responses can inform anti-bullying policy and interventions, including efforts to enable children to more effectively respond to victimisation and bullying.

TALK 2: Effect of the Experience of Low Socioeconomic Status During Childhood on Suicidal Thoughts and Behaviours in Adolescence

Presenter: Sijetlana Vukusic, Australian Institute of Family Studies (AIFS)

Co-author: Neha Swami, Kristen Power, Monsurul Hoq, Australian Institute of Family Studies (AIFS)

Suicidal behaviours in adolescents and young people are a significant public health problem. Lower socioeconomic status (SES) in childhood is associated with numerous adversities over a lifetime, including poor mental health and poorer overall wellbeing, with some limited evidence showing its association with suicidal and self-harming behaviours. The longer a child experiences socioeconomic disadvantage, the higher the risk for self-harming behaviours developing in young adulthood, although there is

limited research on this in the Australian context. This study will answer two main research questions: (1) Does low SES experienced during childhood increase the overall risk of suicidal thoughts and behaviours in adolescence and young adulthood? and (2) Does a longer period of time experiencing low SES in childhood increase the frequency of suicidal thoughts and behaviours in adolescence and young adulthood? We use data from Growing Up in Australia: Longitudinal Study of Australian Children where family SES is based on the socioeconomic position (SEP) variable that uses information about combined annual family income, educational attainment of parents and parent's occupational status. The family SES data are measured at ages 4 to 12 years. Outcome variables are suicidal thoughts, plans, attempts, and self-harming behaviour (measured at ages 14 to 22 years). We hypothesise that the experience of socioeconomic disadvantage and the length of this experience in childhood may lead to increased risk and frequency of suicidal thoughts and self-harming behaviours in adolescence and young adulthood, compared to children who do not experience this disadvantage.

TALK 3: Young Children with Socio-economic Disadvantages: Developmental Courses of Behavioral Difficulties

Presenter: Wei Huang, University of Bamberg

Co-author: Sabine Weinert, Hans-Günther Roßbach, University of Bamberg; Dave Möwisch, Manja Attig, Leibniz Institute for Educational Trajectories

Human development involves interactions between the child and the surrounded ecological contexts (Bronfenbrenner & Morris, 2006). Exposure to multiple risk factors, which may elevate allostatic load (McEwen's, 1998), tend to disrupt these processes and has significant impact on children compared to singular- or non-risk-factor exposure. Numerous studies have shown that socio-economically disadvantaged children tend to have more behavioral difficulties than non-risk children (e.g., Sameroff, 2006). However, we know less about whether multiple socioeconomic disadvantages would escalate the development of behavioral difficulties and increase the differences between groups over time. Thus, drawing on the German National Educational Panel Study – Newborn Cohort, this study used latent growth curve analysis to examine the developmental courses of behavioral difficulties (ages 5–9; peer problems, conduct problems, and hyperactivity) for children with different levels of socio-economic disadvantages (i.e., parents' low education level, poverty, and migration background). That is, non-risk group (without any disadvantages; n = 886), one-risk-factor group (having only one of these disadvantages), and two risk-factor group (having at least two of these disadvantages; n = 155). Furthermore, as socio-economic disadvantages might negatively affect parenting behaviors that may account for the adverse impact of disadvantages on children (e.g., Mistry et al., 2010), this study also examines the association between different parenting behaviors in early childhood and the development of behavioral difficulties. Initially, children in the two-risk factor group had significantly more behavioral difficulties than those in the non-risk and one-risk-factor group. Overall, the differences between groups decreased and only remained significant for peer problems (between both risk groups and non-risk group). The differences between non-risk and one-risk-factor groups were initially non-significant and became significant for peer problems later on. Furthermore, we found different associations between parenting behaviors and behavioral difficulties across groups. Practical implications for early preventive programs targeting children from socio-economically disadvantaged families are discussed.

TALK 4: Overview and Recent Developments of the Child Development Supplement and Transition into Adulthood Supplement to the US Panel Study of Income Dynamics

Presenter: Narayan Sastry, University of Michigan

Co-author: Katherine McGonagle, University of Michigan

The U.S. Panel Study of Income Dynamics (PSID) has two major, ongoing supplements focused on children and young adults: the PSID Child Development Supplement (CDS) and the PSID Transition into Adulthood Supplement (TAS). In this presentation, we describe recent results and innovations for CDS and TAS.

CDS is an ongoing nationally representative longitudinal study of children in the US. It covers multiple cohorts of children and adolescents. CDS interviews are completed with children's primary caregivers (typically the child's mother) and with older children themselves. Home visits in most waves have collected additional in-person measures. CDS began as a cohort in 1997 but was relaunched in 2014 with a steady-state design to collect information in each wave on all children in PSID families. CDS now combines a child cohort study, but covering multiple cohorts, with a repeated cross-sectional design. The 2024 wave of CDS is currently underway and includes a new web mode of administration for interviews with adolescents (ages 12–17 years) alongside a telephone option with an interactive voice response (IVR) component to collect sensitive information.

TAS is an ongoing nationally representative longitudinal study of young adults in the US aged 18–28 years. TAS has included all young adults in PSID families since 2017, completing about 2,500 interviews each biennial wave. Between 2005 and 2015, TAS focused exclusively on interviews with the original CDS cohort. A total of ten waves of TAS have been undertaken. A major recent innovation on TAS was switching the data collection mode from telephone-only to a push-to-web mixed mode approach (with telephone as a back-up). In the first wave of mixed-mode data collection in 2019, we randomized cases to telephone-only versus mixed mode. We summarize the experiment results, which allowed us to compare mode effects on fieldwork outcomes and substantive interview responses.

POSTER PRESENTATIONS

Social Integration, All-Cause and Cause-Specific Mortality Across the Life Course: Findings from the Tromsø Study

Presenter: Ainhoa Ugarteche-Pérez, Inserm, Université Toulouse III Paul Sabatier

Co-authors: Lola Neufcourt, Michelle Kelly-Irving, Inserm, Université Toulouse III Paul Sabatier

Social relations can have a positive impact on health through social support and social participation while buffering against disease risk factors. Poor/insufficient social relations have been associated with an increased risk of mortality. Across the lifecourse, the configurations of social relations vary and, literature suggests that their relationship with mortality differs by age. We aim to investigate the relationship between social integration and mortality (total and cause-specific mortality) across the lifecourse and test the influence of intermediate variables. Data are from waves 4 and 6 of the Tromsø study. A social integration index (SII) was constructed (low, medium, high) combining assigned scores to three social connection items: social participation, marital status and frequency of contact with friends. Recorded mortality events in the Norwegian Population Registry were linked to the data. Cox-regression models, sequentially adjusting for confounders and intermediate variables (lifestyle, self-perception, biological health score (BHS)), were used to analyse the relation between SII and mortality in the study population (N= 7 405) and in age-stratified subsamples. Cause-specific mortality regression models were constructed for cancer, cardiovascular diseases, neuropsychiatric conditions and other deaths. A graded association between SII and mortality risk was observed in the study population, where, people in the low SII group had the greatest risk of mortality compared the those in the high SII group (HR_{lowSII}[95%CI]=1.62[1.25; 2.1]). Age-stratified subsamples showed similar, attenuated, results with the exception of the 64-74 age group, which showed no relationship. Lifestyle and perception variables largely explained the association, but the BHS did not. Having a low SII was associated with mortality by neuropsychiatric conditions and by “other” causes group. Our study provides evidence on the relationship between social integration and mortality risk throughout the lifecourse and the potential underlying mechanisms. We suggest structurally addressing social marginalization to reduce inequalities in mortality risk.

Associations of Working Conditions and Sleep with the Risk of Lung Cancer

Presenter: Bernadette van der Linden, University of Fribourg

Co-authors: Drinbardha Elshani, Arnaud Chiolero, Stéphane Cullati, University of Fribourg

Background Lung cancer is important in the working-age population in terms of incidence. While smoking is as a major cause, the effects of other factors, including work, remains unclear. Work occupies large parts of life and working conditions might be a cause of cancer through stress or sleep disturbances causing suppressed immune function. Our aim was to assess the effects of working conditions and sleep on lung cancer. Methods Data from the UK Biobank were used, a large-scale cohort study including half a million people between 40 and 69 years old at baseline and living in the UK. Incident cancer diagnoses were verified via linkage with cancer registries. Logistic regression was used to estimate the association of working conditions and sleep with lung cancer risk, adjusted for potential confounders. Further analyses exploring the mediating effect of sleep on the relationship between working conditions and cancer are ongoing and will be presented. Results During the 15-year follow-up period, 3923 cases of lung cancers were diagnosed. Preliminary results indicate that individuals working 16-30 hours weekly and those in occupations that never or rarely involved heavy manual or physical work had a lower risk of lung cancer (odds ratio (OR) = 0.78, 95% CI 0.62, 0.98; OR = 0.75, 95% CI 0.59, 0.95, respectively). Both longer (OR = 1.64, 95% CI 1.04, 2.59) and shorter (OR = 1.15, 95% CI 1.01, 1.31) than recommended sleep duration, along with evening chronotype (OR = 1.38, 95% CI 1.10, 1.72) were associated with a higher risk of lung cancer. Conclusion Working conditions and sleep characteristics are associated with lung cancer risks. It is important to further understand and study the potential mechanisms behind these associations to help identify occupations and groups at higher risk as well as intervention targets.

The Utility of Longitudinal Studies at the Time of National Emergencies: Insights from the Growing Up in New Zealand Study

Presenter: Carin Napier, University of Auckland

While New Zealand (NZ) was recovering from the COVID-19 pandemic, the country had to respond to the devastating floods and Cyclone Gabrielle that struck the nation in January/February 2023 with 245mm of rainfall in under 24 hours. Extreme weather or natural disasters are related to increases in post-traumatic stress symptoms, depression, and anxiety in adults and young people. These effects can persist for months or even years. Furthermore, those exposed to severe weather conditions are at risk of injury, disease, and worsening of chronic illnesses. Undertaking data collection at this time was critical to capturing young people's lived experiences while recovery was ongoing and immediate consequences could be accurately recalled. These insights are essential in their own right. However, when combined with existing Growing Up in New Zealand (GUiNZ) datasets, the value is maximised with point-in-time and longitudinal analyses possible. We targeted 1,437 participants residing in regions severely affected by the extreme weather events. Through an online questionnaire-based approach, we assessed a range of wellbeing dimensions, including physical and mental health, familial and social dynamics, neighbourhood safety, school engagement, and household factors such as access to financial resources, food security, housing stability, and transportation accessibility. Data collection took place between August 1 and September 3, 2023, using two online questionnaires when the young people were 13-14 years of age, one for the young person (approximately 15 minutes) and another for their primary caregiver (about 30 minutes). Response rates stood at 46.5% for young participants and 56.6% for their primary caregivers, yielding a rich dataset reflecting the diverse demographics of New Zealand society. The findings of the GUiNZ Extreme Weather Survey provide invaluable insights into the multifaceted impacts of extreme weather events on youth wellbeing, thereby informing targeted interventions and policy responses aimed at supporting resilience and mitigating adverse outcomes within affected communities.

Lessons Learned from the Past: Review the 45 Birth Cohort Studies

Presenter: Chiung-Ying Kuan, National Taiwan University

Background: From a life course perspective, one's health development is a process composed of multiple trajectories, and the pathway may need a birth cohort to examine it. This study aims to survey the 45 birth cohort studies and learn the advantages of continuing a birth cohort. Methods: PubMed searches were performed with the search terms "cohort profile" and "birth cohort" published in the "International Journal of Epidemiology." In the past 20 years (2005–2024), were 55 papers selected. After deleting the updated cohort papers unrelated to people's cohort, it comes to 45 birth cohort studies. Results: In these 45 cohort studies, in which 22 cohort studies' baseline data before 2000; and others was started after 2000. The initial cohort was in England which started form 1946 and aimed to understand the distribution of birth rate and midwives. Early birth cohort studies aimed a specific people, such as autism, and recently objectives of birth cohorts based on life cause perspective, which is not only during pregnancy, but over the life course. Hence, there are four methods that several cohort studies could do: (1) by using the internet to raise the response rate of the questionnaire; (2) by collecting the biology data to expand data; (3) by connecting the ID with other government databases, such as education dataset; (4) by selecting the open data to understand the long-term environment data, such as air pollution. Conclusions: Birth cohorts play a critical role in understanding the pathway of health and health behavior. It is necessary to maintain, build, and to expand the data of birth cohort to eliminate health disparities.

Characterising Developmental Trajectories of Subcortical Grey Matter Volume from Late Childhood to Early Adulthood

Presenter: Chloe Carrick, King's College London

Co-authors: Kathrine Skak Madsen, Copenhagen University Hospital; Silia Vitoratou, Delia Fuhrmann, King's College London

Introduction: Adolescence is a period characterised by protracted structural brain maturation, including changes to subcortical grey matter volume. Individual differences in subcortical volume have been linked to the emergence of psychopathology, indicating the need to characterise developmental trajectories of subcortical regions. However, previous research reports inconsistent findings for subcortical maturational trajectories. The present study aims to use nonlinear modelling techniques to characterise the longitudinal development of subcortical volume in a single cohort with up to 12 repeated measurements between late childhood and early adulthood.

Methods: This is a longitudinal study leveraging data from the Danish HUBU study, ("Hjernens Udvikling hos Børn og Unge", Brain Maturation in Children and Adolescents). The final sample in this study (N = 90; 59% female, 41 % male) were scanned up to 12 times (mean number of scans = 8.28, SD = 3.34) and were aged between 7.6 and 21.6 years old. 745 MRI scans were used for the analyses in this study.

Results: Generalised Additive Mixed Models were used to assess volumetric trajectories of the hippocampus, amygdala, thalamus, caudate, putamen, pallidum, and accumbens. All subcortical regions showed significant nonlinear changes with age ($p < .001$ for all smooth function estimates). The caudate, putamen, and nucleus accumbens show nonlinear decreases with age. The hippocampus, amygdala, and globus pallidus show nonlinear increases with age. The thalamus follows a nonlinear pattern of development, with a decrease in midadolescence, followed by an increase.

Conclusion: The volume of subcortical regions develops in a nonlinear pattern from late childhood to early adulthood. These results provide insight into the shape of volumetric maturation for each subcortical structure, furthering our understanding of adolescent structural brain maturation and providing normative data for future longitudinal studies of brain development.

Joint Effects of Childhood Aggression and Lifespan Neighborhood Risk on Mental Health in Adulthood: A 35-Year Longitudinal Study

Presenter: Dale Stack, Concordia University

Co-authors: Marie-Pier Pare-Ruel, Lisa A. Serbin, Alex E. Schwartzman, Concordia University; Jane E. Ledingham, University of Ottawa

In children, aggression increases risk for mental health problems in adulthood, as does residing in high-risk neighborhoods (Althoff et al., 2010; Hastings et al., 2020). Past research further indicates that precarious neighborhood conditions contribute to the stability of aggression over time (Kirk & Hardy, 2014). These results suggest that exposure to neighborhood disadvantage can worsen aggression over time, thereby exacerbating its effects on mental health. Yet, few studies have examined the joint effects of childhood aggression and neighborhood disadvantage on adult mental health. Moreover, we do not know if such effects occur only at some developmental stages. The objectives of this study were to determine: 1) if neighborhood disadvantage compounds the effects of childhood aggression on adulthood mental health, 2) if neighborhood disadvantage moderates these associations only at specific developmental stages. We investigated these questions with 4110 participants (50.1% boys) from Montréal (Québec) who were followed at six timepoints from 1976 (childhood) to 2010 (middle adulthood). We assessed aggression using the Pupil Evaluation Inventory (Pekarik et al., 1976), mental health diagnoses (i.e., neuroses, bipolar disorder, schizophrenia, and other psychoses) using official health records, and neighborhood socioeconomic disadvantage using census data. Logistic regression analyses revealed that childhood aggression predicted an increased likelihood of being diagnosed with all mental health disorders aside from bipolar disorder. Neighborhood disadvantage moderated these effects, but only beyond adolescence. Specifically, positive associations between aggression and these outcomes were stronger at elevated disadvantage levels (+1SD) but non-significant at lower disadvantage levels (-1SD). Our results suggest that although childhood risk factors contribute to adult mental health, precarious neighborhood conditions in adulthood sustain their effects over time. Despite past behavioral struggles, individuals who are not exposed to neighborhood disadvantage in adulthood are at lesser risk of developing mental health problems, highlighting the importance of improving neighborhood conditions to promote wellbeing.

Menopause and Labour Market Trajectories: Evidence from the English Longitudinal Study of Aging (ELSA)

Presenter: Darina Peycheva, University College London

Co-author: Bozena Wielgoszewska, University College London

A growing proportion of women experience menopause during periods of employment, yet the implications of the type and timing of menopause for their employment trajectories are not well understood. Previous studies have shown that the age at menopause onset is a biological marker of women's health. Notably, early menopause—defined as menopause before the age of 45—has been associated with an increased risk of cardiovascular disease, osteoporosis, type 2 diabetes, cognitive decline, reduced life expectancy, and higher all-cause mortality (Gold, 2011). Additionally, women with early menopause often experience more frequent, severe, and prolonged hot flushes, night sweats, and depressive symptoms (Paramsothy et al., 2017). Prior studies have primarily focused on menopause symptoms during the transition and the workplace environment (Brewis et al., 2017; Atkinson et al., 2021). This paper aims to explore the labour market trajectories of women with early natural and surgical menopause. We use data from the English Longitudinal Study of Aging, a nationally representative survey of people aged 50 and above in England (Stephens et al., 2013). Specifically, we investigate the following questions: 1. How do work trajectories differ by timing (early vs. not early) and type (surgical vs. natural) of menopause? 2. How do these associations change when hormone therapy is used? To address these questions, we employ sequence analysis followed by cluster analysis and logistic regression to examine how cluster membership is associated with menopause characteristics before and after adjusting for other covariates.

Cardiovascular Disease and Diabetes in UK Sexual Minority Adults: Findings from Three Longitudinal Population Studies

Presenter: Evangeline Tabor, University College London

Co-authors: Dylan Kneale, Praveetha Patalay, University College London

Limited international research suggests sexual minority individuals, in particular sexual minority women, may have higher risk of developing cardiovascular and diabetes outcomes than their heterosexual peers. However, little research has explored if a similar disparity is present in the UK. This paper aims to address this gap by exploring differences in these conditions by sexual minority status using UK longitudinal population studies.

Methods: Using data from three UK longitudinal studies (the British Cohort Study (BCS70), Understanding Society: the UK Household Longitudinal Study (UKHLS), and the English Longitudinal Study of Ageing (ELSA)), I used pooled data from all studies to examine whether hypertension, diabetes and cardiac events reporting varies by sexual minority status. I also used pooled data to explore differences in underlying anthropometric and biomarker outcomes. Finally, I generated QRISK and Framingham cardiovascular risk scores to examine differences in ten-year risk of cardiovascular disease.

Results: My results indicate sexual minority respondents have a similar risk of hypertension, diabetes, and cardiac events, as well as similar outcomes for ten-year cardiovascular disease risk and HDL, CRP, HbA1c, triglycerides, and blood pressure than heterosexual respondents. Sexual minority respondents had better outcomes for total cholesterol than heterosexual respondents. However, respondents aged 35-54 had a higher ten-year risk for cardiovascular disease, as well as higher current risk for hypertension, diabetes, and cardiac event than heterosexuals. In addition, bisexual women had higher risk for cardiac events, and bisexual and gay/lesbian men had higher diabetes risk than heterosexual respondents.

Conclusions: This analysis adds substantially to our understanding of cardiovascular and diabetes disparities by sexual minority status in the UK, as well as underlying markers of risk. However, conclusions were limited by small subgroup sample sizes.

The Effect of Parental Unemployment on Child Health: Evidence from the UK Household Longitudinal Study

Presenter: Giacomo De Santis, University of Essex

Many studies have examined how parental unemployment affects child outcomes, particularly focusing on long-term outcomes like educational attainment and life satisfaction. However, those who focus on child health found contradictory results, especially when considering paternal and maternal unemployment separately. This study investigates the correlation between parental unemployment and child health in the UK, considering different health measures and investigating variations across different childhood stages. Utilizing the UK Household Longitudinal Study (UKHLS), this study examines data about around 5300 children who were respectively three, five, and eight years old between waves 3 and 12 of the survey (January 2011 – May 2022). Child health is defined separately by three broad measures reported by parents: perceived child health, long-standing conditions, and Strengths and Difficulties Questionnaire (SDQ) scores. Socio-economic status, living area, and other household, parental, and child factors, are included in the analysis as controls. For each stage of childhood, pooled cross-sectional models are first performed considering paternal and maternal unemployment together, and then separately. Results vary across health measures, different childhood stages and depending on whether paternal or maternal unemployment is considered. A significant detrimental correlation between parental unemployment and “perceived child health” is observed for 5 (OR=2.5 p<0.01) and 8 (OR=1.8 p<0.01) years old children. On the contrary, estimates for “long-standing conditions” models show a significant protective effect of parental unemployment on the prevalence of long-standing conditions for aged 3 children (OR=0.67 p<0.01). For these first two measures, parental-gender-specific models at ages 3 and 8 show a significant effect only for paternal unemployment, while models at age 5 show significance only for maternal unemployment. The strongest evidence of a detrimental effect of parental unemployment is observed when considering SDQ-related models, even when examining parental-gender specific models.

Skills Development for Managing Longitudinal Data for Sharing: Enhancing Expertise Within the Longitudinal Population Studies Data Managers Community

Presenters: Hina Zahid, Liz Smy, UK Data Service

Co-author: Cristina Magder, UK Data Service

The project "Skills Development for Managing Longitudinal Data for Sharing" aims to improve skills and practices for sharing and managing Longitudinal Population Studies (LPS) data across various disciplines. The initiative, funded by the Economic and Social Research Council and the Medical Research Council, builds on a prospectus published by Health Data Research UK in 2021, which highlighted the need to maximise the use of LPS data.

Key activities of the project included auditing existing training resources, surveying the LPS data management community to identify unmet training needs, and designing new training modules focused on key areas such as data management, sharing, and documentation. Collaborative workshops are used to co-design training materials and ensure diversity and inclusivity. The training is divided into introductory sessions for new data managers and focused workshops on advanced topics such as synthetic data.

The project has revealed the need for a tiered training approach, ranging from foundational skills to specialised training in advanced areas such as ethics and creation and dissemination of synthetic data. To ensure the introductory sessions are as valuable to the community, the development of these resources is iterative, with continuous feedback and evaluation to ensure that they meet the needs of the LPS community.

By the project's end in February 2025, it aims to offer freely available, open-licensed training materials and provide strategic recommendations for future skills development initiatives. The final goal of the project is to improve data-sharing practices and support the growth of the LPS community, ensuring sustained improvements in the use and value of LPS data across the social, economic, and biomedical sciences. The project is hosted by the UK Data Service, at the UK Data Archive, University of Essex, but it brings together key partners including UKLLC, UCL, Closer and the University of Manchester.

Mental Health Difficulties and the Implementation of Sanitary Measures During the COVID-19 Pandemic: Gender and Socio-economic Inequalities

Presenter: Irwin Hecker, INSERM France

Co-authors: Solène Wallez, Honor Scarlett, Maria Murielle Mary-Krause, INSERM France

Background: This study seeks to understand how compliance with COVID-19 sanitary measures is related to preexisting mental health difficulties. In addition, we explore whether gender differences exist within the relationship between mental health difficulties and compliance with COVID-19 sanitary measures, alongside how factors such as education and employment may also interact with these patterns.

Methods: Data from four large cohort studies, collected during the COVID-19 pandemic, were analysed using an Individual Participant Data (IPD) meta-analytic approach. Mixed regression models were employed to examine associations between mental health difficulties and compliance with sanitary measures as well as the interaction with socio-economic status. Models were additionally stratified by gender to capture gender-specific patterns.

Results: Our results indicate a positive association between mental health difficulties and compliance with sanitary measures in women, while amongst men a negative association was seen. Moreover, there was a statistically significant interaction between mental health difficulties and education level amongst men, indicating even lower compliance levels amongst those with only primary schooling.

Conclusion: Men experiencing mental health difficulties, especially those with lower educational attainment, had lower compliance with sanitary measures. Targeted messaging and strategies should consider socio-economic and gender-specific patterns to effectively manage health crises and promote public well-being, specifically interventions targeting males with lower educational attainment and mental health difficulties.

The Bidirectional Relationship Between Negative Parenting and Child Externalising Problems: The Moderating Role of Social and Emotional Support

Presenter: Jasmine Raw, University College London

Co-authors: Bonamy R. Oliver, Jane Gilmour, Emily Midouhas, University College London; Jon Heron, University of Bristol

Behavioural problems are one of the most common mental health problems in children and adolescents and have been linked to several adverse psychosocial outcomes including substance abuse and criminality. The parent-child relationship is often targeted in clinical interventions as negative parenting and child behaviours have been shown to mutually influence each other leading to coercive cycles of negative behaviour over time. However, little is known about what factors might be effective in disrupting these cycles over many years in the general population. Perceived parental social support has been associated with better child and parenting outcomes and has been found to buffer parents and children against environmental stress. In the present study, we explore the bidirectional associations between negative parenting and child externalizing behaviour across ages 4, 7 and 8 using data from The Avon Longitudinal Study of Parents and Children (ALSPAC). Additionally, we examine whether maternal perceived social and emotional support moderates these parent- and child-effects. We expect to find bidirectional associations between negative parenting and child externalizing problems. We also hypothesize that greater levels of social support will be associated with more resilience among parents in the face of their child's behavioural problems and will buffer against behavioural problems

among children who are exposed to negative parenting. Structural equation cross-lagged panel models and multigroup models will be used to analyse the data. The findings will provide insight into factors that may interrupt negative parent-child interaction cycles in the general population.

Social Pathways to Loneliness in Socio-Economically Marginalised Young People

Presenter: Kathryn Bates, King's College London

Co-authors: Lauren Turner, Jennifer Lau, Queen Mary University of London; Delia Fuhrmann, King's College London

Young people experience some of the highest loneliness rates, compared to other age groups. Loneliness can have long-term effects on physical and mental health. There are social inequalities in the experience of loneliness: young people from low socio-economic backgrounds experience disproportionate rates of loneliness. Recent qualitative studies suggest the experience of socio-economic marginalisation may contribute to severe loneliness in young people. However, systematic evidence is lacking. We will conduct network analysis using the UKHLS cohort, and we will sample young people aged 16-24 years from Wave 11 (collected from January 2019-May 2021; N~35,000). We will investigate how the relationships between different facets of social connection and loneliness vary between socio-economically marginalised young people and non-marginalised young people. Data analysis will be completed by May 2024. We will examine social connection with family, friends, and partners, involving items such as "How much can you rely on them if you have a serious problem?" and "How much can you open up to them if you need to talk about your worries?", and the UCLA-4 scale assessing loneliness. Network analysis is a hypothesis-generating approach that allows for the extraction of structures within the data. The research will provide systematic evidence of networks of loneliness and social connection in young people from different socio-economic backgrounds experiencing different levels of marginalisation. The research findings should highlight targets from interventions and prevention efforts to tackle loneliness in marginalised groups.

How Public and Participant Voices Have Influenced UK Longitudinal Linkage Collaboration and its Trusted Research Environment

Presenter: Kirsteen Campbell, University of Edinburgh

Co-authors: Rebecca Whitehorn, Sarah Chave, Michael Gregg, Mhairi Docherty, Stela McLachlan, Robin Flaig, University of Edinburgh; Katharine Evans, Richard Thomas, Emma Turner, Jacqueline Oakley, Andy Boyd, University of Bristol

Objectives: UK longitudinal population studies (LPS) have complex governance structures and participant safeguards. As a Trusted Research Environment (TRE) for >20 established longitudinal studies, UK Longitudinal Linkage Collaboration (UK LLC) must ensure effective public and participant input to make central design and operational decisions whilst retaining participant trust and acceptability.

Approach: UK LLC's governance model is based on the principle that participant trust lies with their LPS; not supporting infrastructure providers. UK LLC takes responsibility for system governance and data sharing agreements whilst studies retain control over participant data and its uses. Our public/participant model reflects this. We have set up a public programme and simultaneously work with study managers to gain insight from their involvement work.

Results: We have integrated a diverse range of public/participant input across UK LLC: a public panel to review applications; an advisory panel contributes to our methodological development; a network to input on public acceptability; a Citizen Panel to review data access processes and public advisors on strategy and future partnerships. And we work with partner LPS teams to draw insights from, and coordinate new, LPS-level involvement. This has informed the development of data application frameworks and adds a public viewpoint to decisions regarding linkage of functionally anonymous participant NHS records for research. The involvement of these groups has shaped the design of data flows into the TRE and has helped shape a 'social contract' regarding acceptable UK LLC data use.

Conclusion: Working with public/participant representatives and in partnership with LPS teams, we have developed safeguards and integrated a public/participant voice into our activities. Our aim is to develop a sustainable way of continually working in a way which is acceptable to participants and the public.

Networks of Sleep and Psychotic-Like Experiences in Early Adolescence: Insights from the ABCD Cohort

Presenter: Lara Acosta Siljestrom, King's College London

Co-authors: Sílvia Vitoratou, Kathryn Bates, Delia Fuhrmann, King's College London

Sleep disturbances and psychotic-like experiences (PLEs) are known to precede the onset of psychosis. Whilst the relationship between sleep disturbances and PLEs is well documented in the literature, there are no studies specifically investigating what types of sleep disturbances (e.g., difficulties initiating and maintaining sleep, difficulties breathing during the night, experiencing nightmares or sleepwalking) are associated with different types of PLEs (e.g., thought delusions, grandiose delusions, or hallucinations). Employing the Adolescent Brain Cognitive Development (ABCD) study dataset (N ~ 11,880), we will explore the relationships between particular sleep disturbances and different types of PLEs in a sample of 13- to-14-year old's (prior average age onset of psychosis). Network analyses will be conducted to examine the partial correlations between variables. This will allow to 1) identify clusters of sleep disturbances and PLEs, and 2) identify sleep disturbances and PLEs most central to the network. The latter will be identified via centrality indices such as node strength and betweenness. By shedding light into the relationship between sleep disturbances and PLEs, findings from this study will extend current understanding in the aetiology of PLEs in early adolescence and help identify targets for interventions for individuals at higher risk of psychosis prior their first episode.

Biological and Household Contributions to Childhood Adversity Trajectories and Their Associations with Psychiatric Hospital Treatment in Early Adulthood

Presenter: Lauren Bishop, University of Helsinki

Co-authors: Joonas Pitkänen, Pekka Martikainen, University of Helsinki

Exposure to childhood adversity may stem from multiple household sources; however, most longitudinal research has focused only on adversities arising from the biological parents and does not distinguish between adversities from co-resident versus non-resident biological parents. Such constraints potentially underestimate the accumulation of stressors within the household and limit understanding of the potential mechanisms underlying associations between childhood adversity and mental health. We therefore aim to describe trajectories of childhood adversity, separately for four parent/household constellations, and relate these to psychiatric hospital treatment in early adulthood. We use a total population sample of children born in 1988-1996 and residing in Finland between ages 0–25 (n=533,366). Using administrative register data, we identify their exposure to eight adversity indicators—economic hardship; parental hospital-presenting substance misuse, psychiatric disorders, self-harm, and violent victimization; and parental criminal sentences, death, and union dissolution—from birth to age 16. We use group-based multi-trajectory modeling to categorize children into groups based on their exposure to adversity associated with four constellations: 1) biological parents, 2) co-resident biological parent(s), 3) coresident biological parents and their partners, and 4) all coresident adults. We use logistic regression to estimate associations between adversity group membership and psychiatric hospital treatment in early adulthood within each constellation. We expect to identify similar trajectories (e.g., low, early childhood-limited, and persistent adversity), regardless of constellation. However, we also anticipate a lower prevalence of adversity in constellation 2, relative to constellation 1, and additional adversity exposures in constellations 3 and 4 that are unidentified in standard register-based research. We further anticipate an increased risk of psychiatric treatment among the persistent adversity trajectory group, particularly in constellations 3 and 4. These findings will highlight the importance of considering multiple sources of adversity to advance understanding of the role of the household constellation for mental health in early adulthood.

Bi-directional Associations Between Physical Punishment and Child Internalising, Externalising, and Pro-Social Behaviours

Presenter: Maria Sifaki, University College London

Co-authors: Rebecca Lacey, St George's University of London; Yvonne Kelly, Anja Heilmann, University College London

Introduction: Evidence suggests that parental use of physical punishment adversely affects children. We aim to explore if the associations between physical punishment and child behaviour are bidirectional, to better understand physical punishment's impact and how it operates within families.

Methods: We will use data from the Millennium Cohort Study (MCS), child ages 3, 5, and 7. The parent-reported Strengths and Difficulties Questionnaire (SDQ) will be used to measure child behaviours, with the emotional and peer subscales corresponding to internalising behaviours, conduct and hyperactivity subscales corresponding to externalising behaviours, and the prosocial subscale to prosocial behaviours. Physical punishment will be assessed by the question asked to the primary caregiver on how often they smack the child when naughty, with possible responses being never, rarely, sometimes, often, and daily. Our analytic sample will include all singleton children/families with an SDQ and a physical punishment score across ages 3-7.

To assess bidirectional associations, we will run cross-lagged random intercept models. Missing data will be handled by Full Information Maximum Likelihood. We will account for the stratified design of MCS and adjust for key covariates. Last, we will test if the child's sex, ethnicity, or maternal warmth moderate the strength of the associations found.

Results: According to past research, we hypothesize that physical punishment will predict increased internalising behaviours and decreased prosocial behaviours, but not vice versa. Moreover, we expect to find positive, bi-directional links between physical punishment and externalising behaviours, with the path from externalising behaviours being stronger for boys. We do not expect any other moderating effects; however, we will test for these associations as they are theory driven.

Discussion: Findings from this study can help inform research and policy on the use and effects of physical punishment on children.

The Effects of Sandwich Care on Health and Employment Outcomes in Germany: A Longitudinal Analysis of the German Socioeconomic Panel Study

Presenter: Markus King, University of Potsdam

Co-author: Christian Deindl, TU Dortmund University

For the past few decades, the consequences of informal caregiving have become more and more important. One crucial aspect is the provision of care for another adult – usually a parent – while also providing care for a dependent child called “sandwich care”. Sandwich care comes with its very own unique types of challenges in combining childcare, informal care and other obligations. The combination of both types of care may amplify negative effects of both types of care: Increased feelings stressed by combining two demanding tasks at the same time. Using data from the 2001-2018 waves from the German Socio-Economic Panel (GSOEP), we investigated the association between childcare, informal care, and sandwich care on labour earnings, work-time, self-rated health and life satisfaction of caregivers aged 17–64 using (lagged) fixed effect models. Our results showed that the provision of sandwich care, as well as an increase in care intensity is associated with a reduction in labour earnings, working hours and satisfaction with life. Additionally, we were able to find that the effects for labour earnings and working hours also persist

for at least one wave after the provision of care. Analysing our data stratified by sex revealed that only women show significant decreases in their labour earnings and satisfaction with life if providing sandwich care.

Associations of Childhood Socio-Economic Position and Health with Trajectories of Grip Strength from Mid to Older Ages in Two Distinct Populations

Presenter: Mphatso Chisala, University College London

Co-authors: Rebecca Hardy, Leah Li, University College London; Racheal Cooper, Loughborough University

Background and objectives: This study explored the enduring impact of early-life experiences on grip strength, a measure of physical function associated with optimal aging.

Methods: We used data from the nationally representative China Health and Retirement Longitudinal Study (CHARLS) and English Longitudinal Study of Ageing (ELSA) (16,701 and 12,695 participants with \geq one grip strength measurement and mean enrolment age of 57.9y and 61.4y, respectively). Grip strength (kg) was measured at three timepoints in CHARLS (2011-2015) and four timepoints in ELSA (2001-2019). Childhood SEP indicators were parental education and occupation, and financial hardship. Childhood health included self-rated childhood health (SRH), school absenteeism, being confined to bed, and being hospitalised due to health, and in ELSA, also childhood illnesses. Random-effects growth models were applied to assess the association between each early life factor and trajectories of grip strength.

Results: Lower parental education was associated with weaker hand grip strength (HGS) after adjusting for parental occupation and adult SEP in both settings. In CHARLS, mean HGS was lower for participants of illiterate (60.8%, vs literate) parents by 0.3kg (95% CI:0.13,0.52), and in ELSA, was lower for participants whose parents had no education (1.4%) and <high school (78.6%) by 2.4kg (1.52,3.54) and 0.23kg ($p>0.05$) respectively, compared to those of parents with \geq high school. Although low parental occupation was associated with weak HGS in both studies, this was no longer significant after controlling for adult SEP (CHARLS) and parental occupation (ELSA). Financial hardship was associated with weaker HGS in CHARLS by 0.42kg(0.13,0.51) but not in ELSA. Poor SRH and school absenteeism (both studies), being confined to bed and hospitalised (CHARLS) were consistently associated with weaker grip strength after accounting for childhood and adult SEP. For ELSA, each additional childhood illness was associated with an average decrease of 0.57kg(0.31,0.84) in mean grip strength. Only childhood SRH (CHARLS) and parental education and missing school (ELSA) were associated with decline of grip strength over time.

Conclusion: Childhood SEP and health had an enduring impact on grip strength late in life. Addressing socioeconomic disparities and promoting health of children may enhance physical capacity and well-being in later life. Understanding these relationships in distinct populations can inform targeted interventions to promote healthy aging and reduce age-related health problems.

Unveiling Resilience: A Partnership Typology and Crisis Dynamics

Presenter: Nicole Hameister, DZA German Centre of Gerontology

Co-authors: Luisa Bischoff, Oliver Huxhold, DZA German Centre of Gerontology

Intimate relationships can be protective during external crises but could also intensify challenges that occur. Informed by the cumulative disadvantage theory, we endeavour to construct a partnership typology identifying vulnerable intimate relationships, which are characterised by a heightened risk of termination and lower relationship quality. Subsequently, we employ the Vulnerability-Stress Adaptation Model to explore crisis dynamics within these relationship types during the Covid-19-pandemic as an exemplary external crisis. To this end, we use longitudinal panel data from the German Ageing Survey (DEAS) from 2014 to 2023 encompassing adults aged 42 to 99. In particular, utilising a succinct set of socio-economic and partnership-related variables, Latent Class Analysis is applied to derive a parsimonious set of easily reproducible relationship types. Based on this typology, fixed effects panel regressions are modelled in order to compare the dynamics of partnership quality throughout the pandemic between the relationship types. Our dual objective is to create a versatile typology for diverse research inquiries and scrutinise how distinct relationship types navigate crises. By focussing on the second half of life, our typology recognises the importance of understanding cumulative

disadvantages in addressing social inequalities across the life course. Additionally, we link those patterns of inequality to the resilience or the vulnerability of couples facing external crises and illuminate the nuanced dynamics of vulnerable partnerships. By integrating psychological and sociological theoretical frameworks, our empirical analysis contributes to the understanding of the dynamic interplay of micro-level intimate relationships and macro-level external crises. Accordingly, with our understanding of intimate relationships during crises, we do not only contribute to relationship science but also inform policies and interventions aimed at breaking the cycle of disadvantage, especially in vulnerable relationships.

Parenthood and Childlessness Among Individuals Affected by Infant Institutionalization

Presenter: Nina Graf, Marie Meierhofer Children's Institute Zurich

Coauthors: Raquel Paz Castro, Patricia Lannen, Marie Meierhofer Children's Institute, Zurich; Flavia M. Wehrle, Oskar G. Jenni, University Children's Hospital Zurich

Early childhood is a pivotal and determining period for healthy development across the lifespan. An expanding body of research indicates that adverse childhood experiences (ACEs) have detrimental effects not only across the lifespan but also across generations (Bowers & Yehuda, 2016; Cooke et al., 2021). However, lifespan and intergenerational research on the effects of socioemotional deprivation due to institutionalization in early childhood are scarce. In this population-based study, we introduce data from a 60-year follow-up with individuals placed in infant care institutions in the 1950s in Switzerland (N=431) and a

comparison cohort of individuals from the same geographical location raised within their families during the same time (Zurich Longitudinal Studies, ZLS; N=399). The former were placed in infant care institutions due to controversial social and compulsory measures before law reform in 1981, where they were assessed by Dr. Marie Meierhofer using state-of-the-art standardized instruments. She found significant developmental delays as a consequence of the socioemotional deprivation in the institutions. All individuals were contacted again 60 years later to determine the long-term effects of their early childhood experiences. Preliminary results of the 60-year follow-up demonstrate differences between the formerly institutionalized individuals and the non-institutionalized ZLS individuals in many aspects, such as cognitive abilities, health, and socio-economic outcomes. Here, we will compare the two cohorts regarding parenthood, a vulnerable and critical element for the generational transmission of parental ACEs (Panggabean et al., 2023). We will present data about what predicts parenthood and childlessness both within and between group. We will also present data for age at the transition to parenthood and the number of children depending on early experiences.

The Relationship Between Paternal Responsiveness and Language Development in Children: A Cross-Lagged Model

Presenter: Pei-Zhen Wu, National Taiwan Normal University

Considering the significant variations observed in language development during early childhood, few studies have explored the relationship between paternal responsiveness and children's language development. This study utilized a longitudinal database collected from the Kids in Taiwan Study, with questionnaire samples completed by fathers when their children were 12, 18, and 24 months old. The total valid sample size was 482, with 253 completed by fathers of boys and 229 completed by fathers of girls. This study aimed to utilize Mplus 8.0 software to conduct a cross-lagged model analysis, examining the long-term, bidirectional relationships between paternal responsiveness and children's language development while controlling for the effects of child gender and parental educational status. Paternal responsiveness encompassed responding to a child's vocalizations, showing affection through hugs or kisses, and maintaining interaction during chores or work. This approach emphasized sensitive, warm, and supportive responses to children's needs. The results indicated that paternal responsiveness and language development in children have positive bidirectional relationships, which suggests that both father and children play a role in their development. These findings support the growing evidence of the importance of fathers in children's early language development. Understanding the dynamics of paternal involvement and its impact on language development carries substantial implications for interventions to enhance early language development.

Trajectories of Childhood Poverty, Parental Employment and Household Composition and Later Mortality in Adolescence and Early Adulthood

Presenter: Sanne Pagh Møller, University of Southern Denmark

Co-authors: Andrea Willson, University of Western Ontario; Lau Caspar Thygesen, University of Southern Denmark

Background: Both childhood poverty, parental unemployment and household composition are associated with childhood and adolescent health. At the same time, the correlation between these exposures is strong. The dynamic and clustering nature of these exposures, therefore, raises the relevance of studying trajectories of these across the entire childhood. Identification of distinct trajectories enables subsequent analyses on health outcomes associated with these including estimation of differences in mortality later in life.

Aim: The aim of the study is to identify trajectories of childhood poverty, parental employment and household composition from birth until 16th birthday and to estimate associations between identified trajectories and mortality in adolescence and young adulthood.

Methods: A population-based cohort study including all children born in Denmark 1980-1990 and linked to nationwide registers will be conducted. Trajectories of childhood poverty, parental employment status (i.e., employed, unemployed, student or self-employed) and household composition (i.e., single or two parent household) across childhood from 0-16 years will be estimated using group-based multi-trajectory modeling. Associations between identified trajectories and mortality in adolescence and early adulthood will be estimated using Cox proportional hazards models.

Results: The study is ongoing, and the results will be obtained before September 2024.

Conclusions: Based on the entire cohort of children born in Denmark 1980-1990, the study will provide novel information on trajectories of childhood poverty, parental employment and household composition across childhood as well as associations between these trajectories and mortality in adolescence and early adulthood.

Parental Financial Mobility Trajectories and Predictors of Mobility in the Millennium Cohort Study

Presenter: Sian Fei, University of Leicester

Co-authors: Patrycja J. Piotrowska, Lucy K. Smith, University of Leicester

Background: Across the UK, income inequalities have been increasing while social mobility has been on the decline. Studies investigating mobility have largely focused on intergenerational mobility between two time points only, with many relying on cross-sectional and retrospective data.

Aims: This study aims to describe trajectories of intragenerational financial mobility in a representative sample of UK families, and identify factors that predict these trajectories including health, ethnicity, age, occupation, and educational attainment. This study utilises measures of both objective and subjective financial situation, and absolute and relative income to model financial mobility trajectories.

Methods: This study analyses data from the first six sweeps of the Millennium Cohort Study, with data collected longitudinally over fourteen years. The financial variables analysed include OECD income deciles (the objective relative measure), and OECD weekly income (the objective absolute measure). Participants were also asked to indicate how well they are managing financially (the subjective measure). Growth Mixture Models are being used to understand trajectories of mobility.

Hypothesised results: We hypothesise that the analyses will reveal a number of latent trajectories of financial mobility, and comparisons will be made between the optimal number of trajectories for each of the socioeconomic measures. The analyses will also reveal which socio-demographic variables are significant predictors of latent class membership.

Implications: Lower socio-economic status and downwards social mobility have been consistently linked to poorer child mental health. The outcomes of this study can be utilised in future studies investigating associations between trajectories and child outcomes, as well as the direction of this relationship. The predictors may help identify those most at risk of adverse outcomes and aim to improve their mobility, and therefore child outcomes.

Cohort Effects on Sex Differences in Mortality in USA, Canada, Italy, Austria, and Sweden: 1920-2019

Presenter: Stefan Fors, Karolinska Institutet

Co-authors: Erika Augustsson, Johan Rehnberg, Karolinska Institutet; Susan Phillips, Queens University; Ricardo Rodrigues, Lisbon School of Economics & Management; Cassandra Simmons, European Centre for Social Welfare Policy and Research; Afshin Vafaei, Western University

Introduction: Women live longer than men. However, the extent of this disparity in mortality rates varies significantly depending on geographical location and historical period. In many high-income countries, the difference in life expectancy between men and women widened considerably from the mid-20th century for a few decades before beginning to decrease again. One question arising from this trend is the extent to which these changes can be attributed to birth cohort effects. This study aims to quantify the impact of birth cohort on the disparity in mortality rates between men and women from mid-life onwards in five different high-income countries over a period of one hundred years.

Methods: This study utilized aggregate-level demographic data including sex, age, period, and birth cohort-specific information on five-year mortality rates from the USA, Canada, Italy, Austria, and Sweden, spanning from 1920 to 2019. The data analysis employed a multiphase strategy involving graphical analysis, median polish analysis, and regression analysis.

Results: The findings revealed similar cohort effects on the disparity in mortality rates between men and women across all five countries. Cohorts born between 1890 and 1934 exhibited significantly larger differences in mortality rates between the sexes compared to earlier and later cohorts.

Conclusions: This study demonstrates that the fluctuating magnitude of the disparity in mortality rates between men and women can be partially attributed to higher levels of excess male mortality within specific birth cohorts. Consequently, as these cohorts age out of the population, the gap in mortality rates between the sexes has decreased.

Caregiving for Disabled and Elderly Family Members Among U.S. Adults During COVID

Presenter: Teresa Swartz, University of Minnesota

Co-authors: Teresa Toguchi Swartz, Claire Kamp Dush, Alexandra VanBergen, University of Minnesota; Wendy D. Manning, Bowling Green State University

Over the life course, caring for sick, disabled, and aging family members is a normative life experience. Yet even though caregiving may be anticipated, it can be stressful and may affect well-being. During difficult periods, such as the COVID-19 pandemic, these stressors may be exacerbated as families became socially isolated and had fewer outlets for formal care and support. During the pandemic, who was caregiving for elderly and disabled family members? How was caregiving associated with their wellbeing? We examined caregiving for disabled and elderly family members among U.S. adults ages 20-60 living in married or cohabiting couples during the COVID pandemic using data from the National Couples' Health and Time Study. 14% of adults cared for a disabled or elderly family member. Caregivers were older, although over 10% of those in their 30s reported caregiving. Similar to who provided the bulk of childcare during the pandemic, cisgender women were more likely to provide care compared to cisgender men, as were those who identified as transgender or non-binary. Those in same-gender relationships were more likely to care for someone outside of the home than those in different-gender relationships. Caregivers reported significantly higher depressive

symptoms, anxiety, and stress overload, even when controlling for age, race, gender, COVID disruption, and social support from friends, family, and the partner. Yet caregivers did not differ from non-caregivers in life-satisfaction and self-rated health. Caregivers reported feeling more worried than non-caregivers but did not differ in enjoyment or happiness. Prior to the conference we will determine whether social support moderates the negative effects of caregiving for disabled or elderly loved ones and examine changes in well-being drawing on a one year longitudinal follow up. This study demonstrates the importance of research on caregiving that considers critical life course concepts of age, linked lives and periods.

The Biological Consequences of Social Isolation and Loneliness

Presenter: Wanying Ling, University of Hong Kong

Co-authors: Tarani Chandola, Patrick Rouxel, University of Hong Kong

The effect of social isolation on increased mortality risk is more than double that of loneliness. However, much of research on the underlying biological mechanisms focuses on loneliness as a chronic stressor in relation to the Hypothalamic–Pituitary–Adrenal (HPA) axis functioning, with considerable inconsistency in the reported associations. Dysregulation of the HPA axis functioning is likely to be found at the extremes of the cortisol distribution, which necessitates the use of statistical methods that go beyond estimating effects at average levels of cortisol. This study examined the associations between loneliness and social isolation and HPA axis dysregulation among 3,678 older adults in the English Longitudinal Study of Ageing (wave 6). There was a diverging pattern of associations between social isolation/loneliness and hair cortisol. Social isolation was positively associated with cortisol at the highest levels of the cortisol distribution while loneliness was negatively associated with cortisol at the highest levels of the cortisol distribution. Moreover, it was the lonely older adults who were not depressed who had lower levels of cortisol, in contrast to the lonely but depressed older adults who had the highest levels of cortisol. Social isolation was also associated with greater levels of hair cortisone at the highest levels of the cortisone distribution. Additionally, social isolation interacted with cortisol resulting in higher levels of inflammation (C-Reactive Protein) for older adults with higher levels of cortisol who were socially isolated. Social isolation, rather than loneliness, is associated with HPA-axis dysregulation at the highest levels of the distribution of hair cortisol and cortisone. There was some evidence of glucocorticoid resistance leading to greater inflammation among older adults who were socially isolated with HPA axis dysregulation. Future research on loneliness among older adults should consider loneliness as an epiphenomenon, rather than a direct target of intervention to reduce mortality risk.

Linking Family Structure and Dynamics to Children’s Attitudes Toward School

Presenter: Yuka Temmyo, University of Zurich

Co-author: Kaspar Burger, University of Luxembourg

Positive attitudes toward school promote learning and academic performance and reduce the likelihood of school dropout, yet little is known about how these attitudes are formed. Recent pedagogical and psychological studies have focused on school engagement, which subsumes the aforementioned attitudes, but few have linked this engagement element to children’s early socialization in the family. The present study examines the development of children’s attitudes toward school in family contexts characterized by differences in processual quality (signified by close relationships and high parental educational expectations) and structural features. Guided by the theory of resource substitution and multiplication, this study also explores whether structural features modify the effects of processual quality on the attitudes of interest. Multilevel models are estimated using longitudinal, two-generation data from the Youth Development Study (N = 268 parents, N = 425 children). The analysis reveals that family processual quality significantly predicts positive attitudes toward school, whereas family structural features do not. Moreover, the number of siblings (a structural feature) modifies the impact of the quality of parent–child relationships (a processual feature) in shaping children’s attitudes toward school. Overall, this study suggests that family structures are less important than family processes in the development of positive attitudes toward school.

KEYNOTE 2

Family Life Course and Intergenerational Influences on Later-Life Health and Well-Being in Europe

Presenter: Emily Grundy, University of Essex

Stressors and supports across the life course are known to influence health, and differentials in health, in later life. Most life course research on later life inequalities in health has focussed on socio-economic determinants. However family and social connections and relationships are identified by older people as one of the most important domains influencing their quality of life and a growing literature shows that marital and fertility are associated with differential health trajectories. Effects of these influences may interact with socio-economic sources of advantage and disadvantage and vary by context. Life course events in one generation may also affect the well-being of other generations. Unravelling the extent of these associations is complex as, for example, family lineages share many attributes which may influence, moderate or confound associations between family exchanges and health. Issues of reverse causation and selection also need to be considered.

In this presentation I will consider some of the factors influencing the availability of close family for older people in Europe, examine how partnership and fertility histories may be associated with a range of health indicators of later life health, and how these interact with socio-economic differentials. I will also consider how these influences vary by welfare regime and between East and Western Europe. Finally, I will consider health effects of intergenerational co-residence as an example of effects of 'linked lives' on well-being of both older and younger generations. The presentation will draw on research undertaken with a range of collaborators, as well as other literature.

5A STREAM: HEALTH & WELLBEING 3

SYMPOSIUM

Recent Developments and Innovations in Child Cohort Studies in the UK

Convenor: Lisa Calderwood, University College London (SLLS Cohort Network session)

SUMMARY: Longitudinal cohort studies of children and youth are a core part of the survey infrastructure in many countries, and in the light of the COVID-19 pandemic there has been a renewed focus on such studies as vital evidence bases for child and adolescent research including on well-being, education and labour market. This session will cover recent developments in child and youth cohort studies in the UK. The presentations will cover the scientific content and design of these studies, as well as findings and progress so far.

TALK 1: The Children of the 2020s Study: Key Findings from the 9 Month Data Collection on Socio-Demographic Differences of Aspects of Early Childhood

Presenter: Marialivia Bernardi, University College London

Co-authors: Pasco Fearon, Lisa Calderwood, Alissa Goodman, Laurel Fish, University College London; Sandra Mathers, University of Oxford; Sarah Knibbs, Ipsos

Evidence indicates substantial and growing disparities in educational attainment and data from a range of studies indicate that these inequalities are established very early in development, long before formal schooling begins. In scientific and policy terms, it is critical to identify malleable risk factors linked to these early inequalities to inform policy and intervention. The Children of the 2020s is a nationally representative longitudinal birth cohort study of families across England commissioned by England's Department for Education, and is a collaboration between University College London, Ipsos, and the Universities of Cambridge, Oxford and Birkbeck. The main aim of the study is to examine how differences in the early life and home environment influence infant and child developmental competencies, including language, cognition and socio-emotional development, across the first 5 years. Fieldwork for the first wave of data collection took place between June and November 2022, where 8,623 families were recruited into the study when their child was nine months old. These families will be followed annually up to when their child is five years, with face-to-face data collection at nine months (Wave 1) and three years (Wave 3). Non-face-to-face modes will be administered using a sequential mixed mode design using online and telephone surveys when children are aged two (Wave 2), four (Wave 4) and five (Wave 5). The study will include in-home video observations of parent-child interactions, repeated between-wave longitudinal data collection using a specialised smartphone app, and innovative assessments of childcare settings at ages 3 and 4 years. Primary data collection will be supplemented by record linkage from UK Education and Health records. The talk will cover an overview of the study so far, and key findings from the 9-month data on the impact of socio-demographic differences on aspects of early childhood such as child health and development, parental wellbeing, childcare and service use.

TALK 2: Findings from a Feasibility Study of a New UK Birth Cohort Study: The Early Life Cohort Feasibility Study (ELC-FS)

Presenter: Alyce Raybould, University College London

Co-author: Lisa Calderwood, Alissa Goodman, Pasco Fearon, Karen Dennison, Erica Wong, University College London; Julia Pye, Sam Clemens, Ipsos

Longitudinal birth cohort studies are vital for understanding the development and outcomes of successive generations of children, though there is increasing recognition that often those families who are of most interest from a research and policy perspective are less likely to be recruited and retained in national studies. The UK Early Life Cohort Feasibility Study (ELC-FS),

funded by the Economic and Social Research Council, tested the feasibility of a new UK-wide birth cohort study of several thousand babies with a target age of 9 months. It is led by the Centre for Longitudinal Studies at University College London. The fieldwork, carried out by Ipsos, started in September 2023 in England, Wales and Scotland, and April 2024 in Northern Ireland. Fieldwork ended in summer 2024. The study has strong focus on inclusivity and is designed to maximise representation of ‘less often heard’ groups. It includes sample boosts of babies born into disadvantaged and ethnic minority families, as well as Scotland, Wales and Northern Ireland, and direct recruitment of fathers including those living in their own households. This was possible through the use of birth registrations as a sampling frame. The study involved interviews with mothers and fathers about children’s social and economic environments, their health, well-being and development. We also collected saliva and oral fluid swabs for DNA extraction with a randomised subgroup, and record linkage consents where we experimentally tested different consent wording. Interviews were carried out primarily face-to-face, with web, phone and video interviewing also used. We also included experiments to test the effectiveness of targeted differential incentives and conditional incentives. This paper will give an overview of the design and implementation of the ELC-FS. We will also present some early findings relating to response rates, data quality, and the experimental components of the feasibility study.

TALK 3: ELC+: Feasibility of a Scalable Biomarker Battery for Large Scale Cohort Studies

Presenter: Farah Ghosn, Birkbeck, University of London

Co-authors: Louisa Gossé, Francesca Penza, Emily Jones, Birkbeck, University of London; Mark Johnson, University of Cambridge; Sam Wass, University of East London; Bonamy Oliver, Alissa Goodman, Lisa Calderwood, Pasco Fearon, Jessica Van De Grint, University College London; Rebecca Reynolds, University of Edinburgh; Steven Ginnis, Lottie Hayes, Kavita Deepchand, IPSOS

Large-scale cohort studies seek to identify the environmental factors that influence child development and future outcomes. Although these factors act through changes in the child’s physical and brain development, cohort studies rarely include direct measurements of children themselves. Converging evidence from small samples indicate that markers of early brain development and physical growth vary as a function of family socio-economic circumstances, parental postnatal depression and obstetric risk, and that these markers can forecast future outcomes. However, lack of scalable tools has previously limited the use of biomeasures in large, representative and diverse population studies. Here, we test the feasibility of a home-based biomeasures protocol for inclusion in large scale cohort studies. We co-constructed a backpack-based protocol with key stakeholders, including measures of the brain (head circumference, wearable electroencephalography – sensory processing, spontaneous brain activity and connectivity), cognition (eye tracking – attention shifting, learning and social attention), physiology (actigraphy - movement, heart rate), physical development (adiposity, height and weight) and the proximal environment (in-home audio recordings). Fieldworkers (n=8) were trained to implement the protocol in infant homes across three waves of data collection. To date, n=74 infants (age range: 6-12 months, mean age: 9.68 months) have participated. Data collection for wave 3 is currently ongoing. Preliminary analysis indicates that data yields are high (100% of infants participating provided data on 2 or more biomeasures) and data quality is generally good. Cognition and/or brain measures were collected for 87% of infants respectively (wave 1: 88%, wave 2: 90%, wave 3 ongoing: 84%). These numbers are comparable to results from lab-based neuroimaging studies. In feedback interviews and questionnaires, parents were positive about the aims of the study and the included techniques. We will present initial qualitative and quantitative data and discuss the challenges and opportunities for this emerging research area.

TALK 4: Five to Twelve: A Cohort Study of Emerging Educational Inequalities Among Children at Primary School in England

Presenter: Martin Wood, National Centre for Social Research (UK)

Co-authors: Svetlana Speight, Franziska Marcheselli, Rebecca Light, Tom Bristow, Joshua Hodgkin, National Centre for Social Research (UK)

Five to Twelve is a new cohort study exploring education and wellbeing outcomes in children’s primary years. It is the second of the UK Department for Education’s Education and Outcomes Panel Studies series and will follow a nationally representative sample of 8,000 children in England as they progress through primary school from age 5 to 12. With a focus on educational inequalities, the selected sample included a boost of children in disadvantaged households, as identified by administrative data on eligibility for free school meals. The first wave of data collection is taking place throughout the 2023/2024 academic year. Parents of 5- and 6-year-olds are being interviewed face-to-face, with other parents / partners in the household and in their own household completing their own web interviews where applicable. Children themselves participate in a short set of cognitive assessments and a questionnaire about them is sent to their teacher. Parents and teachers will be interviewed at intervals over the course of primary school, with the children themselves interviewed at age 11. The study covers a broad range of topics including pupil behaviours and character, parental background, home environment, mental health and wellbeing, and relationships between parents and children. The combination of survey data about families and children from over four time points and linked administrative data from educational and other databases will enable the creation of powerful longitudinal databases. These will be archived for use by analysts. This presentation will set out key features of this exciting new study and report on the fieldwork experience at Wave 1, including response patterns and levels of participation for each component. The study is a collaboration between the UK National Centre for Social Research, National Children’s Bureau (NCB) and National Foundation for Educational Research (NFER).

5B STREAM: RESEARCH METHODS 2

SYMPOSIUM

Impact for Longitudinal Social Science Research: Towards a More Robust Approach to Theorising and Measuring the Influence of the Cohort Studies

Convenor: Charis Bridger Staatz, University College London

SUMMARY: “Impact” is a term that has become ubiquitous in academia, with widespread use across disciplines. Despite the regularity in which impact is mentioned, defining, and measuring it is not straight forward. Particularly for longitudinal and life course studies, where the undeniable value of these studies struggles to fit the mould of traditionally “narrow” impact definitions, and to keep up with the rapid timeline of the impact agenda. In 2023, The Centre for Longitudinal Studies (CLS) launched a new stream of work exploring the impact of the CLS cohort studies, led by integrated researchers, aiming to broaden understanding on what impact means for longitudinal studies and develop new frameworks in which this can be measured. This symposium will showcase this work, and how the “Impact Agenda” can be reconsidered for social science, longitudinal and life course studies. Through a critical review, conceptual analysis, and a qualitative analysis of stakeholder interviews, we highlight challenges of the impact agenda for longitudinal research. Using the CLS cohorts as examples, we outline novel approaches to track and measure the ‘impact’ of longitudinal studies, including a more theoretically and methodologically robust approach to case studies, and use of quantitative approaches such as scientometric and bibliometric analysis.

TALK 1: What is Impact? Defining a “Working” Definition for Longitudinal Data Infrastructure

Presenter: Charis Bridger-Staatz, University College London

Co-authors: Evangeline Tabor, Dylan Kneale, University College London

The “impact” agenda has been growing within academia for over a decade. Researchers across diverse fields will have some familiarity or grasp of what “impact” is and the importance it holds in the evaluation of their work, and for securing fundings and grants. There are positives that arise from the impact agenda, such as the increased consideration of the social effects of research and the ethical standards involved. However, there are also well-versed critiques, focusing on the culture generated from the impact agenda - one that prioritises, and values applied research with clear applications to public interest, and encourages academics to make grand, but often unsubstantiated, policy and impact claims in their work. As a field, “impact” is under theorised. The most common definitions of impact (e.g. Research Excellence Framework) emphasise the importance of generating measurable change outside of academia. This narrow stance neglects other important output, such as changes in discourse and development of theory. The expectation that a single piece of research will trigger immediate and measurable policy change is also often unrealistic, particularly for longitudinal research, where the “external impact” may take years or decades to emerge. Arguably, it is a definition not fit for purpose in demonstrating the full contribution of longitudinal and life course studies to society. Recognising this, broader definitions of impact should be considered, that account for the importance of “influence”, and recognise the many and multifaceted contributions of longitudinal and life course research to furthering society. This work therefore aims to (i) provide a critical review of existing definitions of impact in the context of longitudinal and life course studies, using the British Birth Cohorts as a case study, and (ii) to provide a working definition appropriate for longitudinal research, that incorporates “influence” into the discussion.

TALK 2: Quantitative Methods for Mapping “Impact”: Exploring the Impact of CLS’ Cohort Studies Using Scientometric and Bibliometric Approaches

Presenter: Charis Bridger Staatz, University College London

Co-author: Evangeline Tabor, Dylan Kneale, University College London

The Centre for Longitudinal Studies (CLS) is home to four nationally representative longitudinal studies, these being: the 1958 National Child Development Study; the 1970 British Cohort Study; Next Steps; and the 2000/2 Millenium Cohort Study. These studies have had undeniable impact in shaping academic discourse, and developing advancements in longitudinal and life course research, but quantifying this impact is often hard. Using scientometric and bibliometric techniques, we are exploring the impact the CLS data infrastructure has had across academic discourse and different academic fields, as well as the ability of the data infrastructure to facilitate research collaborations. We also intend to showcase these methods for other researchers wishing to apply them to their own work. Bibliometric analysis is the statistical study of publications and citation details, used to identify relationships between publications and authors. Scientometric analysis, although similar, is an objective method to map scientific knowledge and themes of research. Using the CLS bibliography to identify publications, we plan to analyse records from 2013 to 2023 (N ~3,250), representing a period where all four cohorts collected and released data. We intend to synthesis publications across multiple metrics: by study; by CLS’ core research themes (cognition, families, mental health, physical health, social inequalities, labour markets, genetics, and aging); and, by publication type. Additionally, we tend to explore emerging and dominant research themes within each cohort, common institutional collaborations, identification of knowledge gaps and underused data, and periodic changes in research theme focus (e.g. such as during the COVID-19 pandemic). By assessing the impact of the CLS data infrastructure, we intend to demonstrate the indisputable value of the CLS cohorts to scientific knowledge and research advancement, and the ability of these datasets to facilitate institutional collaborations.

TALK 3: Critical Approaches to Impact Case Studies

Presenter: Evangeline Tabor, University College London

Co-author: Charis Bridger Staatz, Dylan Kneale, University College London

Case studies have emerged as the standard tool of impact evaluation and communication. For example, they form the primary submission format in the Research Excellence Framework and Researchfish submissions. A large amount of related activity has emerged to prepare, plan, generate and analyse these case studies by impact evaluation specialists, as well as more critical voices. However, the case study is an established methodology within the social sciences with associated techniques and approaches which are rarely employed in the development of impact case studies. In this work we applied case study methods, for example document analysis and interviews, to the development of impact case studies. We then analysed these case studies for common themes and processes. We will present the findings from these case studies, with a particular focus on how and by what processes “impact” occurs. We will reflect on the challenges of constructing these case studies, with particular reference to examples using longitudinal studies, and possibilities of robust research methods for identifying lessons and pathways for impact. Impact as a field is currently under-theorised with poor methodology but this work is intended to highlight the possibilities of serious academic engagement with impact work.

TALK 4: Longitudinal Study Researchers’ Perspectives on Impact: A Qualitative Project

Presenter: Evangeline Tabor, University College London

Co-author: Charis Bridger Staatz, Dylan Kneale, University College London

Longitudinal studies form an invaluable part of the research landscape and have huge potential for activity relevant to society, health, the economy and the environment. As a result, they are theoretically well equipped to contribute to the growing literature on impact and impact evaluation within the academy. However, despite attempts to provide definitions and frameworks, impact remains a fuzzy concept which for most researchers is encountered in bureaucratic exercises such as Researchfish and the Research Excellence Framework. This paper explores how “impact” is understood, made, and communicated, as well as the limits of the current research impact landscape, for those working with longitudinal studies.

Methods: We conducted a series of semi-structured interviews with research and professional services staff who work with or maintain longitudinal studies in the UK. We asked them about their understanding of impact and their experiences of producing “impact examples”, with particular reference to the challenges and opportunities of longitudinal research.

Results: Understandings and perspectives of impact varied, with some rejecting the role of impact generation entirely. Respondents largely wanted their work to “make the world a better place” and were pragmatic regarding impact evaluation exercises. However, perceptions of impact evaluation and impact generation as a necessary evil persisted. Overall, while respondents were interested in the value of impact and influence more broadly, more narrowly defined generation, evaluation and reporting of impact dominated heavily.

Conclusion: While respondents were optimistic about the ability of longitudinal studies to make lasting contributions to scientific knowledge and in turn contribute to society more generally, respondents were more critical of previous attempts to evaluate these contributions. This work highlights the way impact agendas may be ill-suited to capturing the diverse and long-lasting contributions of scientific and research work, in particular that of longitudinal studies.

5C

STREAM: EDUCATION 2

INDIVIDUAL PAPERS

Health & Wellbeing in Education

TALK 1: Longitudinal Understandings of School Experience Among Students with Neurodevelopmental Disorders: A Multi-Methods Study Based on the Swedish SOFIA-Programme

Presenter: Evelina Landstedt, Karlstad University

Co-author: Åsa Olsson, Karlstad University

Educational attainment displays a strong inter-generational social gradient and is closely linked to access to resources across the life course. Consequently, level of education represents a key factor in economic, social and health related inequalities within and across generations. Means to reduce inequality include the promoting of equitable access to education and providing support to those at risk of school failure. Students with neurodevelopmental disorders (NDD) face increased risk of school failure and poor school attachment. Less is known about longitudinal patterns of school experience in relation to received special needs support in school, and the narratives of these students. Given the existing research focus on boys, there is a need to address gender patterns. The purpose of this planned multi-methods research project is to generate comprehensive knowledge on school experiences among girls and boys with diagnosed NDD, or displaying symptoms of NDD, from preschool to senior high school. School experiences include academic-, social-, and well-being related aspects from the perspectives of students themselves, their parents as well as teachers. The project is based on the Swedish SOFIA-study (Social and Physical Development, Interventions and Adaptation). Data on approx. 2 000 children collected at 7 time points between 2010 and 2024 (ages 3 – 18 years), include teacher, parental and student reports on behaviours, well-being, knowledge-development, special educational needs and provided support. Both person-based statistical approaches and regression models will be applied. Preliminary results (excl. w7) indicate that children with NDD are overrepresented among those in need of additional support in school, and they

report worse school attachment than their non-NDD peers. In wave 7, students with NDD will be invited to participate in qualitative interviews subsequently analysed by narrative approach. The Bronfenbrenner bioecological PPCT theoretical framework will inform analyses of both survey and interview results.

TALK 2: Impact of Electricity on Human Capital Formation in Peru: Evidence from Panel Data

Presenter: Kalyan Kumar Kameshwara, Westminster Business School

Co-author: Cristina Espinosa, University of Exeter

Studies examining the impact of electricity on various outcomes have focused on correlation and were not able to infer if the impact is de facto driven by electricity or other unobserved variables. We investigate the causal impact of electricity on outcomes of health and education, over a period of 15 years. This paper uses the rich panel data to exploit the variation across individuals and the overtime 'within' individual variation to estimate the impact of electricity on inequalities in outcomes, after controlling for other confounding characteristics. We employ the data from a longitudinal cohort study, Young Lives (2002-2016), that tracked 3000 children from two different cohorts in Peru over a period of 15 years followed across 5 waves. Young Lives study employed a multistage, cluster-stratified random sampling to select households randomly from different sites. We construct two-way fixed effects models that demonstrate a highly significant positive impact. This paper moves to focus on the consistency and unbiasedness of the estimators in light of potential threats to exogeneity. In order to push for a more robust causal inference by tackling the endogeneity problem, we use two approaches: (1) estimate using the outcomes as lagged variable. (2) Instrumental variable approach. We do this by exploiting the household shocks. We also highlight heterogeneity analysis to examine if the effects vary for different genders, class positions or ethnicity. The evidence presented in the paper make a strong case from a policy perspective to also prioritise the need for investing in high capital infrastructural projects (mainly electricity) over or along with tinkering in the realm of micro-interventions to induce behavioural changes. We make a case to argue against divesting in capital-intensive macro-projects that have a tremendous potential to improve human capital over a sustained period of time, especially in the context of developing countries.

TALK 3: Education and Midlife Cognitive Functioning: Evidence from the High School and Beyond Cohort

Presenter: Rob Warren, University of Minnesota

Co-authors: Chandra Muller, Koit Hung, University of Texas-Austin; Eric Grodsky, University of Wisconsin-Madison; Jennifer Manly, Adam Brickman, Columbia University

Introduction: Educational attainment is associated with midlife cognitive functioning. However, degree attainment is the culmination of complex and unequal processes involving students' backgrounds, the opportunities that schools provide them, and their performance within those schools – all of which may also shape midlife cognition. What do educational gradients in midlife cognition look like using a richer conceptualization of "education?"

Methods: We use data from High School and Beyond (HS&B:80) – a large, nationally representative sample of Americans followed from high school through age ~60 – to assess the role of education in stratifying midlife cognition.

Results: Schools' academic and socioeconomic environments predict midlife cognition primarily through their associations with their students' academic performance. Student academic performance strongly predicts midlife cognition, partially through its association with degree attainment.

Discussion: Inequalities in educational opportunities and in students' performance in schools shape midlife cognition more than the degrees they attain.

TALK 4: Child's Fluid Intelligence and Parental Education: The Mediating Role of Children's Mental Health

Presenter: Roberto Cavazos, University of Essex

Co-author: Edith Aguirre, University of Essex

Parental education has been consistently linked with variations in children's intellectual development, suggesting a potential intergenerational transmission of cognitive traits. In parallel, the Raven Progressive Matrices (RPM) test has long been regarded as a robust measure of fluid intelligence to capture innate cognitive abilities. There is some evidence of inter-relations between development of cognition and mental health in early childhood. In this study we investigate the dynamics between parental education, Raven scores, and children's mental health, aiming to elucidate potential underlying mechanisms shaping cognitive outcomes. We use data from Understanding Society, the UK Household Longitudinal Study, focusing on a unique subsample of around 1,700 children aged 10 to 15, who responded to the RPM test during wave 10 (2018- 2019). Children's mental health is measured by the Total Difficulties Score obtained from implementing the Strengths and Difficulties Questionnaire (SDQ) to the parents of these children when they were 8 years old. Structural equation modelling was employed separately for mothers and fathers to analyse the direct and indirect pathways linking parental education (our main explanatory variable), children's mental health (our mediating variable), and Raven scores (our variable of interest), controlling for child, parental and household characteristics. Results show a statistically significant mediation effect of children's mental health from maternal education on test scores. The direct effect of maternal education to child cognition was the strongest association about 20 times the magnitude of the indirect effect, which was also significant. The mediated proportion of the total effect is 0.04. No mediation effect was observed from paternal education. This research contributes to a better understanding of pathways to cognitive development shedding light on additional roles child's mental health may play.

TALK 1: Socio-Economic Disparities in Private Paid Tutoring During Primary and Secondary Education: Insights from Five Advanced Countries

Presenter: Hideo Akabayashi, Keio University

Co-authors: Yuriko Kameyama, Keio University; Shimpei Sano, Kobe University; Kayo Nozaki, Osaka University of Economics; Chizuru Shikishima, Teikyo University; Valentina Casoni, Elizabeth Washbrook, University of Bristol; Thorsten Schneider, Leipzig University; Lidia Panico, Sciences Po; Anne Solaz, INED; Jane Waldfogel, Columbia University; Sarah Jiyeon Kwon, University of Chicago

Private tutoring, commonly referred to as "Shadow education (SE)," has become a widespread phenomenon in Asian societies and is increasingly recognized as a global trend. Previous studies have extensively explored SE, examining its origins, prevalence, and impact on educational inequalities primarily using cross-sectional data collected at a single point in a child's life; however, this approach may not accurately capture the implication of tutoring across different societies and age groups. To deepen our understanding of the relationship between socioeconomic disparities, institutional background, and SE utilization, this study uses harmonized longitudinal data sets from five countries: the United States, the United Kingdom, France, Germany, and Japan. We explore how shifts in socio-economic disparity of the utilization of shadow education with age can be understood in light of the timing and type of institutional settings, including tracking systems, the degree of grade retention, and standardized tests, within the public education system. Preliminary findings from the regression analyses indicate that children with highly educated parents, holding a university degree or higher, are more inclined to utilize tutoring services in Japan, the United Kingdom, and France, albeit with variations. In Japan, the trend could be influenced by its tracking system, where children with highly educated parents often expect them to challenge for entrance examinations after primary school, while most children universally utilize tutoring services for high school entrance exams. In contrast, in Germany, children with low-educated parents tend to use tutoring services at the beginning of their elementary schooling, whereas those with highly educated parents gradually begin to utilize such services toward secondary education. By shedding light on these complex dynamics, the study aims to contribute to understanding the multifaceted nature of tutoring and its implications for promoting equitable access to education.

TALK 2: Longitudinal Pathways Between Socioeconomic Status and Educational Attainment: Mediation by Executive Functions and Processing Speed

Presenter: Kate Mooney, University of York

Co-authors: Rachael Cheung, Sarah Blower, University of York; Richard Allen, Amanda Waterman, University of Leeds

There are large and persistent social inequalities in children's educational attainment, with children from more socioeconomically disadvantaged families consistently having lower attainment. Despite this being widely reported, the mechanisms underlying the association between socioeconomic disadvantage and educational attainment are not well understood. It is important to understand the potential mechanisms by which socioeconomic disadvantage may impede on educational outcomes, as this knowledge could then be used to help target possible interventions to improve educational outcomes for socioeconomically disadvantaged children. Children's executive functions (including working memory and inhibition) and processing speed abilities may underlie these inequalities, however, the previous literature regarding this is limited. This study therefore examined the association between socioeconomic status and educational attainment via executive functions and processing speed, using UK cohort study data from Born in Bradford (n=4201; 28% White British, 56% Pakistani heritage, 16% Other; 54% Female). Socioeconomic status was measured before birth, executive functions and processing speed were measured in childhood (Mage=8.45 years), and educational attainment at Key Stage 2 was obtained through educational records (Mage=10.85 years). All models adjusted for child gender, age, language ability, ethnicity, and parent immigration status. Using a Structural Equation Model (SEM), we found that executive functions significantly mediated the association between SES and educational attainment (B=0.109), whilst processing speed did not. In a separate SEM examining different components of executive function, working memory significantly mediated the association between SES and educational attainment (B=.100), whilst inhibition did not. This study reveals working memory as a potential mechanism underlying the strong association between socioeconomic status and later educational attainment. Targeting working memory in a classroom setting has the potential to improve educational outcomes for children from socioeconomically disadvantaged families, hence, future research should test such interventions to establish whether these associations are causal.

TALK 3: What Drives Teacher's Recommendations? Testing the Relevance of Genetic Predispositions, Abilities, and Social Contexts

Presenter: Bastian Mönkediek, Bielefeld University

Co-authors: Tobias Wolfram, Anita Kottwitz, Bielefeld University

Teacher recommendations that are discussed to greatly influence students' track attendance have been regarded critically because they might be inaccurate concerning the evaluation of student's abilities. Being biased against students from disadvantaged backgrounds, teacher recommendations might facilitate the reproduction of educational inequalities. We conducted a behavioral genetic analysis to distinguish the contributions of student performance to teacher recommendation from the contributions of social background. We used data from the German Twin Family Panel (TwinLife) and utilized polygenic scores (PGS) for educational attainment. Our results suggested that social background influences on teacher recommendations are

limited and lower than for most other educational outcomes. Furthermore, there is an indication of passive gene-environment correlation, indicating that the provision of advantageous educational environments is correlated with genetic factors conducive to better school recommendations. Most variation in teacher recommendations related to underlying genetic influences partly mediated via non-cognitive traits, school grades, and parental education.

TALK 4: Employment Take-Up and Job Quality of Basic Income Support Recipients in Times of Technological Change and Migration

Presenter: Cordula Zabel, Institute for Employment Research (IAB)

Co-authors: Katharina Grienberger, Katrin Hohmeyer, Institute for Employment Research (IAB)

Many recipients of basic income support for jobseekers in Germany have low levels of qualification and either very little employment experience or long histories of cycling between unstable employment and unemployment (Bruckmeier/Hohmeyer 2018, Bruckmeier et al 2021, Zabel 2023). At the same time, the ongoing digital transformation is changing the requirements, tasks and quality of jobs. Technological change can exacerbate the situation of benefit recipients, in that work experience in jobs that have become substitutable is devalued, further diminishing their employment opportunities. In recent years, immigration has been the main factor influencing people's entries into basic income support in Germany. Many immigrants are likely to possess hidden human capital in the form of unrecognized educational degrees or employment experience in their country of origin. This could actually lead to higher employment entry rates for basic income support recipients without than with German citizenship. However, lacking formal qualification, it is likely that those without German citizenship primarily have access to low quality, unstable and substitutable jobs. To examine the influence of substitutability of previous employment and citizenship, we apply competing risk hazard models for entries into jobs of different quality, on the basis of largescale longitudinal administrative data for the years 2005 to 2020 (Dummert et al 2024).

5E **STREAM: PARENTHOOD & FAMILY**

INDIVIDUAL PAPERS **Reproduction & Birth**

TALK 1: Fertility, Marriage, and the Impact of Regional Youth Shocks

Presenter: Seraphim Dempsey, Economic and Social Research Institute (Ireland)

Co-author: Xhiselda Demaj, Ca' Foscari University of Venice

Can adverse labour market conditions experienced during youth, influence subsequent fertility and marital decisions? Using life-history data from the BHPS and Understanding Society, we investigate if exposure to regional unemployment rates at the age of 16, influence family formation decisions. To capture regional exposure, we link respondents to historical records of unemployment rates based on their reported place of birth. Observing all respondents at the age of 40+, we then estimate the effect of unemployment rates experience during youth on fertility (ever had a child, age when had first child), and marital status (ever married, age first married). We also investigate whether more localised or more aggregated regional unemployment rates are influential on subsequent family formation decisions. Here, we exploit variation in youth unemployment rates at the Government Office Region level, versus the Country level. Our findings show that more localised economic shocks have a bigger impact on family formation decisions. In particular, men are observed having negative fertility effects and are less likely to report ever having had a child.

TALK 2: Does Parental Mental Health Before Pregnancy Predict Infant Regulatory Problems?

Presenter: Ayten Bilgin, University of Essex

Co-authors: Edith Aguirre, Michaela Benzeval, University of Essex

Infant regulatory problems (i.e., excessive crying, sleeping or feeding problems) are challenging for parents and a source of concern during the early years. There is increasing evidence that they are also associated with an increased risk for psychopathology from childhood to early adulthood, with stronger effects for infants who experienced regulatory problems in two or three domains (i.e., multiple regulatory problems). However, little is known about the factors that could explain the development of infant regulatory problems. The current study aimed to investigate whether parental mental health before pregnancy predicts the development of infant regulatory problems. We used data from the UK Household Longitudinal Study, which is a stratified random sample of UK households in 2009, with additional ethnic minority boost samples. The current sample included 3,843 parents from waves 3 to 13 (2011-2012 to 2021-2022). Mothers reported on their infants' crying, sleeping, and feeding problems using two questions each, which were recoded to reflect problems based on criteria from the previous literature. Mental health symptoms of both mothers and fathers were assessed with General Health Questionnaire (GHQ-12) one wave before birth. Regression estimates are obtained separately for crying, sleeping, feeding problems, and multiple regulatory problems as outcome variables controlling for the impact of infant (e.g., sex, preterm birth), parental (age, employment status, education, ethnicity), and household characteristics (e.g., income, additional adults in the house). The analyses were performed separately for maternal and paternal mental health. Findings revealed that poor maternal mental health before pregnancy is associated with higher rates of all regulatory problems. However, paternal mental health before pregnancy had no impact on the development of regulatory problems. Our findings highlight that interventions should focus on the treatment of maternal mental health symptoms before pregnancy to help prevent the development of infant regulatory problems.

TALK 3: Avoidance, Awareness, or Acceptance: Parental Communication About Sexual and Reproductive Health and College Women's Contraceptive Behaviors

Presenter: Christie Sennott, Purdue University

Co-author: Laurie James-Hawkins, University of Essex

The life course stage of emerging adulthood is characterized by heightened risk to unwanted sexual and reproductive health outcomes. Young women in particular are disproportionately susceptible to STIs and unintended pregnancies. Sexual education programs often prioritize abstinence, leaving young people without information on how to avoid unwanted outcomes. In this context, parental communication about sexual and reproductive health (SRH) is vital to increase young women's SRH knowledge and contraceptive access. However, we know little about strategies used by parents to communicate about SRH with their daughters during adolescence and how these strategies may influence young women's later contraceptive behaviors. These dynamics are critical to understand because past research has documented links between attitudes and knowledge about contraception acquired during adolescence and later contraceptive behaviors. Therefore, in this study, we draw on 57 in-depth interviews with women attending a midwestern U.S. university to document young women's perceptions about the SRH communication strategies their parents took and examine how these strategies are tied to women's contraceptive behaviors in college. We take a life course approach to exploring these issues given the heightened SRH risks young women experience during emerging adulthood. Our findings highlight three sets of parental strategies that differ by communication style and content. In the avoidance strategy, parents generally ignore SRH issues, avoid having discussions about SRH with their daughters, and do not provide them contraceptive access. In the awareness strategy, parents communicate with daughters about SRH indirectly and often put them on birth control under the guise of controlling period symptoms or acne. Finally, in the acceptance strategy, parents talk openly about SRH issues and provide daughters' access to birth control. Each strategy influences young women's later contraceptive behavior in unique ways, with implications for their ability to avoid unwanted sexual and reproductive health outcomes during college.

TALK 4: Breastfeeding Practices and Child Adaptive Behaviour: Exploring Developmental Outcomes

Presenter: Edith Aguirre, University of Essex

Co-author: Mario Martinez-Jimenez, Imperial College London

A growing body of research suggests a correlation between breastfeeding and positive developmental outcomes in children, yet its full impact, particularly on practical skills, remains largely unexplored. Research has highlighted two main factors that could explain the impact of breastfeeding on child development: first, the nutritional advantages of breast milk, which contains specific fatty acids not found in formula milk, and second, the bonding and interaction between mother and child. In this study, we use data from the UK Household Longitudinal Study (UKHLS), to explore whether breastfeeding is associated with adaptive behaviour when children are age 3. We first employ an OLS model to examine the direct relationship between breastfeeding and adaptive behaviour. After controlling for various child, maternal, and household characteristics, our findings suggest a positive association, with breastfed children exhibiting higher adaptive behaviour scores compared to those who were not breastfed. Next, we conduct moderation analyses to determine whether breastfeeding mitigates the negative effects of low birthweight or preterm birth on adaptive behaviour. Our results reveal that breastfeeding does not significantly moderate the relationship between perinatal factors and adaptive behaviour, indicating that it does not appear to buffer against the developmental challenges posed by early-life conditions. Finally, we apply a sibling fixed effects model to account for unobserved family-level factors such as shared environment in the form of family dynamics and cultural background, or genetic factors. When these are considered, the association between breastfeeding and adaptive behaviour becomes not significant, indicating that family-specific factors play a more substantial role in shaping adaptive behaviour than breastfeeding alone. Although breastfeeding remains an important factor for overall child development, its impact on adaptive behaviour appears to be limited. This is consistent with existing research, which typically finds modest causal effects of breastfeeding on other indicators of child development.

5F STREAM: HEALTH & WELLBEING 4

INDIVIDUAL PAPERS Covid 19 (Impacts)

TALK 1: The Impact of the Covid-19 Pandemic on Generalized Anxiety Symptoms: Examining the Role of Genetic Predisposition and Pandemic Stressors

Presenter: Lena Weigel, Bielefeld University

Co-authors: Christoph H. Klatzka, Saarland University; Theresa Rohm, University of Bremen; Bastian Mönkediek, Bielefeld University; Charlotte K. Pahnke, Rana Aldisi, Andreas J. Forstner, Markus M. Nöthen, University of Bonn; Carlo Maj, University of Marburg

The Covid-19 pandemic has led to significant global health, social, and economic impacts. Several meta-analyses have shown that the Covid-19 crisis and the efforts to contain the virus have had a significant impact on mental health, leading to an increase in depressive and anxiety-related symptoms, mainly in the first phase of the pandemic. In particular, a spike in generalized anxiety symptoms was prevalent. This study investigates the development of anxiety symptoms throughout the course of the pandemic in a non-clinical sample. Using structural equation modeling and longitudinal data from the German TwinLife study (N = 2,482), our research focuses on how stressor-related perceptions of threat and burden during the pandemic mediate the development of anxiety symptoms while acknowledging individuals' genetic susceptibility to developing such symptoms and gender differences. The study aims to expand the understanding of pandemic-specific processes by incorporating pre-pandemic anxiety levels. By

investigating whether the influence of a polygenic score varies across the pandemic, the study contributes to the understanding of the pandemic having triggered genetic predispositions to develop anxiety symptoms. Results show that anxiety levels were relatively stable, showing that persons high in pre-pandemic anxiety symptoms tend to experience those symptoms during the pandemic. In contrast to other research, our data did not show a spike in anxiety symptoms during the pandemic. Regarding mediating factors, we find that greater perceptions of burden predicted heightened anxiety symptoms, while greater perceptions of threat predicted a reduction in anxiety symptoms. Looking at gender differences, females showed higher levels of anxiety at all time points and higher perceptions of burden and threat. The individual genetic susceptibility to anxiety symptoms, assessed through a polygenic risk score, was only predictive for the male model.

TALK 2: The Impact of the Covid-19 Pandemic on Negative Affect in Mid- and Long-Term in Switzerland: Pre-Registered Study Spanning 2018-2022

Presenter: Dawid Gondek, University of Lausanne

Co-authors: Marieke Voorpostel, Núria Sánchez-Mira, Teuta Mehmeti, University of Lausanne

Aims This paper examined to what extent pandemic-related exposures, falling under the umbrella of social determinants of health, were associated with negative affect in the mid- and long-term. **Methods** We drew on longitudinal data from five waves (spanning 2018-2022) of the Swiss Household Panel, which included pandemic-specific information collected in May-June 2020 (n = 5,657). Participants were asked about the impact of the Covid-19 pandemic on, among others: 1) perceived financial risk, 2) change in financial situation, 3) physical activity, 4) frequency of leaving home during lockdown, 5) volunteering, 6) relationships with neighbours, 7) worries, and 8) psychosomatic symptoms. Our outcome, negative affect (e.g., frequency of anxiety or sadness), was measured in 2020, 2021 and 2022. **Results** Our study showed that among examined pandemic-related exposures – a higher frequency of psychosomatic symptoms (e.g., sweating, breathing difficulties), greater worries (e.g., health, lifestyle) and concerns about perceived financial risk – were all strongly and persistently associated with higher negative affect up to two years after the Covid-19 pandemic had started. We also found that worsened relationships with neighbours and financial situation were associated with higher negative affect immediately post-pandemic, but improvement in these exposures had no effect. Finally, an increase in physical activity (but not an absolute frequency of exercising) was linked to lower negative affect in the short-term. These associations were robust to extensive confounding adjustment including socioeconomic situation, personality, lifestyle and pre-pandemic wellbeing. **Conclusion** Our study emphasises the importance of preventing pandemic-related worries and stress, as these can have long-lasting post-crisis consequences on people's wellbeing. Moreover, preventing decline in financial situation and relationships within community as well as adopting healthy lifestyle may have protective, albeit short-lasting, effects.

TALK 3: Covid-19 and Gender Inequalities at Home

Presenter: Janeen Baxter, Life Course Centre, The University of Queensland

Co-authors: Alice Campbell, Rennie Lee, Life Course Centre, The University of Queensland

Women's time on unpaid care and domestic work is a significant driver of continuing gender inequalities. Although Australia has made progress in increasing women's access to the paid labour force, women continue to earn less than men, are concentrated in specific industries and occupations, are under-represented at senior management levels, and are more likely to work part-time. Unequal gender divisions of labour at home underpin gender inequality in paid work. Early studies during the Covid-19 pandemic in Australia identified worsening outcomes in gender inequality as a result of the crisis. However, it is unclear whether gender inequality applied consistently to domestic and care tasks as well as for physical and non-physical elements of gender divisions of labour. We extend preliminary studies of gender inequality during Covid-19 and observe whether worsening trends continued after Covid-19 lockdowns were lifted. We begin our paper with a brief overview of the Australian context outlining key legislative and policy contexts relating to family, work and welfare and government responses to the pandemic. Using data from an ongoing household panel study (Households, Income and Labour Dynamics in Australia), we then assess the impact of the pandemic on gender inequality at home using difference-in-difference models. We assess the impact of Covid-19 lockdowns on several outcomes - domestic work, care work, time pressure, mental health, and role functioning. Our results show that Covid-19 temporarily widened the gender gap in most of these domains. Lockdown significantly increased care time and time pressure and decreased mental health and role functioning to a greater extent among mothers than fathers. Increases in time on unpaid domestic work were similar for mothers and fathers. Our findings further suggest that Covid-19 lockdowns had limited long-term effects. There is no evidence that men's increased time at home during the Covid-19 lockdown period has led to greater involvement in domestic and care work after the lockdowns. Overall, we find that gender divisions of labour appear to have returned to pre-Covid patterns.

6A STREAM: HEALTH & WELLBEING 3

SYMPOSIUM

Recent Developments and Innovations in Youth Cohort Studies

Chair: Line Knudsen, National Centre for Social Research (NatCen)

Longitudinal cohort studies of children and youth are a core part of the survey infrastructure in many countries, and in the light of the COVID-19 pandemic there has been a renewed focus on such studies as vital evidence bases for child and adolescent research including on well-being, education and labour market. This session will cover recent developments in youth cohort studies in the UK and Australia. The presentations will cover the scientific content and design of these studies, as well as findings and progress so far.

TALK 1: Tutoring in the Pandemic: Does it Widen or Reduce Education Opportunity? Insights from GENERATION

Presenter: Ben Edwards, Australian National University

Co-author: Maria Jahromi, Australian National University

The educational impact of the pandemic on foregone learning is particularly large for children from low socio-economic backgrounds (Betthäuser, Bach-Mortensen, & Engzell, 2022). Several countries have invested in tutoring – one-on-one or small-group educational instruction – to ‘catch-up’ on lost learning from the pandemic. In Australia, the two states with the most days of school closures – implemented tutoring programs in state government school systems during the pandemic that were targeted at students that were most of risk of learning losses due to school closures. However, the international and Australian evidence suggests that private tutoring on education is far more common in middle- and higher-income families (Enrich, 2020) potentially widening learning gaps. In this paper, we propose to answer the following questions

- What were the short-term impacts of school implemented and private tutoring during the pandemic on student motivation and student reports of their learning being impacted?
- Does the access and nature of tutoring during the pandemic close or widen educational equity? To answer these questions, we use data from Wave 1 and 2 of GENERATION – a new youth cohort following the students as they transition to life beyond school. We will describe the wave 1 and 2 methodology including the explicit focus on capturing equity policies. Our preliminary analyses suggest that ‘catch-up’ tutoring was targeted to students from equity groups, but private tutoring was used by students from higher SES families. Preliminary results from regression models suggested that ‘catch-up’ tutoring reduced the negative consequences of the pandemic on learning and increased students’ motivation. Our final analyses will include estimates of the impacts of private tutoring and incorporate a more extensive set of covariates to account for selection effects.

TALK 2: The Unequal Effects of the COVID-19 Pandemic on Young People’s Education and Wellbeing: The COVID Social Mobility and Opportunities Study (COSMO)

Presenter: Lisa Calderwood, University College London

Co-authors: Jake Anders, Xin Shao, Tugba Adali, University College London

COSMO is a major youth cohort study in England examining short-, medium and long-term impacts of the COVID-19 pandemic and cost-of-living crisis on educational inequality, wellbeing and social mobility. The study is the largest of its kind into the effects of these crises on life chances of a generation of young people. Carried out by University College London, Sutton Trust and Verian and funded by UKRI and ESRC, COSMO offers a combination of rich, representative, longitudinal survey data linked with administrative data. Two waves have been completed, W1 (age 16-17) and W2 (age 17-18) with around 10,000 young people and their parents through a mix of online surveys and targeted telephone and face-to-face follow up. Wave 1 focused on experiences of the pandemic, financial impacts in the home, disruption to schooling, access to home learning and school provision, attitudes to education, mental health and wellbeing, and GCSE assessment in 2021, post-16 transition, as well as the ongoing cost of living crisis, and aspirations for the future. Wave 2 focused on post-16 education and training pathways, higher education aspirations and career plans, and looked at change from Wave 1. We present findings using longitudinal data focussing on gender, ethnic and socioeconomic inequalities in young people’s experiences, and associations between COVID-19 experiences and short-term outcomes, including the interplay between pre-existing inequalities, pandemic experiences, and these outcomes. We also underline relevant policy implications. Our work demonstrates the importance of understanding ongoing and diverse impacts of the pandemic for education practitioners and policymakers and showcases the potential of COSMO data which is deposited on the UK Data Service.

TALK 3: Adapting Through Adolescence: Recent Experience of the Growing Up in Scotland Study

Presenter: Paul Bradshaw, 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. At launch, children in the study’s first birth cohort – born in 2004/05 – were 10 months old. Data was collected annually from then until age 6 providing a detailed picture of the children and their families over the early years period. Further data was then collected at ages 8, 10, 12, 14 and 17/18. The recent adolescent sweeps, at ages 14 and 17/18 conducted in 2019-20 and 2021-23 respectively, and the proposed approach for the forthcoming age 20-21 sweep in 2025, have seen the study undergo significant change in terms of content and methodological approach. These changes reflect the changing age of cohort members, developments in the use of mixed mode data collection and the challenges posed for data collection with young people in late adolescence/early adulthood. This paper will provide an update on the delivery of the study over recent sweeps covering the changes to our approach, reflecting on the success or otherwise of the approaches taken and raising points of consideration for other studies with participants at these stages.

TALK 4: Surveying Young People with Special Educational Needs: Reflections from the SEND Futures Discovery Phase Study

Presenter: Line Knudsen, National Centre for Social Research (UK)

Co-author: Samantha Spencer, National Centre for Social Research (UK)

Improving our understanding of the views and experiences of young people with special educational needs and disabilities (SEND) as they move through the education system is key for policy makers and researchers looking to address inequalities in educational experiences and outcomes. The Department for Education (England) commissioned the National Centre for Social Research (NatCen) to undertake a two-wave Discovery Phase study to inform plans to establish a large-scale longitudinal study with a population of children and young people with SEND. A key aim of the study has been to trial the use of different modes (web, telephone, face-to-face) and approaches to maximising response within groups often under-represented in surveys – specifically, ‘looked after’, or otherwise deemed vulnerable, those from lower income households, and those from ethnic minority backgrounds. With fieldwork now finished, the SEND Futures Discovery Phase study has collected data from or about more than 3,800 young people with SEND aged 12-14. This presentation will reflect on key learnings from the study and set out some key considerations for future studies with this population.

6B STREAM: RESEARCH METHODS 2 SYMPOSIUM

Examining Cognition Across Generations and the Life Course

Convenor: Vanessa Moulton, UCL Institute of Education

SUMMARY: A widely-used feature of the British birth cohorts, is the cognitive measures collected throughout childhood, adolescence and mid-life. A multitude of cognitive tests have been administered, but vary considerably pre-adulthood across the 1946, 1958, 1970 and 2001/2 cohorts, not least as they were originally devised for specific populations, reflecting age and period specificity. This symposium will begin by giving a very brief overview of the main cognitive tests available in the four British birth cohorts measured in childhood, adolescence, mid-life, and soon to be available measures in new sweeps, followed by three papers investigating cognitive ability across time and generations. The first outlines initial results from methodological work, a pilot study to investigate the comparability of a number of the cognitive tests used in the British birth cohorts administered to 10/11 year olds. The second, investigates the relation between body mass index across adulthood and cognitive ability in childhood and adolescence across three generations. The final paper focuses on the strength of the association between different cognitive domains (verbal and mathematical) from 1957-2018 in both childhood and adolescence.

TALK 1: Comparability of Cognitive Measures in Middle Childhood in Four British Birth Cohort Studies: A Pilot Study

Presenter: Vanessa Moulton, UCL Institute of Education

Co-authors: Hannah Jongma, Praveetha Patalay, Ruth Gilbert, George. B. Ploubidis, UCL Institute of Education

Cross-study comparisons of cognitive ability are challenging as there are no widely agreed-upon measures of cognitive ability and tests are frequently adapted over time. In this pilot study we conducted a preliminary investigation to understand the comparability of seven cognitive tests across different cognitive domains administered in the 1946, 1958, 1970 and 2001/2 cohorts at age 10/11. In all, thirteen different tests (including the BAS3) were administered to 72 pupils and the original tests and mode of administration applied. We expected some degree of positive correlation between all the completed tests (hypothesis 1) and correlations between tests from the same underlying constructs to be higher than tests across different cognitive domains (hypothesis 2). Also, we constructed three versions of ‘g’ (general ability) - psychometric ‘g’ (general ability) modelling the British Ability Scales (BAS3) to examine correlations with the general cognitive ability (GAT) administered in the 1946 and 1958 cohorts, and a composite of measures in the BCS70 (hypothesis 3). We also derived item characteristic curves (ICC) to examine period effects, and furthermore tested to identify any interviewer or order effects. All cognitive tests were positively correlated but varied in the strength of their associations ranging from $r=0.22$ to $r=0.82$. For verbal cognitive tests the association was strong ranging from $r=0.53$ to $r=0.72$, and even stronger for the non-verbal domain $r=0.62$ to $r=0.72$. The three different versions of ‘g’, the GAT (1946, 1958), composite ‘g’ (1970) and BAS3 ‘g’ were very strongly correlated with each other, ranging from $r=0.77$ to $r=0.82$. There was no discernible interviewer, order of administration or day of administration effects. The ICCs identified test items in the older cohorts which did not discriminate on ability, probably due to period specific factors e.g. language, which suggests an underestimation of the relationship between test scores.

TALK 2: The Association Between Childhood and Adolescent Cognitive Ability and Body Mass Index Across Adulthood: Preliminary Results from Three British Birth Cohorts

Presenter: Alice Deng, UCL Institute of Education

Body mass index (BMI) and obesity rates have increased sharply in recent decades. Prior studies have highlighted the potential contributing role of cognition on BMI. However, few studies have investigated the associations between early life cognition and BMI across the entirety of adulthood and also the changes in these associations over calendar time (i.e. cohort effects). Investigating changes over time is important—an increasing strength of association for example could suggest a need to simplify information provided to maintain or lose body weight. We investigate the associations between childhood and adolescent cognition and BMI at multiple ages across adulthood, using three British birth cohorts (born 1946, 1958 and 1970) to make cross-cohort comparisons. In each cohort, adulthood BMI was reported/measured at multiple ages and cognition via verbal reasoning/vocabulary and mathematical tests administered at age 10/11 and 15/16 (N=40,058). Multivariable regression models were used, regressing BMI at each age on cognition, separately in each cohort and for each cognition measure. Future iterations

will also use polygenic scores as an additional measure for cognition and include analyses of the 1946 cohort. In the 1958 and 1970 cohorts, higher childhood/adolescent cognition was associated with lower adult BMI, with the associations strengthening as age increased. The associations were stronger in the 1970 cohort after mid-adulthood (age 42 and 46) but weaker at younger ages compared with the 1958 cohort. For example, one SD increase in age 11 maths scores was associated with -0.34 (95% CI= -0.48, -0.20) unit lower BMI at age 46 in the 1970 cohort, while in the 1958 cohort this estimate was only -0.20 (-0.31, -0.10) at age 45. Findings suggest that cognition may be an increasingly important predictor of high BMI. Future studies should investigate the robustness of this association and its underlying mechanisms.

TALK 3: The 'Cognition Puzzle': Weakening of the Correlation Between Cognitive Test Domains from 1957-2018

Presenter: David Bann, UCL Institute of Education

Co-authors: Vanessa Moulton, Liam Wright, UCL Institute of Education

A central finding of intelligence research is that scores on cognitive tests are strongly positively correlated with one another (the 'positive manifold'). This has been well replicated in diverse samples, yet such differences between studies impairs investigation of whether the strength of these correlations has changed across time. The finding that secular increases in cognition (the 'Flynn' effect) differs by cognitive domain would imply that such correlations have weakened. There are however limited large-scale comparative data sources available to test this over long timespans, and fewer still nationally representative samples. In this study we leveraged data from four longitudinal British birth cohort studies, including the Millennium Cohort Study (MCS), and examined correlations between scores on verbal ability and mathematical ability at 10-11 years and 14-17 years. Across multiple specifications, we find that correlations between scores on different cognitive tests markedly weakens across time. For example, the correlation between verbal and mathematical ability at 10/11 years (r) was 0.30 (95% CI: 0.28, 0.32) in the 2001c, 0.55 (0.54, 0.57) in the 1970c, 0.77 (0.76, 0.78) in the 1958c, and 0.73 (95% CI = 0.71, 0.75) in the 1946c. This cross-cohort change was similar across the different tests and ages examined; it was robust to adjustment for parental social position, and sensitivity analyses which sought to account for some of the cohort differences in testing procedures used in each cohort. Further evidence is needed to test the robustness of this trend and, if upheld, its underlying causes. A decline in correlations between cognitive domains is a challenge to the notion that cognitive test scores are universally strongly positively correlated with each other, and potentially further evidence for the environmental modifiability of cognitive performance.

6C **STREAM: EDUCATION 2** **INDIVIDUAL** **Education & Migration** **PAPERS**

TALK 1: Immigrant Optimism in Ireland: Parental Expectations of Children's Educational Attainment

Presenter: Mengxuan Li, Trinity College Dublin

Co-author: Yekaterina Chzhen, Trinity College Dublin

Ireland has a relatively short history of net immigration, with comparatively high skilled immigrants and the highest educational attainment within general population in EU. This study investigates into the 'Paradox of Immigrant Optimism' in Ireland, focusing on the educational expectations immigrant parents hold for their children, and how these expectations compare to their children's actual academic achievements. Using longitudinal data from the 'Growing Up in Ireland' (GUI) 2008 birth cohort studies, alongside the Program for International Student Assessment (PISA) 2022, we examine whether having immigrant background influences parental aspirations for their children's attainment of tertiary education. We investigate the relationship between parental expectations and children's education outcomes, cognitive abilities and socio-economic status across parents' region of birth. Preliminary findings indicate that immigrant parents generally maintain higher educational expectations for their children than Irish-born parents, even after accounting for socio-economic factors and children's PISA test scores. And the migration background differences in educational expectations were larger at lower levels of children's PISA test scores. The GUI data reveal this pattern persists regardless of the child's prior cognitive performance, with expectations being more optimistic among certain immigrant groups, despite lower levels of children's prior cognitive scores. It suggests that Irish parents as well as immigrants from the UK and Western Europe, have more realistic expectations of their children's educational attainment than their counterparts from other world regions, whose expectations are overly optimistic. This paper contributes to our understanding of how educational aspirations differ among immigrant and native families in Ireland and how these expectations align with the normative ideal of equal opportunity in education. The results have significant implications for educational policy, particularly in addressing the challenges faced by immigrant families in a rapidly evolving Irish demographic landscape.

TALK 2: Effects of Internal Migration on the Life Satisfaction of Students in Higher Education

Presenter: Rafael Warkotsch, German Centre for Higher Education Research and Science Studies

Co-author: Nicolai Netz, German Centre for Higher Education Research and Science Studies

As higher education (HE) institutions are clustered in urban areas and students frequently change their HE institutions, internal (within-country) migration is widespread among HE students. While many studies examine the determinants of internal migration among students, very few studies consider its outcomes. We particularly lack studies assessing the influence of internal migration on students' life satisfaction (LS). There is a nascent literature studying the effects of migration on LS. However, this literature uses broad samples of adults, thus disregarding the coupling of migration with age-specific life events, such as entering HE or changing the HE institution. Therefore, its results are not readily transferable to the HE life stage. We narrow this research gap by exploring the LS trajectories of HE students who migrate internally when entering HE, change their HE institution during their studies, or do

not migrate. Based on social production functions theory and rational choice theory, we expect higher increases in LS levels for both types of internally migrating HE students compared to stayers. We also hypothesize that different factors determine the subjective utility of internal migration and, therefore, its effect on the LS of students, including their social origin, prior school and study achievements, and the availability of HE institutions in the departing region. Using data from the German National Educational Panel Study (NEPS), we estimate fixed-effects panel regressions to model students' LS trajectories over the duration of their studies. Thereby, we illustrate the temporal pattern of the LS of students from different social and regional backgrounds and with different academic attainments while controlling for unobserved characteristics. Our results highlight the individual-level effects of internal migration and exemplify the importance of considering the coupling of simultaneously occurring life events such as internal migration and the transition to HE.

TALK 3: Occupational Aspirations and Outcomes: How Important is Migrant Status in Australia?

Presenter: Jenny Chesters, University of Melbourne

Researchers examining the occupational aspirations of secondary school students typically find that migrant students tend to be more likely than their non-migrant peers to hold aspirations for occupations requiring high levels of education. This is the case even after academic ability is taken into consideration. The high aspirations of migrant students have been linked to their parents' high expectations for their children to achieve social mobility through education and occupation coupled with unfamiliarity with the education system in their new country. Cultural and Social Capital theories suggest that migrant students are somewhat disadvantaged due their parents' being educated in their country of origin and having smaller and less culturally rich social networks. Underlying the interest in the aspirations of migrant students is the view that migrants are an 'equity group', that is, they are underrepresented in higher education. Australia is an interesting case to study due to half of the population being either first- or second-generation migrants and the government's immigration policies which preference highly skilled applicants. The availability of panel data from the Longitudinal Surveys of Australian Youth (LSAY) allow for an examination of the likelihood that occupational aspirations will be achieved. Analysis of data from the LSAY2015 cohort confirms that after controlling for academic ability and socioeconomic background at age 15, migrant students are more likely to hold aspirations for professional and managerial occupations than their non-migrant peers. Furthermore, at age 22, migrant students are more likely than non-migrant students to have completed a university degree or be studying at university. In other words, they are more likely to be on track to achieve their occupational aspirations.

6D STREAM: EDUCATION & EMPLOYMENT

INDIVIDUAL PAPERS Health and Wellbeing in Employment

TALK 1: The Relation Between Occupational Mobility Into and Out of Leadership Positions and Subjective Well-Being

Presenter: Dominik Becker, Federal Institute for Vocational Education and Training (BIB)

Co-author: Steffen Hillmert, University of Tuebingen

Individuals' subjective well-being (SWB) is often considered a direct reflection of their perceived utility. Subject to biographical change, SWB establishes a crucial topic of lifecourse analysis. While much research has explored the impact of intergenerational social mobility on SWB, intragenerational (occupational) mobility has received less attention. Existing evidence indicates that upward mobility generally enhances SWB, with adverse effects for downward mobility. An important yet understudied aspect relates to individuals' mobility into or out of leadership positions. Examining the role of leadership positions would allow for a more comprehensive understanding of the mobility process, capturing essential facets (e.g., empowerment or accountability) that may have been overlooked by traditional metrics such as social class or occupational prestige. We address corresponding research gaps by analyzing occupational mobility effects on SWB, focusing on movements into and out of leadership positions. Additionally, we investigate the extent to which working conditions function as a mechanism through which respective effects of occupational upward or downward mobility are passed on. We use the German Socio-Economic Panel (GSOEP, 2007-2019) to analyze individuals' occupational trajectories. From GSOEP, we retrieve a dichotomous measure of whether individuals currently hold a leadership position, along with indicators of their SWB encompassing both life and job satisfaction. Concurrently, shifts in working conditions are assessed using indicators derived from occupation-level job tasks, integrated into the GSOEP from the BIBB/BAuA Work Employment Survey. Preliminary analyses, employing fixed-effects regressions, suggest that mobility into leadership positions is positively related to both indicators of SWB. For life satisfaction, the beneficial effects of leadership positions can be explained by traditional social class and prestige measures – a relationship that is not equally observed for job satisfaction. Our next steps will involve a thorough exploration of the potentially transmitting role of working conditions as well as additional robustness checks for potential reverse causality.

TALK 2: How Does Flexible Working Influence Men's and Women's Housework and Well-Being? Findings from the UK Household Longitudinal Study

Presenter: Baowen Xue, University College London

Background: Organisations and policymakers are increasingly developing policies to give workers better rights to work flexibly. In the UK, the 'right to request' flexible work policy has gradually been extended over the past decade and as of June 2014 is available to all employees who have been employed for at least 26 weeks. We aim to assess how the use of flexible working has influenced men's and women's housework and well-being and whether the 2014 policy reform has been effective in increasing the uptake of flexible working. Methods: Data come from the UK Household Longitudinal Study (2010- 2020). Using fixed effects models, we

investigated the relationship between uptake of flexible working and hours spent on housework, sharing of housework, psychological distress, mental health functioning, overall life satisfaction and satisfaction of leisure time, for men and women separately. We applied a difference-in-differences (DiD) method to estimate the average treatment effects on the treated (ATT) of the 2014 policy reform on the uptake of flexible working (sample N=6846). Results: Fixed effect model showed that the use of flexible working was associated with increased hours of housework for both men (0.15h/w, p=0.007) and women (0.31 h/w, p<0.001) as well as women's share of housework (0.81%, p<0.001). The uptake of flexible working was associated with decreased psychological distress and improved mental health functioning for both men and women. It did not influence overall life satisfaction but improved satisfaction with leisure time for both men and women. DiD methods show that the 2014 policy reform only slightly increased the use of flexible working for women but not for men. Conclusions: Working men and women may benefit from flexible working on mental health and satisfaction with leisure time. However, gender natural flexible working policy may increase gender inequalities in divisions of housework.

TALK 3: The Effects of Women's Work-Family Histories on Their Own and Their Spouse's Well-Being in Older Couples Living in England: The Mediating Role of Spousal Support

Presenter: Jingwen Zhang, University of Sheffield

Co-authors: Georgia Chatzi, James Nazroo, University of Manchester

Work and family life courses are found to impact marital quality and well-being in later life. However, little is known about the crossover effect of women's work-family histories on their spouse's well-being and the role of spousal support in this relationship. This study aims to investigate spousal support as a potential mediation pathway between women's work-family histories and their own and their spouse's well-being in later life. Dyadic data from 1,800 couples (3,600 individuals) aged 50 and older from the Main and Life History Interview of Wave 3 (2006/07) from the English Longitudinal Study of Ageing were used. Multichannel sequence analysis was employed to identify work-family histories and seemingly unrelated regression combined with mediation models were used to address the interdependence of the well-being within couples, as well as to investigate the mediating role of spousal support on well-being variables, including depressive symptoms (CESD), quality of life scale (CASP15), and satisfaction with life scale (SWLS). Seven distinct types of women's work-family histories emerged with those in part-time employment who had 'family on-time' (19%) being the most prevalent, while those in full-time work without children (11%) were the least prevalent. The latter group and those with flexible employment and early family perceived a higher level of spousal support. Total indirect effects in women in full-time work without children [CESD: $\beta=-0.10(-0.18,-0.17)$, CASP15- $\beta=0.65(0.17,1.15)$, SWLS - $\beta=0.72(0.17,1.28)$] and those in a career break and early family [CESD: $\beta=-0.78(-0.16,-0.01)$, CASP15: $\beta=0.05(0.01,0.90)$, SWLS: $\beta=0.55(0.03,1.07)$] showed better well-being scores compared to those in part-time employment and late parenthood. Similar effects were not found for men's spousal support and well-being scores. We found that women in full-time work, without children and those with a flexible career and early family had higher spousal support and this might explain the association between women's work-life circumstances and well-being in later life.

TALK 4: Taking the Long View of Adolescent Work Quality

Presenter: Jeremy Staff, Penn State University

Co-author: Jeylan Mortimer, University of Minnesota

Widespread concern about potential negative consequences of adolescent work for future attainments is among several factors limiting teen employment in the United States and other countries. Early work may constitute the groundwork for the development of enduring vocational orientations and the capacity to address workplace opportunities and demands. As such, early jobs could foster maladaptive responses, inhibiting future career progress, or propel teenagers toward beneficial work experiences. Despite the notion that most teens work in "adolescent jobs" with negative job conditions (Greenberger & Steinberg, 1986), pioneering research conducted by the Youth Development Study (YDS), when teen employment was near its peak in the early 1990's, found differences in intrinsic and extrinsic features of teen jobs as well as negative work conditions (Mortimer, 2003). Recent studies confirm these findings (Rauscher et al., 2013). Thus, unlike most research that highlights teenage investment (hours) in paid work, we ask, do job dimensions reflecting mid-adolescent work quality predict the same experiences during the ensuing occupational career? Using longitudinal YDS data (N=711 individuals over 3,164 occasions) and hybrid panel models to control unobserved time-stable selection influences, we find substantial continuity of work quality. Six adolescent work dimensions (autonomy, learning opportunities, chances for advancement, hourly pay, wage satisfaction, stress) significantly predict the same dimensions of adult work, measured in seven waves from age 21 to 46, when controlling educational attainment and other time-varying adult confounders. The findings indicate the importance of monitoring the effects of early work in more recent cohorts, as employment may have different consequences in an era when youth employment rates are lower, and when youth work for shorter durations of time. Our findings also suggest that attempts to improve the quality of youth jobs will have long-term impacts, extending through the course of adult careers.

TALK 1: Linking Family Structure and Dynamics to Children's Attitudes Toward School*Presenter: Yuka Temmyo, University of Zurich**Co-author: Kaspar Burger, University of Luxembourg*

Positive attitudes toward school promote learning and academic performance and reduce the likelihood of school dropout, yet little is known about how these attitudes are formed. Recent pedagogical and psychological studies have focused on school engagement, which subsumes the aforementioned attitudes, but few have linked this engagement element to children's early socialization in the family. The present study examines the development of children's attitudes toward school in family contexts characterized by differences in processual quality (signified by close relationships and high parental educational expectations) and structural features. Guided by the theory of resource substitution and multiplication, this study also explores whether structural features modify the effects of processual quality on the attitudes of interest. Multilevel models are estimated using longitudinal, two-generation data from the Youth Development Study (N = 268 parents, N = 425 children). The analysis reveals that family processual quality significantly predicts positive attitudes toward school, whereas family structural features do not. Moreover, the number of siblings (a structural feature) modifies the impact of the quality of parent-child relationships (a processual feature) in shaping children's attitudes toward school. Overall, this study suggests that family structures are less important than family processes in the development of positive attitudes toward school.

TALK 2: Multigenerational Association of Education Through Shared Lifetimes and Co-Residence*Presenter: Hiroshi Ishida, University of Tokyo**Co-author: Misaki Matano, University of Tokyo*

Sociologists have long been intrigued by the potential influence of grandparents on the life trajectories of their grandchildren, recognizing its significant implications for the reproduction of inequality and life chances across multiple generations. Previous studies indicate that grandparents' socio-economic characteristics can impact the socio-economic achievement of grandchildren, even when accounting for parental factors. This study aims to explore two research questions: (1) Is there a correlation between the educational attainment of grandparents and that of grandchildren, while controlling for parental education? (2) Do grandparents transmit their advantages and disadvantages through shared lifetimes and co-residence? With the extended life expectancy of grandparents, there is now a greater opportunity for prolonged interactions and shared experiences between grandparents and grandchildren than in previous generations. Co-residence, in particular, provides a context for more frequent and intimate interactions between grandparents and grandchildren compared to when they live separately. This study uses data from the Life Reflection Survey on Parent-Child Relationships, a nationally representative survey conducted in Japan between 2019 and 2020, targeting individuals aged 60 to 69. The survey collected information regarding the socio-economic status of respondents, their parents, and their children, as well as details about the dynamics of their relationships. The findings reveal a significant correlation between the educational attainment of grandparents and that of their grandchildren, even after controlling for parental education. Moreover, this association appears to be more pronounced when grandparents are alive at the time of the survey compared to when they are deceased, and it is particularly robust when grandparents and grandchildren reside together, as opposed to living separately. These findings suggest that the enhanced opportunities for interaction between grandparents and grandchildren play a significant role in facilitating increased socialization and the transmission of cultural capital from one generation to the next.

TALK 3: Social Class or Social Foreground: Understanding the Link Between Adult Children's Education and Parent Mortality*Presenter: Shawn Bauldry, Purdue University**Co-author: Joseph D. Wolfe, University of Alabama at Birmingham*

Introduction: A growing body of research documents a relationship between adult children's education and parent health, an inversion of the much more frequently studied transmission of resources from parents to their children. In this study we examine the extent to which social class as indicated by wealth both confounders and moderates the link between adult children's education and parent mortality.

Methodology: We draw on the 2000 to 2020 waves of the Health and Retirement Study (HRS), a nationally representative sample of adults ages 50 and older in the United States, for our analysis. The HRS includes a census of the children of the respondents beginning in 2000 that documents levels of education as well as other characteristics. We construct a measure of adult children's education based on the highest level of education among any of the parents' children. In addition, the HRS includes detailed information on levels of wealth of respondents and has been linked with National Death Records to document mortality. We use Cox proportional hazards models to establish net associations and parametric survival models to examine median ages of death for different subpopulations to assess the moderating effect of wealth.

Results: Preliminary results indicate that adult children's education maintains an association with parent mortality after adjusting for parent wealth (and a number of additional parent and adult children characteristics). For instance, parents with at least one adult child with a college degree have a 21 percent lower hazard of mortality than parents with no children with at least a college

degree. In addition, we find evidence that wealth interacts with adult children's education such that having more educated children has less of an association with parent mortality for respondents with higher levels of wealth.

Conclusion: Incorporating wealth into analyses of adult children's education and parent mortality provides additional insight into multigenerational process linking socioeconomic position and health.

TALK 4: Accumulation of Sibling Complexity Over 16 Years and Its Impact on Mental Health and Education

Presenter: Lauren Bishop, University of Helsinki

Co-authors: Philipp Dierker, Max Planck Institute for Demographic Research; Pekka Martikainen, Liina Junna, University of Helsinki

Compositional family change under the second demographic transition has led to increasingly complex kinship experiences for children. Most prior research on family complexity centres on the impact of parental partnership transitions—typically union dissolution—on children's social- and health-related outcomes. However, family complexity also affects the sibling constellation, yielding sibships containing full, half-, and/or stepsiblings. The impact of such constellations on subsequent wellbeing largely remains unclear. This study therefore examines associations between accumulated sibling complexity and mental health and education using a total population sample of children born between 1990–1996 and residing in Finland between ages 0–23 (n=420,275). Using administrative register data, we identify the index children's biological parents, parents' coresident partners, and all children from those unions—the index children's full, half-, and/or stepsiblings—from birth to age 16. Using sequence analysis, we create an index reflecting the unpredictability and uncertainty of individual sibship experiences. The index is based on eight possible sibship states, ranging in complexity from having zero or only full siblings to constellations including half- and/or stepsiblings. Beyond the traditional sequence complexity index, we construct weighted (precarity) indices that differentiate between typical and potentially disadvantageous sibship transitions. The weighted indices are subsequently used to investigate whether experiencing complex sibling constellations is detrimental for mental health or educational attainment (ages 17–23), relative to having a stable sibship. Given that existing evidence on family dynamics suggests an association between family complexity and stress, we expect poorer mental health among those who experienced sibships with more transitions, net of other sociodemographic factors. We further expect that accumulated sibling complexity will be negatively associated with educational attainment. These findings will highlight differences between detrimental and beneficial sibling constellations to advance understanding of the role of sibling complexity for mental health and socioeconomic outcomes in early adulthood.

6F **STREAM: HEALTH & WELLBEING 4**

INDIVIDUAL **Care**
PAPERS

TALK 1: Inequalities in Wellbeing Around Becoming a Young Carer in the UK

Presenter: Alejandra Letelier, St. George's University of London

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

Introduction: Caring responsibilities can profoundly affect the wellbeing of young carers. This paper distinguishes itself by adopting a longitudinal approach, offering a comprehensive analysis of both the immediate and long-term wellbeing effects of becoming a young carer. Objective: To investigate the longitudinal effect of becoming a young carer on individuals' wellbeing, compared with peers who are not young carers, examining how this effect varies according to the intensity of care (weekly hours spent caring), gender, ethnicity, and socioeconomic position. Methods: This study utilized data from the UK Household Longitudinal Study, focusing on individuals aged 10–25 from Waves 1 through 13 (2009–2023). Wellbeing was measured via self-reported life-satisfaction and self-esteem. Employing Propensity Score Matching, carers were paired with non-carers. Linear piecewise growth curve modeling examined wellbeing trajectories pre-, during, and post-caring. The analysis included 4,202 individuals, examining the trajectories of carers versus non-carers, with further stratification by care intensity, gender, ethnicity, and household income. Results: Wellbeing diminished at the transition to care, with a more pronounced decrease observed in young carers compared to non-carers, and with those undertaking high-intensity caregiving reporting lower life satisfaction and self-esteem than their low-intensity peers, a trend persisting post-transition. We found declines in life satisfaction and self-esteem for both males and females, with no significant gender differences. During the transition to care white carers report lower wellbeing than white non-carers, whereas carers from other ethnic groups exhibit similar levels of wellbeing to non-carers during and after transition to care, underscoring the diverse impact of caregiving across different demographics. Furthermore, carers from lower-income households reported diminished wellbeing at the transition to care. Conclusion: The findings reveal that young carers experience a decline in wellbeing during their transition into caring, a decline that is more pronounced than that experienced by non-carers. This effect is particularly pronounced for those providing intense care, and individuals from socioeconomically disadvantaged backgrounds.

TALK 2: Young Carers and School Engagement: Evidence from the UK Household Longitudinal Study-National Pupil Database Linkage

Presenters: Rebecca Lacey, Alejandra Letelier, St. George's University of London

Co-author: Anne McMunn, University College London

Background: Young carers, defined as young people aged 5-24 who are providing unpaid help to someone because of disabilities, mental and physical health problems or addiction, are a frequently overlooked group of carers. Recent work from the UK Household Longitudinal Study shows that around 12% of young people report caring responsibilities. Longitudinal research on young carers to date has been extremely limited. There have been no longitudinal studies to date which have examined whether young caring impacts on education. Cross-sectional evidence suggests that young caring impacts on school attendance, exclusions and exam grades, and that schools play an important role in identification and support of young carers. Objective: To understand associations between young caring and education outcomes, including educational attainment and school engagement (absences and exclusions). Methods: We use the UK Household Longitudinal Study, a household panel study that started in 2009 which has self-reported information on caring status. This dataset has been linked to the National Pupil Database – an administrative education dataset capturing objective education outcomes, including key stage attainment scores plus exclusions and attendance for children and young people in England. We make use of this linkage to examine longitudinal associations between young caring and education engagement (absences and exclusions) and attainment. We will also examine whether there are particular groups of young carers that are particularly disadvantaged, including those with special educational needs and those from more socioeconomically disadvantaged households. Results: We hypothesize that young carers will have lower levels of school attendance and higher rates of school exclusion than their peers who are not carers. Young carers will also have lower attainment scores across key stages. Conclusions: This study will provide important new longitudinal information on the educational impact of being a young carer, and the particular groups of young carers who are most disadvantaged.

TALK 3: The Relationship Between the Transitions in Unpaid Care and Health Behaviours Across the Lifecourse

Presenter: Enrico Pfeifer, University College London

Co-authors: Anne McMunn, Hynek Pikhart, Sue Brown, Baowen Xue, University College London; Rebecca Lacey, St. George's University of London

Background: In the UK, demographic and epidemiological shifts have led to an increase in unpaid caregiving, yet its impact on caregivers' health behaviours remains underexplored. Existing evidence often focuses on older caregivers and is constrained by cross-sectional or small-scale longitudinal studies. Aims: This project aims to investigate the relationship between caregiving transitions and health behaviours. For this, the project will use data from the UK Household Longitudinal Study ('Understanding Society') to examine the trajectories of health behaviours when participants transition into the role of a caregiver, when caregiving ends and when caregiving intensity increases. Theoretical framework: For this project, an interdisciplinary conceptual framework has been developed that encompasses caregiving role theory and health behaviour theory. Additionally, the lifecourse perspective is applied and models will be stratified by gender and lifecourse stage. Methods: This project is a secondary data analysis using quantitative data from the nationally representative UK Household Longitudinal study. The study contains information on caregiving characteristics and health behaviours. To allow a rigorous comparison between caregiving and non-caregiving participants, participants will be matched via propensity score matching and entropy balancing. To assess the patterns of change before, during and after a caregiving transition, piecewise growth curve models will be employed to depict these trajectories. Preliminary Findings: For smoking, 8,485 participants transitioned into care during 9 waves and observations and were matched with 17,747 non-caregivers. The trajectories of the probability of smoking remained stable in individuals not entering caregiving while these trajectories show a noticeable increase for those transitioning into caregiving. This analytical approach will be repeated for physical activity, healthy diet as well as alcohol consumption. Funding: This project is supervised by Prof. Anne McMunn, Dr. Rebecca Lacey and Prof. Hynek Pikhart and Dr. Baowen Xue and funded through the UBEL-DTP (ESRC).

TALK 4: Out-of-Home Care and Maternal Mental Health: Exploring Disparities in Trajectories and the Mediating Roles of Adult Socio-economic, Health and Psycho-Social Outcomes

Presenter: Jeongeun Park, University of Sussex

Co-authors: Lisa Holmes, University of Sussex; Bethan Carter, University of Cardiff; Eva Sprecher, University College London

Care-experienced mothers refer to those who have previously been in the care or supervision of Children's Social Care Services, before their 18th birthday (also known as out-of-home care (OHC) or Children in Care). This state care experience often indicates exposure to childhood adversities, commonly associated with neglect and abuse. Recent research suggests that care-experienced mothers tend to show more mental health difficulties than those without such experience, hinting at potential disparities in maternal mental health based on a history of state care. Nevertheless, longitudinal research into this group's mental health continues to be lacking. We address this by exploring (a) how disparities in maternal mental health unfold as mothers raise their children throughout childhood and adolescence and (b) whether maternal adult socioeconomic, health and psychosocial outcomes are possible mechanisms through which childhood experience of state care influences maternal mental health. We examined these through an interdisciplinary lens, drawing on life course and child psychopathology perspectives. We explored maternal mental health in two steps, using 6-item Kessler Psychological Distress scores from the UK's Millennium Cohort Study (Full analytic N=11,134). We first conducted a piecewise growth curve analysis to explore trajectories of maternal distress when offspring was in childhood (ages 3, 5, 7) and early adolescence (ages 11, 14). Subsequently, we employed a multiple mediation analysis to examine mechanisms, using maternal information provided when their offspring was 9 months old. All analyses were conducted in R programming. Results showed the early presence and changing pattern of disparities in maternal mental health

across different developmental stages of their children. Worse mental health amongst care-experienced mothers when children reached the age of 14, was partially accounted for by adult health, socio-economic, external and internal resources. We discuss research, policy, and practice implications to promote maternal mental health, given its intergenerational effects on child development.

7A STREAM: HEALTH & WELLBEING 3 SYMPOSIUM

Wellbeing of Refugees Across the Lifecourse

Convenor: Ben Edwards, Australian National University

SUMMARY: Coming Soon

TALK 1: Class Background, Migration Experience, and the Labor Market Integration of Young Syrian Refugees in Germany

Presenter: Hans Dietrich, IAB (Germany)

The paper addresses both the effects of social origin (SES) and of mental wellbeing (here PTSD) of young Syrians' regarding their labor-market integration in Germany from 2016 to 2021. Doing so, this paper integrates status attainment theory and mental wellbeing research. There is on the one side, the indirect SES effect of education. As Syria had developed a modern educational system, educational degrees delivered reliable signals for human capital. Besides the indirect SES effect of educational attainment, we consider ongoing educational aspirations affecting individual shot there aims for labor market integration. As the majority of these individuals have experienced violence in various ways, PTSD is addressed as a second mechanism affecting individuals' labor market integration. There is consistent evidence of the limiting effect of PTSD on refugees' integrational progress in receiving countries in general, and, in particular, the Syrian population. Besides our mechanism of interest, we control for further migration related risk factors such as financial burden, recognition of the residence status, duration of migration, time spent in third countries, age at arrival, discrimination experience, etc. which may affect both individuals' educational or occupational aspirations and labor market attainment. This paper employs data from the IAB-WELLCOME study, which were perfectly matched with the German Integrated Employment Biographies and document the labor market status of the respondents from 2016 to 2021. Linear regression models are applied and predictive marginals are calculated to present results for the effect of PTSD and SES on refugees' labor market integration. Based on the merged data we found both expected SES effects and effects of PTSD and wellbeing, diagnosed at time of arrival in Germany, on the process of labor market integration between 2016 and 2021. We additionally found long-lasting effects of PTSD and mental disorders on individuals' labor market integration, whilst other migration-related strains, important at the time of loss, lose relevance over time and hardly affect labor market integration around five years after arrival.

TALK 2: Predictors of Wellbeing Among Displaced Children and Adolescents: Results from the "Refugees from Ukraine in Germany" Study

Presenter: Ludovica Gambaro, Federal Institute for Population Research (BiB)

Co-authors: Lidia Gutu, Katharina Spiess, Federal Institute for Population Research (BiB)

Background: The Ukrainian refugee population includes a large share of children and adolescents. Although existing evidence indicates that war trauma has detrimentally affected them, there is still little systematic evidence on children's and adolescents' wellbeing and on how it is related to their experience over time in resettlement countries.

Methods: The study assesses the longitudinal predictors of wellbeing among a representative sample of Ukrainian children and youth over their first two years in Germany. Germany is a relevant country case, with more than 200'000 Ukrainian refugees enrolled in its schools. Four waves of data collection were conducted between summer 2022 and spring 2024. The analysis focuses specifically on social inclusion and asks whether it is positively associated with well-being, measured by broad life satisfaction, internalizing symptoms and externalizing behaviour. Two age groups are distinguished: from 6 to 11 year olds and 12 to 17 year olds. For each group relevant forms of social inclusion are identified, spanning the school-domain and extra-curricular activities. Particular attention is also paid to co-occurring participation in online educational activities organised in Ukraine. The survey additionally provides rich information on parents' pre-migration characteristics and experience of reception, such as attendance of an integration course and housing arrangements.

Implications: The establishment of a longitudinal survey collecting information specifically on children and adolescents provides the novel opportunity to analyse whether, and under which circumstances, social participation is a protective factor for their wellbeing. More generally, results will allow gaining a deeper understanding of the challenges that refugee children and adolescents from Ukraine face and to identify opportunities to enhance their current and future wellbeing.

TALK 3: Reducing Self-Stigma to Seek Mental Health Support Among Ukrainian Refugees in Germany? Evidence from a Randomized Controlled Experiment

Presenter: Andreas Ette, Federal Institute for Population Research (BiB)

Co-authors: Alexandra Avdeenko, World Bank; Luc Behaghel, Artur Obminski, Paris School of Economics; Jean Décieux, Katharina Spiess, Federal Institute for Population Research (BiB); Esther Dufló, Massachusetts Institute of Technology; Yagan Hazard, PSL University; Alexander Moldavski, Mannheim Central Institute of Mental Health; Nicolas Ruesch, Ulm University

Poor mental health among displaced populations is a widespread problem with consequences for both their wellbeing and subsequent labour market integration. Even where mental health services are available, uptake is limited by fear of stigma and shame, as well as information and language barriers. Can videos that address potential information gaps and stigma increase help-seeking and uptake of mental health support among vulnerable populations in need of such support? The paper is based on the probability-based online panel survey “Ukrainian Refugees in Germany (BiB/FReDA-Study)”, consisting of more than 2,800 Ukrainian refugees who arrived in Germany between February and June 2022. It analyses a randomised controlled survey experiment with anti-stigma messages and information provided in two different videos. Survey participants were shown either a video featuring well-known celebrities or a video featuring a relatable refugee speaking from personal experience - with a control group not receiving this particular information. The paper presents findings on the effectiveness of impersonal video testimonials in reducing the self-stigma of seeking help and evaluates the most effective approaches to addressing these barriers. The paper provides policy-relevant lessons for improving the mental health of displaced populations as a pathway to better integration and livelihoods.

TALK 4: Settlement Intentions and Integration Among Ukrainian Refugees in Germany: An Autoregressive-Cross-Lagged Analysis

Presenter: Andreas Ette, Federal Institute for Population Research (BiB)

Co-authors: Leona Przechowski, Kateryna Sytkina, Eldad Davidov, University of Cologne

The Russian invasion of Ukraine in February 2022 triggered an unprecedented wave of Ukrainian refugees seeking safety outside their country, constituting the largest movement of Ukrainian citizens since World War II. Over one million Ukrainian refugees officially registered in Germany as of 2022. In our study, we explore the dynamics following the refugees’ arrival in Germany. We investigate whether a positive integration into German society within the first year and a half after Ukrainian refugees’ arrival increases their intentions to stay in Germany and, conversely, if strong intentions to stay contribute to greater integration. Despite its importance, this nexus remains relatively unexplored. Its investigation provides valuable insights into the determinants of integration and settlement intentions, shedding light on the factors influencing Ukrainian refugees’ decisions regarding both settlement and integration. In our analysis, we employed a representative longitudinal survey of Ukrainian refugees who arrived after February 2022 in Germany and conducted autoregressive cross-lagged analyses. Our results yielded two main preliminary findings. First, Ukrainian refugees’ intentions to stay in Germany were hardly predictive of their integration. Second, integration into German society did not affect Ukrainians’ settlement intentions at later time points. Thus, our study suggests that factors shaping Ukrainian’s settlement intentions extend beyond societal integration and that their integration progresses independently of their settlement intentions. This research enhances the current understanding of refugee settlement and integration, providing valuable insights for policymakers and practitioners working towards facilitating a successful settlement and integration of Ukrainian refugees into German society.

7B STREAM: RESEARCH METHODS 2

SYMPOSIUM

The Role of Social and Physical Environments in Shaping Health Across the Life Course

Convenors: Gergő Baranyi, University College London; Jamie Pearce, University of Edinburgh

SUMMARY: Emerging evidence suggests that environmental factors in the places where people live have profound implications for health, well-being, and inequalities. However, existing research often relies on cross-sectional studies, and our understanding is limited on how different environmental characteristics associate with health outcomes across the life course. This symposium will present recent findings from high-quality cohort and linked administrative data from the UK and Hungary, elucidating the complex relationship between environmental exposures and health over time. The first presentation will examine the relationship between individual, social, and area-level factors and walking behaviour among older adults, drawing on data from the UK household panel study. Using population-based administrative data from Wales, the second paper will investigate the impact of social and physical household characteristics on health outcomes and transitions to care homes among individuals aged 65 and older. The third paper will utilize biological, environmental, and health data from the English Longitudinal Study of Ageing to explore the mediating pathways, including inflammatory, metabolic, and cardiovascular factors, linking neighbourhood characteristics to frailty in older adults. Finally, findings from the Cohort ’18 Growing Up In Hungary study will demonstrate the association between air pollution exposure during pregnancy and birth outcomes, as well as early-life weight trajectories.

TALK 1: The Exposure to Area-Level Social Cohesion and Multimorbidity: An 18-Year Longitudinal Analysis Among Nationally Representative Samples of the Scottish Population Aged 40+

Presenter: Chunyu Zheng, University of Edinburgh

Co-authors: Elejo Abubakar, Chris Dibben, Alan Marshall, Jamie Pearce, University of Edinburgh

Background: Multimorbidity has become a major public health challenge worldwide. Although it commonly refers to the co-existence of two or more chronic conditions, there are multiple ways to measure it. Prior evidence has linked social cohesion with single conditions (physical and mental) however, little is known about the association between area-level social cohesion and multimorbidity.

Aims: This study aimed to examine the association between area-level social cohesion and multimorbidity and how this varies across different measurements of multimorbidity (the co-occurrence of 2+ chronic conditions and mental-physical multimorbidity), urban-rural classifications (3-fold), and individual social grade (6-point approximated measure).

Method: Linking the Scottish Longitudinal Study (5.3% of the Scottish population, using Census 2001 and 2011) with hospitalisation records (2001-2019) and a neighbourhood-level index reflecting area-level social cohesion (2012), focused on cohorts of mid- and old-aged adults (40+), we used 3-level logistic regression to account for the clustered data structure of repeated diagnosed chronic conditions over time with individuals within datazones.

Results: A statistically significant association was found between reduced area-level social cohesion and the increased likelihood of having multimorbidity ($p < 0.01$), both with and without controlling for area-level income deprivation. Varied by multimorbidity measurements, this association showed an inverted U-shaped pattern for the co-occurrence of 2+ chronic conditions, with no additional effect of area-level social cohesion after reaching the threshold; while a linear pattern was observed for mental-physical multimorbidity. Furthermore, although living in rural areas was associated with a higher risk of having 2+ conditions compared to urban areas with the same area-level social cohesion, urban residents were more sensitive to the impact of area-level social cohesion. People with a higher-level social grade were more strongly affected by area-level social cohesion compared to those with the highest-level social grade. No statistically significant interaction effects were seen for mental-physical multimorbidity.

TALK 2: Impact of Physical and Social Household Characteristics on Health and Care Use in Older Adults

Presenter: Clare MacRae, University of Edinburgh

Co-author: Bruce Guthrie, University of Edinburgh

Background: Physical and social household living environments might increase the susceptibility of older adults to health and social care use. To explore this, we examined associations between household characteristics with unplanned hospitalisation, transition to care home, and mortality.

Methods: Population-based cohort study of people aged 65+ years who participated in the Wales Census on 27 March 2011. Linked routine health, administrative, and census data included five years of follow-up. Associations between physical (accommodation type, greenness measured as normalised difference vegetation index within 300m of the household, central heating) and social (household size, occupational status, and accommodation tenure) characteristics of the household with the measured outcomes were examined using mixed effects parametric accelerated failure time models.

Results: 354,712 older adults living in Wales on the day of the 2011 Census were included. Living in a house (vs. apartment) was associated with transition to care home (adjusted hazard ratio [aHR] 1.10, 95%CI 1.04-1.17), and the absence (vs. presence) of central heating was associated with transition to care home (aHR 1.15, 95%CI 1.03-1.28) and mortality (aHR 1.19, 95%CI 1.14-1.25). No associations between greenness with the outcomes reached statistical significance. Social household characteristics were associated with all outcomes. The strongest association was found for individuals living in a two-person household (vs. living alone) who had lower risk of transition to care home (aHR 0.72, 95%CI 0.63-0.81). Living in an owned (vs. rented) household (aHR 1.14, 95%CI 1.11-1.16) and in a household with routine (vs. higher/professional) occupational status were associated with mortality (aHR 1.12, 95%CI 1.10-1.15).

Interpretation: Physical and social characteristics of the household are associated with health and care outcomes in older adults. Further research, including longitudinal study, is needed to better understand the direction and mechanisms of action of these associations.

TALK 3: Environmental Drivers of Frailty: A Longitudinal Analysis of Biosocial Ageing Processes in ELSA

Presenter: Laurence Rowley-Abel, University of Edinburgh

Co-author: Alan Marshall, University of Edinburgh

Frailty in older adults represents a general deterioration of the body's resilience across multiple biological systems that results in heightened vulnerability to adverse events. The existing literature has demonstrated a strong and persistent social gradient in individuals' susceptibility to becoming frail in later life, with longitudinal studies demonstrating that socioeconomic conditions in midlife is predictive of frailty decades later. At the same time, there is a strong geographical patterning in the distribution of frailty in England, with small-area estimations showing the highest prevalence in coastal and urban areas, as well as in more deprived neighbourhoods. Given the geographically uneven trajectories in population ageing that are predicted to occur across the country, with particularly high growth in coastal areas, it is all the more important to understand the environmental drivers of frailty and

how these may be contributing to social inequalities in people's experiences of ageing. A number of mechanisms have been proposed that may link neighbourhood factors with frailty, however longitudinal evidence demonstrating these pathways is lacking. In this longitudinal analysis, we therefore investigate whether there are inflammatory, metabolic and cardiovascular pathways between neighbourhood characteristics and frailty. Using biosocial data from the English Longitudinal Study of Ageing, we look at variations in biomarker trajectories across different neighbourhood types and estimate their association with the subsequent accumulation of deficits that results in frailty. In doing so, this analysis investigates how the biological processes underlying frailty are impacted by environmental exposures and how this, in turn, contributes to inequalities in frailty risk.

TALK 4: Air Pollution Exposure During Pregnancy and Weight Trajectories from Birth Until Age 3 in a Large and Nationally Representative Cohort from Hungary

Presenter: Gergő Baranyi, UCL Institute of Education

Co-author: Zsuzsanna Veroszta, HCSO Hungarian Demographic Research

Higher exposure to air pollution during pregnancy, and especially in the third trimester, is associated with worse birth outcomes, including lower birth weight and preterm birth. It is plausible that air pollution during pregnancy leads to different weight trajectories; however, this hypothesis has been rarely tested and there is no evidence available from Hungary. Data was drawn from Cohort '18 Growing Up In Hungary, a nationally representative birth cohort capturing approximately 10% of pregnancies in Hungary. Residential addresses during the third trimester were geocoded using Google API and linked the annual PM2.5 concentrations (European Environmental Agency's 1km x 1km model). Weight was recorded at birth, and at 6, 18 and 36 months. Covariates were extracted from the pregnancy questionnaire. Linear models with survey weights estimated associations. After excluding twin births and controlling for confounders, a 10- $\mu\text{g m}^{-3}$ increase in PM2.5 exposure was associated with 90g (95% CI: 172-4) lower birth weight (n=7175); reduction was larger among females (155g; 95% CI: 274-36). PM2.5 did not associate with gestational age. Preliminary analyses suggest that after birth, newborns in higher polluted areas were gaining weight faster until month 6. Our first results shows that higher air pollution during pregnancy is associated with lower birth weight and potentially fast weight gain after birth. Further efforts will link higher resolution pollution maps to the sample and analyse the data longitudinally.

7C

INDIVIDUAL PAPERS

STREAM: EDUCATION 2

Education Inequalities

TALK 1: Education-Work Trajectories and Well-Being Inequalities in Midlife: A Comparison of Canada and Germany

Presenter: Janine Jongbloed, The University of British Columbia

Co-authors: Johanna Turgetto, Wolfgang Lauterbach, University of Potsdam; Lesley Andres, The University of British Columbia

Background: Existing research shows that well-being in midlife is shaped by various life domains that are gendered in context-specific ways and unfold dynamically across different stages of life, notably education levels, career and job statuses, as well as interpersonal factors. Current research reveals that gendered educational and employment trajectories significantly influence midlife well-being. Also, continuous employment positively impacts both men and women's satisfaction with life. Conversely, unstable employment histories have cumulative negative effects, with longer spells of unemployment exacerbating dissatisfaction. Aim: We aim to address gaps in the existing literature by providing insights into the diverse effects of education-work trajectories on well-being. To do so, we examine well-being in midlife from a gendered comparative life course perspective by investigating well-being inequalities among women and men with diverse educational and employment trajectories over adulthood. By focusing on gender differences in satisfaction with life in mid-adulthood and situating them in welfare state policy contexts (Canada and Germany), we examine the interplay between individual experiences and societal structures in determining the social distribution of well-being. Method and Data: Two longitudinal studies, the German Life and the Canadian Paths on Life's Way, spanning approximately 30 years (from ages 16 to 46), provide data for our analyses. Partial proportional odds models are employed for statistical analyses using clusters of proximate trajectories derived by previous sequence analysis. This allows for comparisons between both countries and across genders. Results: Accounting for individual characteristics, family factors, dynamic life course variables over adulthood, and static employment characteristics in midlife, we demonstrate that continuous full-time employment does not universally boost life satisfaction for German and Canadian men and women. Rather, patterns of inequality emerge related to levels of education and family factors, with women reporting increased odds of high levels of well-being when in continuous part-time employment. Conclusion: The findings highlight the complex relationship between education, employment, gender, and welfare states in shaping inequalities in well-being in mid-adulthood. This study has strong implications for the social policy structures in place allowing families to balance work and family obligations.

TALK 2: Aspiration and Educational Achievement Using the Wisconsin Longitudinal Study

Presenter: Guang Guo, The University of North Carolina, Chapel Hill

Co-authors: Meng-Jung Lin, National University of Taiwan; Adam Lilly, University of North Carolina at Chapel Hill

Introduction: In this analysis, we investigate the influences of individual aspiration in early life on educational achievement. The conventional approach of linking aspiration to educational achievement was popular about 30 years ago, but the approach was challenged. Aspiration as a predictor of educational and occupational outcomes is generally considered endogenous because aspiration itself could be affected by ability and social environment. In this study, we address the endogeneity of aspiration via two strategies. First, acting on the insight of the body of qualitative social scientists on the importance of resources for aspiration, our analysis incorporates resources into aspiration analysis. Second, our estimation of aspiration effects uses genomic data as control for competence that might have been already factored in the expressed aspiration. The project will use data from the Wisconsin Longitudinal Study (WLS) and data from Add Health. We have already done some empirical work and the following provides more on the rationale of the project.

More Background: Aspiration in the classic literature. What is behind human action has been debated at least since the ancient Greece. Plato in the Republic adds spirit to reason and appetite as a third source of action where appetitive desires are biological urges such as those for food, drink and sex. This contrasts to Socrates' theory in, for example, the Protagoras, which includes reason and appetite, but not spirit. Rather than about how one thinks, spirit is more about how one feels and what one aspires to be and do. To a large extent, spirit is molded by the experiences in the upbringing. To modern social scientists, spirit or aspiration is simultaneously apparent and challenging to evaluate. Sociologists and psychologists already understood the promises and challenges more than half a century ago. They recognized a basic distinction is between realistic aspiration and idealistic aspiration. The former is defined as what an individual feels that he or she might be able to accomplish and the latter refers to what an individual feels that he or she might be able to accomplish when things fall into place. It is realistic rather than idealistic aspiration that has important behavior relevance. Furthermore, aspiration does not act alone. Human outcomes such as educational attainment is influenced by both aspiration and "facilitation". In Haller's words, the facilitation includes "both intra- and extra-personal elements (p.486)." Intra-personal elements refer to individual characteristics such as cognitive ability and extra-personal elements refer to family environment and peer influences. It was also suggested that interaction should be assessed between the level of aspiration and the level of facilitation. Morgan argued that "... the theory of educational aspirations needs to be cast as a theory of educational intentions and grounded on the simultaneous cost-benefit calculations of students and their 'significant others.'" The analytical strategy of including self-reported aspiration in an analytical model has been long challenged as endogenous (e.g., 1993, 1996, Dominitz and Manski 1996). The well-known challenge argues that self-reported aspiration is not only a measure of one's aspiration, but also her or his ability. Aspiration in more recent social sciences literature. A body of qualitative research since at least 1980s has shown that merely expressed aspiration is not sufficient. Plans need extensive guidance for college and career and need substantial financial resources to navigate college and job preparation. Middle class typically has both through parents and communities. Among middle class, even poor planning sometimes led to relative success in the early transition to adulthood. These resources include advice and information, economic security, and family stability. Control for competence via genomic data. Our work takes advantage of GWAS and that measures for genomic influence at individual DNA level. Advances in molecular genetics over the past two decades have brought forth DNA data at individual level. The efforts linking DNA variation to cognitive ability began in earnest in the early 2000s. By then, it is evident that cognitive ability is a complex trait subject to the influence of a large number of genes each with a tiny effect. The challenge to find specific genes for cognitive ability is enormous. A human genome consists of millions of genetic variants or sections of DNA that may differ across individuals. Testing whether each one of them predicts ability and setting the critical value for significance at the conventional level of 0.05 would by chance generate a large number of false positives. Although the genome is large, it is finite. The solution is to set a stringent critical value of 5×10^{-8} for significance and to request a replication of a discovered genetic variant in an independent data source. Initial successes of the GWAS employing thousands of individuals are performed on human traits such as type 2 diabetes and body mass index (BMI). The number of GWAS-identified genetic loci are small but tended to be replicated. It soon became clear that by far the single most important factor in GWAS is sample size. The GWAS of educational attainment in 2018 assembles 1.1 million individuals and reports 1,271 independent SNPs associated with years of education at the genome-wide significance level of 5×10^{-8} . The polygenic score (PGS) for educational attainment constructed from all common SNPs in the GWAS reports an R^2 of about 12% using data from Add Health. Many of the genetic loci are implicated in biological pathways that play a role during prenatal brain development. The 2018 GWAS of cognitive ability employs 269,867 individuals and identifies 205 independent genome-wide significant loci. The analysis data for the GWAS are assembled from more than a dozen cohorts, and different cohorts tend to use different cognitive tests. In spite of the differences in form, cognitive tests are all based on the common underlying fluid intelligence or the Spearman's g , which is likely to have a large impact on multiple domains of cognitive functioning. The g factors extracted from different cognitive tests are highly correlated, substantiating the approach used in the GWAS. The GWAS of educational attainment and cognitive ability will be used to construct controls in our analysis.

TALK 3: The Effect of Education on Mental Health Among Ethnic Minorities in the UK: A Regression Discontinuity Design

Presenter: Facundo Herrera, Lancaster University

Co-authors: Ceu Mateus, Giuseppe Migali, Lancaster University

Objectives: This study aimed to investigate the causal effect of an additional year of schooling on long-term mental health - measured by SF-12 and GHQ- within ethnic minorities in the UK, employing the Raise of the School Leaving Age (ROSLA) policy as a natural experiment. **Methods:** The research adopted a fuzzy regression discontinuity design (RDD) with a local randomisation assumption, drawing inspiration from Cattaneo et al. (2015) and Titiunik (2021), exploiting the ROSLA policy as a natural experiment to assess its impact on mental well-being. **Results:** The causal effect of additional years of education induced by the ROSLA on mental health within ethnic minorities was not statistically significant. **Discussions:** These results contribute to understanding the relationship between education and mental health within the context of ethnic minorities in the UK. Results were aligned with the literature suggesting different channels of impact. Future studies could explore potential mediating factors or investigate other dimensions of well-being.

TALK 4: New Millenium Higher Education Expansion and Inequalities in the Female Life Course

Presenter: Jessica Ordemann, German Centre for Higher Education Research and Science Studies (DZHW)

Higher education participation in Germany has changed tremendously in the new millennium. One of the most relevant developments is the growing share of women with a tertiary degree that resulted in a reversal of the previous attainment pattern benefitting men. As winners of the new millennium higher education expansion women should have better access to the returns associated with a higher education degree. Current research mainly concentrates on part of the life course and the overall consequences of the new millennium higher education expansion remain an open question. The objective of the proposed paper is to investigate the following question Does women's increased tertiary degree attainment minimize gender inequalities over the life course? Using linked data of the German Old Age Insurance ('Deutsche Rentenversicherung') and the German Socio-Economic Panel Study (SOEP) I take a unique perspective by looking back on the inequalities that an individual accumulates over their lifetime by analysing pension points ('Rentenengelpunkte'). They reflect the times in life when inequalities appear and how accumulated (dis)advantages change or persist over the life course. Preliminary results for 381 highly qualified women and 409 highly qualified men aged 14 to 38 show that women accumulate less pension points than men indicating persistent inequalities between both genders. Inequalities between women and men of younger cohorts remain smaller until a later age before opening up, albeit then on a lower level than for older birth cohorts.

7D

SESSION CANCELLED

7E

STREAM: PARENTHOOD & FAMILY

INDIVIDUAL PAPERS

Family Wealth

TALK 1: Unveiling Financial Dependency: The Education-Specific Impact of First Birth on Household and Individual Poverty Risks Within Couples in Germany

Presenter: Christina Siegert, University of Vienna

Typically, poverty risk is assessed solely at the household level, neglecting within-couple income inequality and the role of individual characteristics in vulnerability to income poverty. Going beyond a household analysis, this paper uses German SOEP data (v37, 1991–2020) and Kleven's event study approach to child penalties to investigate dynamic changes in poverty risks within couples over an 8- year period around the transition to parenthood. During this phase, when income disparities between partners are prominent, couples with children may pool resources, reducing the immediate poverty risk for the lower-earning partner. However, low personal income can still leave individuals vulnerable and exposed to social risks, particularly women. This paper takes a novel approach by simultaneously evaluating household and individual poverty risks, i.e. assessing the risk of poverty with/out access to the partner's income. In doing so, the paper enhances our understanding of economic inequality within couples and the link between parenthood and poverty risk. Women with low and high levels of education diverge in their fertility behaviour and encounter distinct motherhood penalties on income, suggesting education-specific effects of first birth on poverty risk at household and individual levels. Focusing on partnered women aged 16–49 who had their first child between 1992 and 2013 (N=1,176) and live with a male partner, the causal analysis examines motherhood penalties on poverty risk by the unit of analysis and education background, from two years before the transition to parenthood until the first child turns six, controlling for period and age trends. Preliminary results indicate a consistently low household poverty risk for couples during the transition to parenthood, with first-time fathers showing similar individual poverty trajectories. By contrast, first-time mothers exhibit distinct trajectories between household and individual levels, marked by educational disparities and temporal changes.

TALK 2: Lone Parenthood Transitions and Economic Vulnerability in Ireland

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

Co-author: Bertrand Maitre, Economic and Social Research Institute

Lone parents and their families are consistently found among the most economically disadvantaged groups in Ireland, however much of the research on the relationship between lone parenthood and poverty is based on cross-sectional data. In this paper we apply a life course perspective to better understand the process behind this association. Specifically, we focus on the extent to which becoming a lone parent through union dissolution increases economic vulnerability. We also ask whether there are circumstances in which the economic consequences are mitigated? We also investigate the factors that predict exit from economic vulnerability for lone parents. We draw on four waves of the Growing Up in Ireland '08 Cohort, which follows families from when the study child is aged 9 months up to 9 years. We use latent class analysis to identify families that are economically vulnerable (EV) in each data wave. We then conduct logit models on pooled pairs of waves. Controlling for initial economic vulnerability and characteristics (at t-1) becoming a lone parent leads to a very significant increase in the risk of economic vulnerability compared to those who stay partnered, increasing the probability from .14 to .34. The probability of EV for those who became lone parents did not significantly differ by previous marital status, employment status, or number of children at t-1. We find that both increasing hours of paid employment and re-partnering increase the chances of exiting EV, but employment has a more positive impact than entering a partnership. Only taking up employment of more than 15 hours per week is associated with an exit from EV. Lone parents who report that they do not have enough social support and those with more children are significantly less likely to exit EV.

TALK 3: The Evolution of the Earnings Gap within Couples over Time and the Role of Parenthood

Presenter: Martina Dieckhoff, University of Rostock

Co-authors: Vanessa Gash, City University of London; Antje Mertens, Berlin School of Economics and Law; Laura Romeu-Gordo, The German Center of Gerontology

Research has shown that women in heterosexual relationships earn substantially less than their partners (e.g. Bianci et al. 1999; Dotti-Sani 2015). These inequalities are problematic as they impact women's future labour market outcomes (e.g. Bröckel et al. 2015; Shafer 2011). Earnings inequalities in couples are hence not only the result of inequalities in the labour market, they can also further enhance them. It is thus important to understand these inequalities and how they evolve over the life-course. In this effort, we investigate how earnings inequalities evolve with the duration of couple's cohabiting relationships. Our analyses also explicitly model the impact of having a child on the earnings gap over time. We furthermore examine whether different patterns can be observed for different cohorts. Our study focuses on Germany using the Socio-Economic Panel (SOEP) from 1992 to 2020. Germany has experienced significant changes in its family policies and so presents us with the ideal contextual conditions to examine whether changing institutional context is reflected in different degrees of within-couple inequality across different cohorts. Our findings suggest that children substantially increase earnings inequalities within couples, and that inequality levels do not return to pre-birth inequalities over time - this is the case for all cohorts. However, we find important differences across cohorts. These suggest that the impact of children on the partner pay gap has reduced over time with younger cohorts experiencing less substantial penalties than older ones. Finally, our analyses unveiled important differences between East and West Germany.

TALK 4: Earnings Penalties to Motherhood and Income Inequality Among Couples with Children in the US and the UK

Presenter: Susan Harkness, University of Bristol

Becoming a first-time parent triggers large changes in household employment and earnings patterns, with less educated women often seeing the largest reductions in labour supply. In this comparative study, we use harmonized panel data for the United States and the United Kingdom from 2009 to 2019 to show how parenthood influences earnings and family income among couples at different points of the distribution. As children have a larger effect on female labour supply and earnings in the UK than in the US, we expected childbirth to have a larger and more dis-equalizing effect on family income. In line with other studies, we find, however, that while parenthood is associated with large losses in female earnings these changes are fully compensated for by increased male earnings in the US and, in the UK, by changes in taxes and transfers. We find no evidence that the arrival of children widens inequalities in couples' income in either the US or the UK. Overall, the findings shed light on the role of earnings penalties to motherhood in driving inequalities in the incomes of families with children.

7F

STREAM: HEALTH & WELLBEING 4

INDIVIDUAL PAPERS

Ageing

TALK 1: Effects of Childhood Socioeconomic Positions on Later-Life Cognitive Decline in Europe

Presenter: Wen Wang, University of Essex

Co-author: Cassandra Simmons, European Centre for Social Welfare Policy and Research, Vienna

Objectives This paper examines the long-term relationship between childhood socioeconomic positions (SEP) and trajectories in cognitive decline in later life when controlling adulthood characteristics. **Methods** Data are from seven waves of the Survey of Health, Aging, and Retirement in Europe (SHARE) and retrospective data of SHARELIFE at wave 7. Cognitive functioning was measured through four global domains (orientation, numeracy, memory, and executive function) from wave 1 (n = 11,527 at baseline; 57% female, age 50+) to wave 8 except for wave 3 and calculated the total value of the standardize each global domains as the composite score of cognitive function. Retrospective childhood circumstances were collected from participants' self-

reported information, and included the "number of rooms per capita", "number of books", "features in accommodation (number of fixed baths, cold, hot running water supply, inside toilet and central heating)", "the occupation of the main breadwinner" as the indicators of SEP at the age of 10. Linear mixed-effect models were used to estimate the association between childhood SEP and cognitive functioning, including time (in years since baseline) and controlled covariates step by step. Results We find that people with lower childhood SEP not only have lower cognitive performance at baseline but also exhibit faster cognitive deterioration with the change in age. On the contrary, more advantageous childhood circumstances can shave off the decline of cognition after considering adulthood characteristics. Further analyses suggest that females from lower childhood SEP suffer quicker deterioration of cognitive decline than the equivalent males. Conclusions Our empirical evidence suggests that worse early childhood circumstances are associated with a quicker deterioration in cognitive functioning in later life with evidence of heterogeneity across genders. Policy interventions in early life to improve the family socioeconomic situation of children may help to mitigate the speed of decline in cognitive function in older age.

TALK 2: Adverse Childhood Experiences and Age-Trajectories of Depressive Symptoms in Adults at Mid-to-Older Ages: Evidence from England and China

Presenter: Xuan Ren, Great Ormond Street Institute of Child Health

Co-author: Panayotes Demakakos, Leah Li, University College London

Background: Adverse childhood experiences (ACEs) have profound lifelong impacts on health outcomes. Less is known about their influence in late-life outcomes (e.g. mental health). Moreover, associations of ACEs with age trajectories of depressive symptoms remain unclear, especially in different populations. We investigated associations between ACEs and trajectories of depressive symptoms at mid-to-older ages in two distinct populations.

Methods: We used the longitudinal data from English Longitudinal Study of Ageing (ELSA: n=19602, ≥50y) and China Health and Retirement Longitudinal Study (CHARLS: n=19561, ≥45y). Depressive symptoms were measured by CES-D (Center for Epidemiologic Studies Depression Scale) at 10 waves (2002-2022) in ELSA and at 5 waves (2011- 2020) in CHARLS. ACEs (maltreatment and household dysfunction) were retrospectively reported. We applied group-based trajectory modelling to identify distinct age trajectories of depressive symptoms and multinomial regression to estimate associations between ACEs and trajectory groups.

Results: We identified three trajectory groups: in ELSA: high (12.3% in men and 14.7% in women), moderate (46.6% and 47.9%) and low (41.1% and 37.4%), and in CHARLS: high (9.3% and 13.2%), moderate (34.1% and 39.4%) and low (56.6% and 47.4%). Most ACE measures were associated with increased risk of having moderate/high trajectories of depressive symptoms after adjusting for other ACEs, sex, and childhood socioeconomic disadvantages (financial hardship, low parental education, and father's occupation). For example, for physical abuse, the adjusted relative risk ratio (RRRadj) for high and moderate trajectories of depressive symptoms was 2.34(2.21, 2.46) and 1.22(1.18, 1.27) respectively in ELSA. It was 1.34(1.23, 1.44) and 1.21(1.12, 1.30) in CHARLS. For domestic violence, the respective RRRadj was 1.84(1.60, 2.12) and 1.45(1.23, 1.71) in ELSA, and 1.32(1.22, 1.44) and 1.26(1.16, 1.36) in CHARLS.

Conclusion: ACEs have life-long effects on mental health at mid-to-older ages in both countries, independent of childhood socioeconomic disadvantages, highlighting the need of early intervention to improve mental health in later life.

TALK 3: Allostatic Load and Chronic Pain in the Health and Retirement Study: A Fixed-Effects Analysis

Presenter: Yunlong Liang, University of Essex

Allostatic load (AL) is a chronic stress-related risk factor of chronic pain (CP). Whether AL is longitudinally associated with CP in a nationally representative older US population have not been examined. We draw on data from the Health and Retirement Study 2004/2006–2014/2016 (3 waves) to examine the relationship between AL and CP among 14,808 U.S adults at baseline. We identified 3 phenotypes of AL: baseline phenotype (n=13,311), cardiovascular phenotype (n=4,267), and metabolic phenotype (n=4,707). The fixed effects robust Poisson regression within the generalized estimation equation (GEE) framework was utilized to examine the relationship between AL phenotypes and the presence of CP and high-impact CP (HICP), adjusted for time-constant and time-varying confounders. For CP severity, fixed-effects OLS estimation was used. A set of robustness checks was conducted, including inverse probability of attrition weighting for longitudinal dropouts, multiple imputation for item missingness, specifications for fixed-effects model, and different operationalization of the outcomes for pain severity and HICP. The metabolic phenotype of AL was associated with a 30.3% greater risk of reporting HICP (95% CI = 1.104-1.537, P=0.002), compared to participants with the baseline phenotype. The significance was mainly driven by the association between the metabolic phenotype of AL with severe and disabling pain (RR=1.558; 95% CI=1.081-2.245, p=0.017). Alleviating metabolic dysregulation related to chronic stress may be an effective population-level strategy for alleviating the most severe and interfering CP.

TALK 4: Ageing and Inter- and Intra-Generational Inequalities: A Mixed-Methods Survey

Presenter: Jordan Pinel, INED

Co-authors: Vincent Caradec, University of Lille; Rémi Gallou, Julie Rochut, CNAV France; Guillaume Le Roux, Catherine Bonvalet, INED

This presentation is part of the Elvis project ("Longitudinal study on ageing and social inequalities" - 2021-2025) funded by the ANR and involving four partners (Cnav, Ined, U. Tours, U. Lille). The aim of this project is to analyse inequalities between and within generations in France, at the threshold of retirement and during the ageing process. The paper will present the methodological approach adopted, combining quantitative and qualitative data. The quantitative analysis is based on administrative data and survey data. The qualitative component is based on a collection of 119 interviews in 7 different French territories. These interviews were carried out with people from the 1935-1939, 1945-1949 and 1955- 1959 generations and were structured around five themes: residential, family and professional histories; territory and daily mobility; social interaction and solidarity; use of digital technology; assets and standard of living. This presentation will focus on two mixed methods. Firstly, we will present the methodology developed to select the surveyed areas. This was based on a typology of French municipalities that shows their dynamics and the living conditions of the population, and more specifically the elderly. In addition, we will show the innovations in terms of data collection tools (life course grid and short questionnaire collected during the interviews) that allow to make a direct link between the interviews and the quantitative data set used. With this approach, we are able to qualify, using interviews' indicators, the greater or lesser divergence from the statistical results, and to analyse the reasons by exploring life courses. Two examples will illustrate the analysis of inequalities between and within generations with regard to life courses: family support and use of digital tools.

KEYNOTE 3

Social Policies and Inequalities in Health Within and Between Generations

Mauricio Avendano, University of Lausanne

A key objective of social policy is to reduce inequalities in wellbeing over the life course across multiple life outcomes including education, employment, income, housing, social participation and retirement. These life outcomes, in turn, are believed to impact health and health inequalities. In this lecture, I address the following question: can social policies to address inequalities in these life outcomes reduce health inequalities and their transmission across generations? Based on quasi-experimental and experimental studies that link longitudinal data to social policies and interventions, I argue that social policies can, and at times do, reduce health inequalities and their transmission across generations. Yet, social policies can also exacerbate health inequalities; even when they improve some dimension of wellbeing, such changes may or may not translate into improved health and reduced health inequalities. I illustrate the value of linking social policies to longitudinal studies to understand the complex behavioural and social mechanisms through which social policy may impact health and health inequalities.

KEYNOTE 4

How Will We Carry Out Longitudinal Surveys in the Future?*Peter Lynn, University of Essex*

Survey data collection using interviewers has become increasingly difficult over the past two decades for a combination of reasons. The covid-19 pandemic made face-to-face interviewing impossible in most countries for an extended period of time, forcing surveys to cease or to switch to other modes of data collection. In many countries, this in turn decimated the social survey interviewing field force, making a swift return to face-to-face interviewing impossible. Some have spoken of a “crisis” in survey data collection since the pandemic. Longitudinal surveys are often amongst the most complex and demanding of surveys and consequently often rely on interviewer-led data collection, at least in part. The question therefore arises as to whether and how this may have to change in the post-pandemic world.

While interviewer- administered data collection has become more challenging, other changes have brought new opportunities for survey data collection. The pandemic accelerated the spread of internet use, and various new technologies including AI have offered much promise. As a result, the ever-changing world of survey data collection is perhaps changing at a faster pace than ever before.

Research funders have recognised the need to better understand the changing survey data collection landscape and to identify how data needs can best be met in future. In the UK, the Economic and Social Research Council have commissioned [Survey Futures](#), the Survey Data Collection Methods Collaboration, to identify and promote best current practice in survey methods and to explore promising future developments, as well as to address market capacity constraints. Related initiatives in other countries include the European Statistical System network on [Smart Survey Implementation](#), and the German Research Foundation Infrastructure Priority Programme on [New Data Spaces for the Social Sciences](#).

This presentation will provide an overview of the issues currently faced by survey data collection and of current initiatives attempting to address these issues. There will be a particular focus on issues that are unique to longitudinal surveys or that have distinct features in a longitudinal context. Some speculative suggestions as to how longitudinal survey design and survey data collection may change in the future will be offered for discussion.

8A STREAM: HEALTH & WELLBEING 5

SYMPOSIUM

Interdisciplinary Health Research in Understanding Society*Convenor: Meena Kumari, University of Essex*

SUMMARY: The Understanding Society dataset enables a variety of interdisciplinary health research capitalising on the detailed social, biological and health data captured longitudinally from all participants in the household across the UK. The study enables us to collect information from a representative sample with supplementation to enable analysis of minority groups, from across the age range and across the entire UK. The study collected biomarker data in waves 2/3 (2010-2012) and symptoms of mental health and doctor diagnosed disease at all waves. Here we present three examples of research from Understanding Society, showcasing the diverse population enabling intersectional analysis of mental health; analyses of data from the entire adult age range to examine biological ageing and investigation of novel biomarker data with mental health followed by a description of the next waves of data collection in the study. Wicks et al., will present evidence of the intersectional nature of the association of protected characteristics (age, ethnicity, sexual orientation, disability, religion, marital status, and gender) with undiagnosed mental health distress; Wang et al., will examine area level characteristics and biomarkers of ageing and Dearman et al., will describe the association of the proteome and mental health. Kumari and Benzeval will discuss new data collection in the survey and the potential for new analyses by the research community.

TALK 1: Investigating Intersectional Profiles of Protected Characteristics and Associated Risk of Mental Health Care Inequalities*Presenter: Susan McPherson, University of Essex**Co-authors: Claire Wicks, Cara Booker, Meena Kumari, Antonella Trotta, University of Essex*

Previous research has highlighted the importance of investigating mental health outcomes by protected characteristics, with evidence of mental health care inequalities being experienced in relation to age, ethnicity, sexual orientation, disability, religion, marital status, and gender. Using data from Understanding Society; the UK Household Longitudinal Survey (UKHLS), Wicks et al. (in press) identified younger adults, people living with a disability and LGB people were independently at greatest risk of having undiagnosed distress (defined as a GHQ caseness score and no history of mental health diagnosis). The current study takes an intersectional approach to build on previous research by investigating whether people who embody more than one protected characteristic have a cumulative risk of experiencing an undiagnosed distress; a proxy for experiencing a mental health care inequality. Using a sample extracted from waves 10-13 of the UKHLS, respondents were scored based on the number of “at risk” protected characteristics they embodied resulting in a score of between 0-6. Respondents were categorised into mental health status categories for analysis; “undiagnosed distress”, “healthy” and “diagnosis received”. The categories were derived based

on GHQ caseness score and history of mental health diagnosis, with undiagnosed distress the category of interest in this study. The sample was separated by gender for analysis and respondents with 5 or 6 protected characteristics were combined into one category (5+) to ensure all categories included sufficient respondents for the analysis. Multinomial regression was used to test whether risk of experiencing an unmet mental health need increased with the number of protected characteristics a respondent embodied. Descriptive statistics were used to explore the frequency of groupings of protected characteristics within the sample. The results indicate that embodying multiple protected characteristics is associated with increased risk of undiagnosed distress in both males and females. People with 4+ protected characteristics are at the greatest risk of experiencing a mental health care inequality. Health care providers should ensure services take an intersectional approach to designing and delivering mental health care.

TALK 2: Area Deprivation and Biomarkers of Ageing in the UK

Presenter: Wen Wang, University of Essex

Co-authors: Meena Kumari, Yanchun Bao, Paul Clarke, Steven Haworth, University of Essex

In ageing societies, disease burden rises with increasing life expectancy, necessitating proactive disease risk identification. Biological ageing measurements have emerged as more nuanced markers for ageing-related disease risk and mortality compared to chronological age. However, current research predominantly focuses on the elderly, overlooking the fact that age-related changes may begin in early adulthood. Limited attention has been given to the impact of residential environments and aging across multiple organ systems throughout adulthood. Exposure to poor living conditions can accelerate ageing by increasing stress levels and inducing biological changes. Understanding the biological ageing process and its social determinants across adult lifespan is crucial for delaying or preventing age-related diseases and improving later-life health outcomes. This study utilized blood sample and geographical linkage data from Understanding Society. Composite measures of biological ageing and health signs of ageing measurements were calculated to identify suitable ageing measurements for UK adults. Associations between area-level material deprivation and biological ageing were examined, along with the mediating role of biological aging between area deprivation and individual level biological ageing indicators. Biological ageing measures were strongly associated with chronological age, and individual level indicators deteriorated with age. Molecular and organ system-level aging measures were closely correlated, with most biological ageing measures significantly associated with various health signs of ageing measurements. Individuals in deprived areas exhibited accelerated biological ageing compared to those in more affluent areas. Biological ageing measures partially mediated the relationship between area deprivation and individual level ageing health outcomes. Composite biological ageing measures and health signs of ageing measurements are valuable predictors of ageing. The under the skin measurements of ageing may partially mediating the pathway from area deprivation to individual level ageing health outcomes. This study underscores the importance of addressing residential inequalities to mitigate health disparities and optimize ageing-related interventions.

TALK 3: Serum Proteomic Correlates of Mental Health Symptoms in a Representative UK Population Sample

Presenter: Anna Dearman, University of Essex

Co-authors: Yanchun Bao, Leonard Schalkwyk, Meena Kumari, University of Essex

Poor mental health constitutes a public health crisis due to its high prevalence and its mechanistic heterogeneity. A comprehensive understanding of the biological correlates of poor mental health in the population could help guide treatment strategies. The human bloodstream contains many proteins which have not been thoroughly examined in relation to population mental health symptoms, however recent technological advances have made this possible. Here we perform exploratory factor analyses of 184 proteins from two panels (cardiometabolic and neurology-related) measured using proximity extension assays from Understanding Society (the UK Household Longitudinal Study; UKHLS). Data reduction results in 28 factors that explain 55-59% of the variance per panel. We perform multiple linear regressions using two mental health symptom-based outcomes: psychological distress assessed with the general health questionnaire (GHQ-12) and mental health functioning assessed with the 12-Item Short Form Survey, Mental Component Summary (SF12-MCS) using the proteomic factors as explanatory variables and adjusting for demographic covariates. We use backward selection to discard non-significant proteomic factors from the models. Five factors which are associated with both scales appear to capture immunometabolism, adaptive immune cell-mediated processes, neurodevelopment, growth factors, and proteolysis and the kynurenine pathway. Three factors are uniquely associated with psychological distress (haemostasis and proteolysis, synaptic processes, and oxidative stress and the cytoskeleton) and two are unique to mental health functioning (acute phase processes and neuroprotective processes). A sensitivity analysis excluding people taking antidepressants or other central nervous system medications suggestively implicates some of the factors in treatment-resistant poor mental health (haemostasis and proteolysis, growth factors, synaptic processes, proteolysis and the kynurenine pathway and oxidative stress and the cytoskeleton). Our findings suggest that different measures of mental health symptoms have biological correlates that are both overlapping and distinct, all of which broadly replicate biomarker studies of psychiatric illness. More work is needed to understand the direction of causality in these associations.

TALK 4: New Data in Understanding Society

Presenter: Meena Kumari, University of Essex

Co-authors: Tarek Al Baghal, Michaela Benzeval, University of Essex

Understanding Society has deposited 14 waves of data including biomarker data collected in waves 2/3 and 14 waves of health data including mental health symptoms and long-term conditions. Adding the collection of objective measures of health (biomarkers) to Understanding Society, on a regular basis, will significantly add to opportunities for 'biosocial' research to better understand the two-way relationship between society and health. Understanding Society was funded by ESRC to collect biomarker data at Waves 2/3 (2010-2012) and has recently been funded to re-collect biomarker data at Wave 16 (2024-2026)

and wave 22 (2031-2023). The recollection of biomarker data in Understanding Society could support a number of avenues of research: Understanding the biological pathways that connect society and health. Prevalence of undiagnosed/sub-clinical measures in different social groups. Measuring impacts associated with macro-change in society (including unforeseen events). National representativeness/benchmarking. It explains why Understanding Society is an effective study through which to support research under each theme and identifies which of the proposed biomarkers to be included in Wave 16 will contribute to each theme.

8B STREAM: RESEARCH METHODS 3

SYMPOSIUM

Longitudinal and Linked Data Assets for Research and Policy

Convenor: Janeen Baxter, Life Course Centre, The University of Queensland

SUMMARY: This symposium will focus on challenges and opportunities for accessing data, building capacity and developing infrastructure to support evidence-based policymaking and research from a life course and longitudinal perspective. Many countries have invested in large-scale longitudinal and panel studies that enable researchers to examine individual trajectories through the life course. These studies have proven to be invaluable resources for life course researchers and, in many cases, have enabled cross-national comparative studies with similar surveys conducted in several countries. Data infrastructures that work across multiple individual studies to achieve shared goals are increasingly common and key to building cross-study frameworks. A more recent emerging trend is the increased use of administrative data collected by governments and non-government organisations, which provide information on whole populations through data collected about clients for the purposes of administering social services. This symposium will outline a cross-national project being undertaken by the World Health Organisation to develop a roadmap for building frameworks and evidence to support healthy ageing over the life course, including case studies from Australia and the UK. It will also outline work by CLOSER to build capacity, improve data discoverability, and mobilise research using longitudinal and life course data.

TALK 1: Healthy Ageing Over the Life Course: A Framework and Evidence Needs

Presenter: Chandni Maria Jacob, World Health Organisation

Co-authors: Ritu Sadana, Vanessa De Rubeis, Hsin yi Lee, World Health Organisation

This paper will outline the project led by WHO to develop a framework and roadmap for healthy ageing over the life course. WHO's programme of work on the life course – connecting healthy development and healthy ageing - aims to extend learning on healthy ageing and connect it to other efforts to improve people's abilities and capacities such as supports for early child development. This collaborative research to policy work takes a person-centred approach considering the wellbeing of the whole person, not only a focus on illness or disease. As part of the work, a life course consortium was developed which is a collaboration across all WHO regions including a range of academic institutions, centres focusing on life course from around the world, researchers focusing on individual life stages, national institutes, civil society and WHO technical experts in each life stage across its major offices in each region of the world. The network is engaged in a five-year programme of work from mid-2022 to mid- 2027. Two tracks of the work include (1) Research and evidence synthesis, and (2) Measurement and monitoring. Examples of ongoing activities include developing a framework for the implementation of a life course approach in policies, systematic reviews to address evidence gaps in interventions to improve people's capacities and abilities across the life course and global country-based scoping reviews on approaches to harmonize and link data from diverse sources.

TALK 2: A Scoping Review of Australian Longitudinal Studies and Linked Data for Examining Healthy Ageing Over the Life Course

Presenter: Janeen Baxter, Life Course Centre, The University of Queensland

Co-authors: K. M. Shahunja, Abdullah Mamun, Life Course Centre, The University of Queensland; Francis Mitrou, Life Course Centre, University of Western Australia

The World Health Organization has developed a framework to examine health and wellbeing over different life stages associated with healthy ageing. We outline selected Australian high quality longitudinal, cohort and linked administrative data sources capable of supporting the WHO framework. We review selected longitudinal and cohort studies that enable insight across the entire life course, and outline progress toward building an integrated Life Course Data Asset (LCDA) based on linked administrative data. The Longitudinal Study of Australian Children (LSAC) surveys 10,000 children nationwide (5,000 from birth), offering crucial insights for policy and intervention development. The Household, Income and Labour Dynamics in Australia (HILDA) Survey interviews over 17,000 individuals annually and focuses on economic and personal wellbeing, labour market involvement and family dynamics. The 45 and Up Study tracks over 250,000 individuals to examine health and social wellbeing trajectories. Many of these studies link to administrative records on health and education, enabling a rich portrait of life course journeys and outcomes. We provide examples of the types of analyses possible with each dataset and point to their strengths and weaknesses for person-centred life course analyses. The LSAC study provides insights into early life stages, covering family dynamics, health, education, and social and emotional development. HILDA offers detailed information on adult life, including relationships, health, employment, and living standards. The 45 and Up study focuses on determinants of health in older age, chronic disease risk factors, health service utilization, and productivity factors. The LCDA is designed to support government

intervention to reduce entrenched disadvantage over the life course and across generations. Australia is well-advanced in developing high quality, large-scale longitudinal and cohort surveys, as well as whole-of-population linked administrative data assets. Together they cover the full life course and are useful for addressing the WHO's emerging framework for studying healthy ageing.

TALK 3: Connecting Healthy Development and Healthy Ageing: A Case Study of Life Course Data in the UK

Presenter: Charlotte Campbell, University College London

Co-authors: Paul McCrone, University of Greenwich; Jennifer Symonds, University College London

The UK has a rich collection of national and regional longitudinal population studies that have been collecting data across the life course for over 75 years. The World Health Organisation (WHO) Life Course Network recognises healthy ageing as a process occurring across all life stages. In this context, the WHO is examining how a whole life course approach, with appropriate data resources, can build global understanding and evaluation of healthy ageing. This presentation will summarise a case study produced for the WHO Life Course Network, which gives an overview of UK longitudinal population studies and data, with emphasis on studies forming part of the CLOSER partnership, alongside other relevant studies. A focus of the WHO Life Course Network is the opportunity created by linking survey and administrative data and other types of data enhancements. Many studies in the UK have carried out data linkage between their survey data and administrative data sources, including education data, health care records, and mortality registers. This case study will highlight efforts to combine these data sources with UK longitudinal population studies' data and will outline examples of other data enhancements and study features that help build an understanding of healthy ageing across the entire life course throughout diverse populations, including data harmonisation, sample boosts, and intergenerational studies. The audience will be invited to participate in a discussion around the strengths and weaknesses of UK longitudinal data for investigating healthy ageing across the entire life course, the challenges with enhancing survey data and how as a community we can address these.

TALK 4: Guidance and Resources to Harness and Share the Power of Longitudinal and Life Course Data

Presenter: Charlotte Campbell, University College London

Co-authors: Neil Kaye, Jennifer Symonds, University College London

CLOSER is the UK's partnership of social and biomedical longitudinal population studies (LPS), the UK Data Service and The British Library. CLOSER's mission is to increase the visibility, use, and impact of longitudinal population studies, data and research to ensure that longitudinal evidence is used to address the health, social, economic, and environmental challenges facing the UK, now and in the future. CLOSER has created a suite of educational resources for researchers, students, and those interested in learning more about longitudinal data and research. These include the CLOSER Learning Hub, for beginners who want to understand the basics of longitudinal research, and the CLOSER Training Hub, for those seeking more advanced learning covering cross-study research, data management, and dissemination and impact. CLOSER has also created a Policy Hub which provides guidance, information and bespoke tools and templates for researchers to help them mobilise their evidence to policy actors. Additionally, CLOSER's data discoverability tools allow researchers to discover, explore and assess data from UK longitudinal population studies. This includes the metadata research tool, CLOSER Discovery, which allows researchers to search, explore and assess data from multiple UK longitudinal population studies in unprecedented detail. There are also cross-study data guides for in-depth contextual information and data comparability on three topics – physical activity, cognitive function, and dietary measures. This presentation will showcase CLOSER's work to provide training and build capacity, improve data discoverability, and mobilise data and research in the UK context. It will discuss the lessons from these activities and how these could inform and support the building of a life course framework for healthy ageing.

8C STREAM: RELATIONSHIPS

SYMPOSIUM

Partnerships and Intimate Relationships in a Lifecourse Perspective: A Comprehensive Overview

Convenor: Brienna Perelli-Harris, University of Southampton

SUMMARY: For centuries, the institution of marriage has governed the relationship between individuals in most of the world. However, as societies have changed, so have partnerships. Increasingly, marriage has become one form of partnership among many, with more fluid and diverse relationships increasingly recognised. As these trends continue to evolve globally, it becomes imperative to question our understanding of these alternative arrangements, agreements, and associations. This symposium launches the Research Handbook on Partnering across the Life Course, edited by Dimitri Mortelmans, Laura Bernardi, and Brienna Perelli-Harris. With 38 chapters, this compendium provides a broad overview of partnerships globally. In the symposium, we highlight some of the main themes. In the introduction, Mortelmans focuses on the multiple disciplinary definitions of partnership and how they change across the lifecourse. Bernardi presents an overview of the theoretical perspectives covered in the Handbook and reflects on their synthesis by applying the overarching lifecourse perspective. Hiekel illustrates trends in partnership formation and dissolution in Europe. Finally, Perelli-Harris discusses how partnerships differ across the world and the importance of their historical and geographical contexts. The Handbook is highly relevant for the SLLS audience as the lifecourse constitutes an overarching perspective across chapters.

TALK 1: Introduction to the Handbook

Presenter: Dimitri Mortelmans, University of Antwerp

This presentation will provide an introduction to the Research Handbook on Partnering across the Life Course. The research handbook explores the complex dynamics of partnerships in modern society. It transcends traditional demographic studies of union dynamics, delving into the evolution of relationships from marriages to various forms of unions, including unmarried cohabitation and out-of wedlock births. The volume adopts an interdisciplinary approach, encompassing insights from psychology, anthropology, sociology, and demography, to provide a holistic understanding of partnerships across different cultures and socioeconomic contexts. Central to the book is the concept of the 'family kaleidoscope' highlighting the diversity of partnership forms. It emphasises the fluidity and multiplicity of partnership definitions shaped by cultural, historical, and personal factors. The handbook addresses key topics such as arranged partnerships, online dating, LGBTQ relationships, and the implications of union dissolution and re-partnering. The volume also explores the concept of partnership through the lenses of love, commitment, institutions, and living arrangements, reflecting on how these aspects have evolved alongside societal changes. It highlights the increasing acceptance of non-traditional relationship forms, such as singlehood and same-sex partnerships, and the complexities arising from them. By integrating various theoretical and empirical perspectives, this handbook offers a comprehensive view of the changing landscape of human partnerships, illuminating the intricate interplay between individual life course trajectories, societal norms, and legal frameworks in shaping modern relationships.

TALK 2: Theoretical Perspectives on Partnering

Presenter: Laura Bernardi, University of Lausanne

This presentation outlines the theoretical chapters in the Handbook. It starts by describing the historical perspective, focusing on a case study of England and Wales from 1750 to the 1960s, when formal marriage was the norm; couples generally married in their 20s; and most individuals married only once. We then move on to Sociological perspectives and four overlapping theories that describe cultural context and global family systems; social institutions; theories of power dynamics within couples; and social theories related to individualisation and the de-standardisation of the life course. Next are psychological perspectives with a focus on personal relationships. A variety of perspectives and theories (evolutionary, attachment, interdependence, and stress models) address what influences more distal and proximate behaviours of the ongoing processes between partners. Last, we present anthropological perspectives, which have largely focused on marriage but have recently moved towards more nuanced analyses of various practices of intimate relations. These different perspectives provide a variety of lenses with which to examine life course partnership behaviour.

TALK 3: Married and Cohabiting Partnerships

Presenter: Nicole Hiekel, Max Planck Institute for Demographic Research

This presentation will be based on a chapter which addresses, from a socio-demographic and comparative perspective, trends in cohabitation and marriage. The chapter examines how union formation processes stratify across countries and social groups, linking cohabitation and marriage when appropriate, such as when looking at timing in the life course and preferences when choosing between cohabitation and marriage. It addresses the duration of cohabitation vis-à-vis marriage and discusses how relationship instability and processes of institutionalising a cohabiting union via marriage jointly contribute to increasingly diverse partnership trajectories in contemporary life courses. A particular focus is on how individuals attach meaning to their cohabiting union and how this might affect relationship trajectories and social and demographic behaviour in these unions. The presentation will also include reflections on increasing trends in divorce, re-partnering, and serial cohabitation. The presentation contributes to framing demographic behaviour in the normative and value context in which it occurs.

TALK 4: Partnership Practices Around the World

Presenter: Brienna Perelli-Harris, University of Southampton

The final presentation will highlight the variety of partnership practices across the globe, which are featured in the Handbook. The presentation starts with a focus on arranged marriage. In this chapter, the author defines arranged marriage and locates it over time and space on a global scale, then, focusing on India and South Asia, discusses how it varies across localities, religion/caste, and gender. Although marriage practices in this region are shifting over time, they still do not neatly match the binary ideal types of arranged and self-choice marriage. Next, partnerships in the Middle East and North Africa are discussed whereby we point out the widespread practice of arranged marriage, particularly among cousins and young girls. This region is characterised by early age at marriage and low divorce rates but has substantial heterogeneity, with some regions experiencing the postponement of marriage and parenthood. East Asia has experienced changes in partnership and marriage, but in different ways; although long-term cohabitation and non-marital childbearing are rare, the rise of online dating has changed the partnership matching process, and singlehood has increased. This region has also witnessed an increase in international marriage migration and greater awareness of LGBTQ relationships, particularly in Taiwan, where same sex marriage has been legalised. Latin America has experienced a radical transformation in partnerships, especially with the dramatic rise in cohabiting partnerships and childbearing within cohabitation. Africa has had less pronounced change, maintaining longstanding customs such as bride wealth and polygyny. But even in Africa, ideas and preferences for marriage and childbearing are shifting, and the growing inequality among young adults has produced an unequal landscape for partnering.

TALK 1: The Medical Schools Outcomes Database (MSOD) and Longitudinal Tracking Project: Assessing the Potential for Systematic Workforce Interventions*Presenter: Antonia Verstappen, University of Auckland**Co-authors: Craig Webster, Phillipa Poole, University of Auckland*

SUMMARY: Introduction/background: The MSOD project is the first study internationally to consistently collect career data on medical students throughout their training to answer health workforce questions. MSOD was established by the Medical Deans of Australia and New Zealand. In New Zealand, the MSOD study has been underway since 2007, and contains data from thousands of individual medical students and graduates from both Auckland and Otago schools of medicine. Each year, every medical student in New Zealand, as well as medical graduates 1-, 3-, 5- and 8-years post-graduation are invited to complete a MSOD questionnaire. Items include demographics, current and future practice, location and career aspirations. This is then linked to actual place and type of work. Aim/objectives: This presentation aims to show how combining quantitative and qualitative data may allow the development of a whole-of system model to enhance career choice in General Practice and primary care. Methods: An iterative model was developed by layering longitudinal quantitative analyses with insights from qualitative interviews. This allowed for the development of a model that suggests tailored workforce interventions at specified timepoints along the training pathway, and an ability to model what an aggregation of marginal gains might mean for workforce outcomes. Results: Combining quantitative and qualitative data allows for a better understanding of the intentions underlying career choices, in this case a General Practice career. A whole-of-system model may allow for the aggregation of marginal gains in terms of supplying graduates that better suit community health needs. Discussion: Longitudinal data that tracks the same student throughout their training and into the workforce is critical to identify where system changes may be made. The overlay of qualitative information helps clarify where gains may be made and confirms the need for a systemic approach to building priority health workforces such as General Practice.

TALK 2: Using Latent Class Analysis to Measure Socioeconomic Position: Results from Three UK Birth Cohorts*Presenter: Caitlyn Rawers, Ulster University**Co-authors: Orla McBride, Jamie Murphy, Eoin McElroy, Ulster University*

Early life socioeconomic disadvantage is a robust predictor of mental health difficulties in children and adolescents. Yet, there are numerous indicators of socioeconomic position [SEP] such as income, education, or social class, which are uniquely associated with mental health outcomes and cannot be used interchangeably. Using multiple socioeconomic indicators allows researchers to investigate the multi-dimensionality of SEP as a construct but presents analytical challenges for regression-based models. Alternatively, person-centred approaches can be used to identify complex patterns of socioeconomic indicators and predict mental health outcomes. Previous studies have also demonstrated that the effect of SEP on mental health outcomes is getting stronger over time. However, to analyse this effect with data from different cohorts necessitates retrospective harmonization, which few studies have done to date. This presentation reviews the process of identifying, harmonizing, and analysing data from three British birth cohorts. In this study, we conducted latent class analysis with seven SEP indicators. We then tested the sociodemographic characteristics of the latent classes to determine subgroups of the population at greater risk of experiencing disadvantage. Finally, we tested the relationship between the latent classes and adolescent internalising and externalising mental health symptoms. The highest internalising and externalising symptoms were most strongly related to the latent classes characterised by the greatest relative disadvantage in two of the cohorts. Despite differences in the relationship between SEP latent classes and mental health symptoms, the changes cannot be attributed to how participants interpreted the mental health scales. The implications of these results will be considered, as well as applications for future research.

TALK 3: Long-Term Trajectories of Mental Health and the Cost-Of-Living Crisis at the Intersection of Gender and Socioeconomic Position: Evidence from the 1970 and 1958 British Birth Cohorts*Presenter: Darío Moreno-Agostino, University College London**Co-authors: Vanessa Moulton, Sam Parsons, Bozena Wielgoszewska, George B. Ploubidis, University College London; Jayati Das-Munshi, King's College London*

The COVID-19 pandemic disrupted the pre-existing long-term trajectories of mental health, with changes being disproportionately more negative for some groups within the population, including women. Data from the latest sweeps of two of these British Birth cohorts, the 1970 British Cohort Study (BCS70) and the 1958 National Child Development Study (NCDS), provide the opportunity to understand a) how individuals' long-term trajectories of mental health have been impacted by recent events including the aftermath of the COVID-19 lockdowns and the ongoing cost-of-living crisis, b) whether trends of widening gender inequalities have persisted, worsened, or reversed, and c) how these intersect with socioeconomic and generational inequalities. We will use data on mental health prospectively collected from two British birth cohorts using the same questionnaire (9-item Malaise Inventory) at multiple time points: BCS70 (with mental health measures collected at six time points between 1996 – age 26 and 2022/2023 – age 52/53) and NCDS (with mental health measures collected at five time points between 1981 – age 23 and 2020/2023 – age 62/65). After analysing the measurement invariance/equivalence of the measures across groups (genders, socioeconomic position, and generation) and over time, we will use growth curve modelling approaches to study overall and group-specific longitudinal changes. We will use contrasts of marginal predictions to analyse whether the gender inequalities

observed during the COVID-19 pandemic have persisted, worsened, or reversed, and report the extent of those inequalities across the two generations under study (born in 1970 and 1958) and by socioeconomic position (using detailed socioeconomic information collected across the waves). These initial findings from the latest sweeps of two British birth cohorts will provide timely evidence on gender and socioeconomic inequalities in how the mental health of two different generations have been impacted by challenging times such as the COVID-19 post-lockdown period and the ensuing cost-of-living crisis.

TALK 4: Career Trajectories with Prolonged Fixed-Term Employment at Labour Market Entry in Germany, Poland and the UK: Does Parental Socioeconomic Status Matter?

Presenter: Anna Kiersztyn, University of Warsaw

Co-authors: Katarzyna Kopycka, Remigiusz Żulicki, University of Lodz

We assess the heterogeneity of wage and occupational status trajectories of young people who experienced fixed term employment in the initial years of their labour market activity. In particular, we investigate whether trajectories characterised by prolonged initial contractual instability differ systematically depending on the social background of individuals in three countries representing differing institutional contexts: Germany, Poland, and the UK. Past studies suggest that fixed-term contracts in the first job after leaving education do not have lasting negative effects on wages and occupational status attainment, as many of those who start out as temporary workers are able to compensate for the initial disadvantage in the following years. However, these results may mask important effects due to the heterogeneity within temporary employment, which can either act as stepping stones to permanent positions or trap workers in sequences of temporary jobs. Furthermore, allocation to these paths may be partly driven by parental socioeconomic status. Our study is the first to address these issues in accounting for differences in the dynamics of wage and occupational career trajectories by focusing on the type of employment not only at labour market entry, but also in the following years. Specifically, we distinguish careers characterized by direct entry into permanent employment, mobility from initial fixed term to permanent employment (stepping-stone), and lack of mobility to permanent employment (trap), in order to directly capture the further development of the most unfavourable career entry patterns. Using data from national panel surveys (the German SOEP, UKHLS Understanding Society and Polish Panel Survey POLPAN), we estimate growth curve models of occupational attainment and wage mobility during up to ten first years of work activity after leaving education. Furthermore, we apply a regression analysis on random slope estimates in order to investigate the effects of parental socioeconomic status.

8E **STREAM: WELLBEING IN CHILDHOOD TO ADULTHOOD**

INDIVIDUAL Mental Health and Wellbeing

PAPERS

TALK 1: Mental Health and Wellbeing Trajectories from Childhood to Young Adulthood: Evidence from Growing Up in Ireland

Presenter: Michael Vallely, Economic and Social Research Institute (Ireland)

Co-authors: Anne Nolan, Emer Smyth, Economic and Social Research Institute (Ireland)

This paper uses data from the Growing Up in Ireland (GUI) study to examine the mental health and wellbeing of children and young people in Ireland. We examine how mental health and wellbeing evolve over early and middle childhood and into adolescence and young adulthood and identify the factors that are associated with these patterns. Specifically, this paper examines scores from the Strengths and Difficulties Questionnaire (SDQ) and uses group-based modelling to assess how early predictors and adolescent outcomes differentiate trajectory groups, with a particular focus on gender. We formally model trajectories of change in internalising and externalising difficulties between the ages of 3 and 13 for the '08 Cohort of GUI and between the ages of 9 and 17 for the '98 Cohort. To our knowledge, this is the first time that both dimensions of internalising and externalising difficulties will be modelled for both cohorts using GUI. The paper aims to address the following research questions: How does socio-emotional wellbeing evolve over childhood, into adolescence and young adulthood? Do levels of socio-emotional wellbeing at age 9 differ by cohort ('98 vs. '08)? Do these patterns differ depending on the measure of socio-emotional wellbeing examined? Do these patterns differ by gender? What factors explain these trajectories? We observe that socioemotional wellbeing varies over time and by gender. We observe that girls have higher scores for the emotional and internalising scales and boys have higher scores for the conduct, hyperactivity, peer problems, externalising scales. In adolescence, trajectories of internalising difficulties begin to diverge between boys and girls. Furthermore, we find six internalising difficulties trajectories for girls and five for boys. For externalising difficulties, we find five trajectories for boys and girls. We find that factors, such as parental depression and socioeconomic status, explain these trajectories.

TALK 2: What Drives the Long-Term Decline in Adolescents' Life Satisfaction in Britain?

Presenter: Golo Henseke, University College London

Co-authors: Hans Dietrich, IAB; Ingrid Schoon, University College London

Background: Life satisfaction is a measure of overall happiness and a predictor of individual functioning in education and the labour market and well-being in later life. More recent findings of a long-term decline in happiness among young people in Britain are thus of particular concern. This paper assesses the factors driving the observed downward trend. Locating the source of the declining life satisfaction is essential to target interventions effectively.

Method: We apply linear fixed-effects models to examine life satisfaction trajectories in the age group 10-15 in combined data from the young surveys of the British Household Panel Study (BHPS) and Understanding Society (UKHLS). Participants expressed their satisfaction with life overall on a 7-point scale from “completely dissatisfied” to “completely satisfied”. Fixed effect models compare changes in the outcome within the same individual over time, removing potentially confounding time-invariant factors.

Results: Initial findings show that between 1995-2022, British 10-15-year-olds were never happier than in 2005-2010. Since then, average life satisfaction trended downward, predating the impact of the Covid-19 pandemic. Compared with 2009/2010, average adolescent life satisfaction had fallen steadily by nearly a score point from a mean of six to five by 2022. The long-term decline in life satisfaction was evident in all age groups, except the youngest, and stronger among girls than boys. The time trend cannot be explained by worsening individual, family, and socio-economic risks, nor a greater predisposition towards lower life satisfaction among more recent birth cohorts. Instead, adolescents’ declining happiness with their appearance explains most of the declining overall life satisfaction.

Conclusion: The results call for a nuanced understanding of the factors influencing adolescent wellbeing beyond conventional socio-economic risks. They emphasize the need for interventions that address the specific concerns of adolescents, particularly around body image, to mitigate the long-term decline in life satisfaction.

TALK 3: Developmental Timing of Pain Symptoms: Associations with Early Adulthood Pain and Anxiety in Two Longitudinal Studies

Presenter: Ellen Thompson, University of Sussex

Co-authors: Amanda Ly, Hannah Sallis, Rebecca M. Pearson, University of Bristol; Geneviève Morneau Vaillancourt, Olakunle Oginni, Elisavet Palaiologou, Elham Assary, Celestine Lockhart, Tom McGregor, Thalia C. Eley, Lauren Heathcote, King’s College London; Edmund Keogh, University of Bath

Background: Pain symptoms are highly common in childhood and adolescence and are frequently associated with co-occurring and subsequent symptoms of anxiety. Despite their high co-morbidity, few studies have investigated whether the timing of pain symptoms influences the development of anxiety in early adulthood. Further, there is limited evidence on whether genetic and environmental influences changes across development.

Aim: This study will leverage data from two UK longitudinal population-based studies to investigate the relationship between, and genetic and environmental influences of pain symptoms across childhood and adolescence and anxiety in early adulthood.

Methods: Data from 8,000 twins from the Twins Early Development Study (TEDS), and 4,082 (65.21% female) participants from the Avon Longitudinal Study of Parents and Children (ALSPAC) will be used. Measures include somatic symptoms from the strength and difficulties questionnaire in TEDS (parent-report at ages 4, 7, 9, 12, 16 and 21 years; and self-report at ages 9, 12, 16 and 21), and ALSPAC (parent report at ages 4, 8, 9, 11, 13, and 16). Pain and anxiety symptoms at age 26 years were assessed in TEDS using the Patient Health Questionnaire 15, and at age 24 in ALSPAC using the Clinical Interview Schedule CIS-R questionnaire.

Analysis: Structural equation modelling will be applied to derive the following estimates: i) path models to estimate the phenotypic longitudinal association between latent factors of childhood and adolescent pain symptoms and early adulthood pain and anxiety, while adjusting for observed confounds (sex, age, and socioeconomic position (TEDS and ALSPAC); ii) a multivariate Cholesky decomposition (ACE model) to estimate genetic and environmental influences of childhood, adolescence and adult pain symptoms (TEDS); iii) phenotypic informant discrepancies in parent and self-reported pain symptoms (TEDS).

Findings will be discussed in light of the growing evidence of pain symptoms and anxiety in young people.

TALK 4: Disability Onset Trajectories and Their Influence on Wellbeing

Presenter: Bram Vanhoutte, University Libre Bruxelles

Co-author: Thibault Kohler, University Libre Bruxelles

Does the manner in which one becomes disabled impact subjective quality of life? While disability is a common occurrence in later life, its effect on overall well-being can differ significantly. One crucial factor influencing these discrepancies is the speed at which disability manifests. Two distinct pathways to disability emerge: a gradual, progressive onset, and a sudden onset without prior indication of functional decline. This study investigates the role of anticipation, a fundamental component of resilience, in moderating the impact of limitations in Activities of Daily Living (ADL) on well-being. Utilizing longitudinal data from the Survey of Health, Ageing, and Retirement in Europe (SHARE), spanning from wave 4 to 8, the study focuses on realigning the disability transition as the central event at time zero. Disability is defined as the transition from no limitations to at least one ADL limitation, along with functional decline as measured by the physical functioning domain of the Short Form 36 scale. Spline growth models were employed to analyze trajectories both before and after disability onset for various measures of well-being (including depression, life satisfaction, and subjective quality of life) among individuals experiencing progressive versus sudden disability onset. The findings reveal that individuals experiencing a progressive disability tend to exhibit, on average, lower levels of well-being prior to the transition, yet experience a lesser decline in wellbeing upon the onset of disability, compared to those with a sudden disability. This underscores the significance of comprehending the diverse pathways to disability and the influence of anticipation on shaping subjective well-being during this critical transition period.

TALK 1: Development of a Digital Tool for Counterfactual Analyses: ‘Digicat’ and Applications in Longitudinal Data*Presenter: Aja Murray, University of Edinburgh**Co-authors: Ingrid Obsuth, Dan Mirman, Marie Allitt, Patrick Errington, Josiah King, Yi Yang, Xinxin Zhu, Hannah Casey, Helen Wright, University of Edinburgh*

Counterfactual analyses such as propensity matching or weighting provide advantages over more commonly used methods such as regression adjustment for generating preliminary evidence on possible intervention targets. However, the methods can be challenging in the presence of missing and complex survey and methodological reviews suggest that their implementation is often suboptimal. To promote uptake and best practice use of counterfactual analysis methods we developed DigiCAT: a digital tool with an easy user interface and accessible accompanying tutorials DigiCAT (shinyapps.io). In this talk I introduce DigiCAT, discuss how longitudinal datasets contributed to its development, and present examples of its applications. Applications presented include utilisation of the Understanding Society and Millennium Cohort Study datasets to examine candidate active ingredients in adolescent mental health. Results suggest that while promoting reading for pleasure is not a promising intervention target for adolescent mental health, social media use and school exclusion may be. Applications were selected and findings interpreted with the help of our young person’s advisory groups. Implications and future directions for the tool are discussed.

TALK 2: Optimising the UK Longitudinal Linkage Collaboration Data Discoverability Journey Through Development of Interoperable Metadata Documentation, Application System and Tooling*Presenter: Katharine Evans, UK Longitudinal Linkage Collaboration, University of Bristol**Co-authors: Richard Thomas, Matthew Crane, Emma Turner, Jacqui Oakley, Andy Boyd, University of Bristol; Stela McLachlan, Robin Flaig, UK Longitudinal Linkage Collaboration, University of Edinburgh*

UK Longitudinal Linkage Collaboration (UK LLC) is the national Trusted Research Environment (TRE) for the UK’s longitudinal research community. UK LLC integrates data from many UK Longitudinal Population Studies (LPS) and systematically links participants’ health, environmental and non-health socio-economic records, into a centralised TRE research platform. Co-locating many LPS’ datasets enables a highly diverse UK-wide sample, increases overall statistical power to investigate ‘rare’ exposures/outcomes and includes harder-to-reach population sub-groups. However, the breadth of data included raises a substantial data discovery, selection and inference challenge. To enable UK LLC to effectively support its users, we are developing a range of systems to optimise the researcher journey and support users to identify and understand the data they need for their research. We have developed a multi-layered FAIR (findable, accessible, interoperable, reusable) system, which collates internal UK LLC metadata and draws metadata from data owners (e.g. the NHS) and other LPS infrastructure (e.g. CLOSER metadata catalogue). First, a web-based data discoverability tool functions both as a ‘shop window’ and ‘shopping basket’ and provides search functionality with advanced filtering to enable researchers to identify the data items most suited to their research question. Second, UK LLC’s Jupyter book contains the documentation and metrics needed to understand the provenance of the linked data and how these data have been impacted by the linkage and data de-identification processes. Third, integration of the UK LLC data catalogue’s shopping basket with the bespoke UK LLC application management system enables intuitive data selection and facilitates rapid application review with automated project-level data provision. Finally, our GitHub repositories and associated processes support users to deposit and document reusable research resources (e.g. syntax and code lists) into a community archive. These systems are designed to provide a high-quality user experience, whilst maximising the value of existing LPS infrastructure initiatives.

TALK 3: Methodological Developments in Administrative Data Linkage for Cross Cutting Policy Relevant Research: Working Towards a Sustainable Data Pipeline*Presenter: Emma Turner, University of Bristol**Co-authors: Jen Hampton, Rachel Huck, Clare Melson, Roya Shahrokni, Leah Quinn, Jason Powell-Bavester, ONS; Alissa Goodman, George B. Ploubidis, University College London; Robin Flaig, University of Edinburgh; Andy Boyd, University of Bristol*

Objectives: Develop administrative linkages within a national Trusted Research Environment (TRE) that hosts Longitudinal Population Study (LPS) data for over 20 LPS. We will describe the methodological development carried out to enable linkage to administrative datasets. These linked data will support research for public good, informing policy and practice.

Methods: The first sets of administrative data under consideration in this Feasibility Study are the Department of Work and Pensions (DWP), the Department for Education (DfE) and HM Revenue and Customs (HMRC). Working with UK Government departments through a Task & Finish group we have gathered input from DWP, HMRC and DfE and Office for National Statistics (ONS) data sharing experts. The group identified pragmatic data linkage and sharing models, that enable data to be linked via a newly designed secure data pipeline in a legal, secure, and trustworthy manner for all stakeholders.

Results: To encourage sustainability and acceptability, a model designed to be maintained long-term is based on the re-use of Departmental Personal Identifiable Information (PII) – i.e., name, date of birth, gender, National Insurance number - and attribute data already deposited by the Departments into ONS. ONS will develop a system for linkage and extraction of ONS Data which

conducts, and quality assesses the linkage; minimises the Departmental data to participants within the TRE and the variables specified in the agreements; and, de-identifies data to DEA processing standards. The minimised and functionally anonymous data extract will be securely transferred for ingest and integration into the TRE enabling researchers to address a wider range of questions for public good.

Conclusion: This is a model for efficient and low-burden linkages to inform cross cutting research. Forming part of responsive UK data science capability which can inform government research needs and be used to meet future crisis e.g. new pandemics or economic shocks.

TALK 4: Construction of a Frailty Index using Understanding Society and Analysing the Influence on Ethnicity Using a Multilevel Growth Modelling Framework

Presenter: Alexander Labeit, University College London

Co-authors: Jay Banerjee, Christopher Williams, University of Leicester; Victoria Cluley, University of Nottingham; Sharma Surinder, Hanne Laceulle, Susan Pickard, University of Liverpool; Simon Conroy, University College London; Bram Vanhoutte, Free University of Brussels

As the UK population ages, frailty will increasingly become one of the principal issues for the health care system. While the UK is a diverse nation in terms of ethnic background, surprisingly very little is known about how the level and the development of frailty varies by ethnicity. The aim of this study is to illustrate frailty trajectories over time in the UK for individuals of age 50 and above of different ethnic backgrounds. In a first step, a frailty index (FI) has been constructed in Understanding Society (US), a large panel study of 40,000 households in Great Britain. US includes a 'boost' sample of 11,500 participants from diverse ethnic minorities. For the construction of the FI an accumulation of deficits approach has been used. The FI facilitates tracking changes in subjective, physical, functional, cognitive health and chronic conditions. Domains which are included in the construction of a FI from US are health conditions, health limitations and disabilities/difficulties. In the second step, frailty trajectories will be modelled using the age vector model for different ethnic groups: Indian, Pakistani, Bangladeshi, Caribbean, African ethnic minorities compared to White British groups. The aim is to analyse the differences in levels and the intensity of development of frailty over age adjusted for covariates such as sex.

9A STREAM: HEALTH & WELLBEING 5

SYMPOSIUM

Frontiers in Biosocial Research: Soc-B PhD Spotlights

Convenors: Katie Sarah Taylor, Sidonie K. Roque, University College London

SUMMARY: This symposium seeks to showcase interdisciplinary research on physical and mental health across the lifecourse. This research uses various statistical techniques to model the biological pathways through which social exposures "get under the skin" using data from key British cohort studies. All presentations are from PhD candidates as part of the UK ESRC-BBSRC Soc-B PhD programme. Biosocial research explores the dynamic interplays between biological, social and behavioural factors across the lifecourse. This approach enhances the depth and breadth of insights drawn from research, which helps increase the positive impacts of research on policy and society. The first study in this symposium aims to investigate the relationship between childhood social connections and adiposity trajectories into young adulthood. The second study aims to investigate whether adverse childhood experiences are associated with midlife resting autonomic function (heart rate, systolic blood pressure, and diastolic blood pressure). The third study aims to examine the associations between depressive symptoms and both cancer and all-cause mortality in people with cancer, and whether socioeconomic position moderates these associations. The final study aims to assess the effects of psychological distress on a broad spectrum of physical health outcomes in mid-life, employing the outcome-wide longitudinal design.

TALK 1: The Long-Term Associations of Childhood Social Connections with Adiposity Trajectories from Childhood to Young Adulthood

Presenter: Katie Sarah Taylor, University College London

Co-authors: Liam Wright, Daisy Fancourt, Yvonne Kelly, University College London

In 2021-22, 33% of 10-11-year-olds in the UK had overweight or obesity. Early life obesity tracks into adulthood and can have a significant impact on health across the lifecourse. Positive social connections (e.g., high social support and frequent social contact) have been associated with reduced obesity risk, whilst negative connections (e.g., loneliness and relationship conflict) are linked to increased obesity risk. Potential mechanisms linking social connections to adiposity include biological, behavioural, and psychosocial stress pathways. Key gaps remain that limit our understanding of these complex relationships. First, research rarely explores across social connection constructs or dimensions (structural, functional, quality). Second, the primary measure of adiposity used is body mass index (BMI) which does not differentiate lean from fat mass and provides no information on body fat distribution. Third, the unique contributions of different sources of social connections to adiposity is unknown. Finally, the lack of longitudinal studies exploring these relationships in early life means that the lifecourse effects are undetermined. The current study aims to investigate the relationship between different social connection dimensions in childhood and adiposity trajectories (BMI, waist-to-height ratio, fat mass index, and android to gynoid fat mass ratio) from childhood to young adulthood. It further aims to explore whether differences exist in these associations by gender or by source of social connections. This study uses data from the Avon Longitudinal Study of Parents and Children (ALSPAC). Social connection constructs (social contact, social

network, social participation, loneliness, perceived support, received support, positive and negative aspects, social inclusion and exclusion) between the ages of 8 and 11 and repeated adiposity measures from ages 10 to 24 will be used in analyses. Gender-stratified growth curve models will be used to estimate adiposity trajectories. Interactions between time and social connections will be included to estimate trajectories for different levels of connections.

TALK 2: Exploring the Impact of Childhood Adversities and Socioemotional Difficulties on Midlife Autonomic Function: Insights from the 1958 NCDS Cohort

Presenter: Sidonie K. Roque, University College London

Co-author: Rebecca Lacey, St. George's University of London

In England and Wales, around 50% of children have experienced at least one form of adverse childhood experience (ACEs), which can be single or prolonged events that threaten a child's physical and mental well-being. ACEs are associated with autonomic dysregulation, leading to socioemotional difficulties. It is crucial to examine not only the cumulative effects of ACEs, but also the individual effects as they have varying effects on children. Moreover, research is needed to understand how socioemotional coping mechanisms differentially affect ACEs and autonomic functioning. The current study investigates the accumulation and individual impact of ACEs on midlife resting autonomic function (heart rate (HR), systolic blood pressure (SBP), and diastolic blood pressure (DBP)). Prospectively and retrospectively reported ACEs will be compared. Lastly, the study will evaluate whether socioemotional difficulties play a role in modifying this relationship. This study uses data from the National Child Development Study (NCDS), which is a nationally representative sample of children born in England, Scotland, and Wales during the same week in 1958. Multiple imputation methods were employed to address missingness. Among prospectively reported ACEs, 21.8% experienced 1 ACE and 2.5% experienced 2 or more ACEs. The most prevalent individual ACE was parental offending (9.3%), followed by parental separation (7.8%). Among retrospectively reported ACEs, 21.3% reported 1 ACE and 21.0% reported 2 or more ACEs. Furthermore, parental mental illness (24.4%) was the highest retrospectively reported ACE, followed by parental substance misuse (13.3%). Internalization (31.1%) was the most prevalent socioemotional difficulty in adolescence. Linear regression methods will investigate the relationship between ACEs and resting HR, SBP, and DBP. Socioemotional difficulties (internalization, externalization, comorbidity, and well-adjusted) will be examined for potential modifying effects. Initial findings suggest that retrospectively reported ACEs captured a higher proportion of adverse events in childhood. Additional findings will further investigate this relationship.

TALK 3: Depressive Symptoms, Socioeconomic Position and Mortality in Older People Living With and Beyond Cancer

Presenter: Natalie Ella Miller, University College London

Co-author: Abigail Fisher, Philipp Frank, Andrew Steptoe, University College London; Phillippa Lally, University of Surrey

Higher depressive symptoms are associated with increased risk of mortality in people living with and beyond cancer (LWBC), but most studies have not accounted for a wider range of important confounders and competing causes of death in the context of cancer-specific mortality. There are also established socioeconomic inequalities in depression and mortality among people LWBC, but it is unknown whether socioeconomic position (SEP) moderates the association between the two. This study aimed to examine (1) the association between depressive symptoms and mortality in people LWBC and (2) whether SEP moderates this association. Participants diagnosed with cancer from the English Longitudinal Study of Ageing (ELSA) who reported depressive symptoms within four years following their diagnosis were included. Elevated depressive symptoms were defined by a score of 3 or more on the 8-item Centre for Epidemiologic Studies Depression Scale (CES-D). SEP was indexed by wealth tertiles. Cox regression was used for all-cause mortality. Competing risk regression was used for cancer-specific mortality. Analyses were adjusted for sociodemographic and clinical factors. A total of 1352 participants were included (mean age = 69.6 years). Over the 16-year follow-up period, 596 deaths occurred, of which 335 were cancer-related. After multivariable adjustment, elevated depressive symptoms were associated with a 93% increased risk of all-cause mortality within the first four years of follow up. Elevated depressive symptoms were associated with a 38% increased risk of cancer-specific mortality. While directionally consistent, this association did not reach statistical significance at conventional levels after excluding people who died within one year after baseline assessments. There were no interactions between depressive symptoms and SEP. The findings suggest that elevated depressive symptoms are associated with increased risk for all-cause mortality among people LWBC within a four-year follow-up. Early detection and intervention of depression in people LWBC is crucial for improving outcomes.

TALK 4: Health Consequences of Psychological Distress in Mid-Life: A Longitudinal Outcome-Wide Analysis of the 1970 British Cohort Study

Presenter: Martin Danka, University College London

Co-author: Jessica Bone, George B. Ploubidis, Richard Silverwood, University College London

Psychological distress is a widely recognised risk factor for poor physical health and a major contributor to global disease burden. However, the specific impact of psychological distress on diverse health conditions remains poorly understood, largely due to methodological variations and the traditional focus on single exposure-outcome relationships in existing studies. Additionally, these relationships may be further influenced by reporting bias in physical health outcomes. Participants may be prone to recall conditions causing them more distress, whereas medical records may not capture subjective experiences of poor health, often exacerbated by limited access to healthcare. To address these challenges, the present study employs the outcome-wide longitudinal design (OWD) to systematically assess the effects of psychological distress on a range of physical health outcomes. These relationships will be examined in mid-life, as stress-related health conditions become more common at this age, enabling a comprehensive outcome-wide investigation. The data come from the 1970 British Cohort Study, an ongoing longitudinal study

following the lives of over 17,000 people born in Great Britain in a single week of 1970, and include linked Hospital Episode Statistics (HES) data, allowing us to compare self-reports from cohort members and outcomes derived from medical records. The effects of psychological distress at age 34 will be estimated separately for each outcome at age 42, adjusting for a common set of confounders using inverse probability of treatment weighting (IPTW). This analysis will be extended with simulations to investigate the appropriateness of IPTW for similar contexts, in conjunction with multiple imputation. The presentation will discuss emerging results, including potential biosocial pathways linking psychological distress to the identified health outcomes. Comparisons of analyses using self-reports and outcomes derived from HES data will yield implications for research examining links between mental and physical health. The simulation extension will inform recommendations.

9B STREAM: RESEARCH METHODS 3

SYMPOSIUM

Leveraging Genetic and Epigenetic Data to Study Inequalities in Education and Health

Convenor: Jasmin Wertz, University of Edinburgh

SUMMARY: Several longitudinal studies have recently added genetic and epigenetic data to their cohorts, which offers a new lens through which to study life-course development. However, many social scientists may not be aware of these data; unsure of how to analyse them; or concerned about the conclusions that can be drawn. The goal of this symposium is to introduce some of these new data resources to longitudinal researchers, and to showcase how they can be leveraged to study inequalities across life courses and generations. The first paper uses newly available genetic data in the UK Millennium Cohort Study to investigate gene-environmental interplay in the intergenerational transmission of educational outcomes. The second paper explores how genetic influences on children's academic achievement are mediated by aspects of the family environment. The third paper uses data from six cohorts to analyse links between parent's genetics and parenting behaviours across the life-course. The fourth paper delves into the role of epigenetic mechanisms in mediating associations between social inequality and children's cognition and educational performance. Collectively, the papers illustrate how genetic and epigenetic data can be integrated into life-course research to enhance our understanding of the emergence, persistence and transmission of inequalities in education and health.

TALK 1: Gene-Environment Interplay in the Intergenerational Transmission of Educational Advantage in the Millennium Cohort Study

Presenter: Tim Morris, University College London

Strong parent-offspring correlations for education have been observed across many contexts and remained largely consistent over time, with this being interpreted as a marker of social immobility that reinforces social inequalities over generations. These correlations may arise due to a mix of social and genetic factors related to learning behaviour. Distinguishing between these is difficult as estimates of social effects can be contaminated by genetics, while estimates of genetic effects can be contaminated by social factors. We make use of non-transmitted genetic effects, which must be fully mediated by environmental or social factors, to investigate pathways through which educational outcomes are transmitted over generations. We used data from a longitudinal UK birth cohort of children born in the UK in 2000-2001, the Millennium Cohort Study, to answer the following research questions: how do transmitted and non-transmitted polygenic scores for educational attainment relate to offspring educational performance; how are these effects patterned with respect to family level socioeconomic factors; and how do pathways related to the childhood learning environment mediate indirect genetic effects for educational outcomes. We used self-reported data from mothers, fathers and children, and administrative educational records through data linkage. Our results demonstrate that non-transmitted genotypes are strongly related to offspring educational outcomes, suggesting strong social effects in the transmission of education. We observed attenuation in the non-transmitted effects by around half when accounting for socioeconomic background, and stronger non-transmitted (environmental) effects for offspring from more socioeconomically advantaged backgrounds. Finally, we show that these effects operate through a range of parenting behaviours. Our findings contribute to a deeper understanding of the complex interplay between genetic and environmental factors in shaping educational outcomes across generations.

TALK 2: Gene-Environment Correlation: The Role of Family Environment in Academic Development

Presenter: Margherita Malanchini, Queen Mary University of London

Academic achievement is partly heritable and highly polygenic. However, genetic effects on academic achievement are not independent of environmental processes. We investigated whether aspects of the family environment mediated genetic effects on academic achievement across development. Our sample included 5,151 children who participated in the Twins Early Development Study, as well as their parents and teachers. Data on academic achievement and family environments were available at ages 7, 9, 12 and 16. We computed educational attainment polygenic scores (PGS) and further separated genetic effects into cognitive and noncognitive PGS. Three core findings emerged. First, aspects of the family environment, but not the wider neighbourhood context, consistently mediated the PGS effects on achievement across development, accounting for up to 34.3% of the total effect. Family characteristics mattered beyond socio-economic status. Second, family environments were more robustly linked to noncognitive PGS effects on academic achievement than cognitive PGS effects. Third, when we investigated whether environmental mediation effects could also be observed when considering differences between siblings,

adjusting for family fixed effects, we found that environmental mediation was nearly exclusively observed between families. This is consistent with the proposition that family environmental contexts contribute to academic development via passive gene-environment correlation processes. Our results show how parents shape environments that foster their children's academic development partly based on their own genetic disposition, particularly towards noncognitive skills.

TALK 3: Genetic Associations with Parental Behaviours from Conception to Wealth Inheritance in Six Cohorts

Presenter: Jasmin Wertz, University of Edinburgh

Parents' genes may affect children's development not only through genetic transmission from parent to child, but also through environments that parents create for their children, including the parenting they provide. Here we tested links between parents' genes and their parenting in 30,000 parents across six population-based cohorts in the UK, US and New Zealand, some of which have only recently added genetic data. Whereas parenting is typically assessed during childhood, we adopted a life-course approach and measured parental behaviours from the prenatal period through infancy, childhood, adolescence, and into offspring adulthood. To measure parent genetics, we constructed a genome-wide polygenic score based on previous largescale genetic analyses of educational attainment. Our findings revealed widespread associations between parental genetics and parental behaviour across the lifecourse, from smoking during pregnancy, breastfeeding during infancy, parenting during childhood and adolescence, to leaving a monetary inheritance to adult children. Findings were broadly consistent across the six cohorts, across different aspects of parenting, and across mothers and fathers. Children's own polygenic scores were also associated with parenting, suggesting that children evoke differences in parenting, but associations between parental genetics and parenting were not explained away after controlling for child effects. Effect sizes were small at any given time point, but there was evidence for accumulating effects across development. Our findings suggest that parents may influence offspring development not only via direct genetic transmission or purely environmental paths, but also via genetic associations with parental behaviours from conception to wealth inheritance. These findings stress the importance of considering gene environment interplay when studying intergenerational transmission from parent to child. They also point to potentially modifiable characteristics in the pathway from genes to behaviour.

TALK 4: Socially Stratified Epigenetic Profiles Are Associated with Cognitive Functioning in Children and Adolescents

Presenter: Laurel Raffington, Max-Planck Institute for Human Development

Children's cognitive functioning and educational performance are socially stratified. Social inequality may operate partly via epigenetic mechanisms that modulate neurocognitive development. Following preregistered analyses of data from 1,183 8- to 19-year-olds from the Texas Twin Project, we examined whether salivary DNA-methylation measures derived from adult discovery studies trained on inflammation, cognitive function, and the pace of biological aging are (a) stratified by major dimensions of social inequality and (b) associated with cognitive functions and academic performance in children and adolescents. We found that children growing up in more socioeconomically disadvantaged families and neighborhoods and children from marginalized racial/ethnic groups exhibit DNA-methylation profiles that, in previous studies of adults, were indicative of higher chronic inflammation, lower cognitive functioning, and faster pace of biological aging. Socioeconomic disadvantage statistically accounted for some, but not all, of the differences between racial/ethnic groups in DNA-methylation profiles. Furthermore, children's salivary DNA-methylation profiles were associated with their performance on in-laboratory tests of cognitive performance as well as real-world school outcomes. Notably, DNA-methylation profiles of cognitive performance explained 11.1% of the variation in math performance. Given that the DNA-methylation measures we examined were originally developed in adults, our results suggest that children show molecular signatures that reflect the early life social determinants of lifelong disparities in health and cognition. Our findings are consistent with observations that racial and ethnic disparities leave biological traces in the first two decades of life and reflect multiple dimensions of social inequality.

9C STREAM: RELATIONSHIPS

INDIVIDUAL PAPERS Relationships 1

TALK 1: Social Relationships Over the Later Life Course: Are There Cohort Differences in Friend and Family Orientation?

Presenter: Erika Augustsson, Karolinska Institutet

Co-authors: Johan Rehnberg, Stefan Fors, Carin Lennartsson, Neda Agahi, Karolinska Institutet

Future cohorts are expected to have more diverse family structures as they enter old age and may become more reliant on friends to fulfil social needs and provide informal care. This study explores cohort patterns in social relationships in Sweden, specifically focusing on friendships, to discern changes in social contact with friends and family across three separate birth cohorts aged 56-87 over 40 years. Cohorts born between 1915 and 1944 were followed using data from seven waves of two linked Swedish panel studies. Age trajectories were tracked using kernel weighted local polynomial smoothing. Additionally, gender and educational differences were analysed. Trajectories of visits with friends and family were generally similar across cohorts, with later cohorts showing increased engagement with friends in the age range of 56 to the early 70s. Women and higher-educated people exhibited more prominent cohort differences in visits with friends. While a majority of the respondents reported engaging with friends and family to equal extents, there were some indications that people gravitated disproportionately towards one type of relationship over

the other as they aged. Findings suggest that evolving societal norms and changing cohort structures are leading to increasing engagement with friends in old age. This study contributes insights into evolving patterns of friendships across cohorts in later life and trade-offs with family relations, emphasising changing social behaviours. Understanding these dynamics is crucial for anticipating the social support needs of ageing populations.

TALK 2: Life-Course Social Participation and Physical Activity in Midlife: Longitudinal Associations in the 1970 British Cohort Study (BCS70)

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

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

A hypothesized benefit of social participation is that it encourages people to be more physically active. However, limited evidence exists on the association between social participation over the life-course and physical activity in midlife. We sought to apply a life-course framework to examine the association of social participation and device measured physical activity in midlife in the UK. We used the 1970 British Birth Cohort Study (BCS70), which includes all people born in Britain during a single week in 1970. Social participation was assessed at ages 16, 30, 34 and 42. Physical activity was measured by accelerometry at age 46, as mean daily step count and time spent in Moderate to Vigorous Physical Activity (MVPA). The associations of social participation and physical activity were tested using two different life-course models: the sensitive period model and the accumulation model. Individuals with medium and high participation compared to no social participation over their life-course had higher mean daily step count and MVPA in midlife, supporting the accumulation model. In the sensitive period model, only those that actively participated at age 42 had higher mean daily steps and MVPA compared to those who did not participate. Our study provides empirical evidence on the importance of sustaining social participation at all ages over the life-course rather than at a particular timepoint of someone's life. If our findings reflect causal effects, interventions to promote social participation throughout the life-course could be an avenue to promote physical activity in middle life.

TALK 3: Living Apart Together and Older Adults' Mental Health in the United Kingdom

Presenter: Rory Coulter, University College London

Co-author: Yang Hu, Lancaster University

Living apart together (LAT) is widely identified as a distinctive and long-term partnership form among older adults, which allows them to balance interdependence and autonomy in their personal lives. Despite the crucial role intimate partnerships play in maintaining well-being, little is known about the implications of LAT for older adults' mental health. In LAT relationships, partners live in different households but maintain frequent material and non-pecuniary exchanges. By comparing LAT with other partnership statuses and forms, we examine the role of partner co-residence – a key ideal underpinning couple relationships – in configuring older adults' mental health. We analyze data from Waves 3–13 (2011–2023) of the United Kingdom Household Longitudinal Survey. To provide a comprehensive assessment of older adults' mental health, we examine both negative mental distress (GHQ-12) and positive mental well-being (SF-12 MCS). We first compare the mental health of older people in LAT versus marriage, unmarried cohabitation and singlehood. Then, leveraging the longitudinal data structure, we use fixed-effects models to examine how transitions into and out of LAT impact older people's mental health. This study highlights LAT as a key form of family diversity and complexity in the aging population. Our findings reflect critically on the long-held ideal of co-residence in couple relationships and its role in maintaining older people's mental health. They encourage researchers to go beyond the household as a default unit of analysis and examine inter-household intimate connections in older people's lives.

TALK 4: Social Quality and Health in a Swiss Municipality: Results of a Three-Wave Longitudinal Survey

Presenter: Dario Spini, University of Lausanne

Co-authors: Yang Li, Cecilia Delgado Villanueva, University of Lausanne

From 2019 to 2024 a community participatory intervention has been conducted in Chavannes-près-Renens, a Swiss municipality close to Lausanne. The objectives of this social intervention was to increase the social quality (empowerment, social inclusion, social cohesion and social security) within three neighborhoods following a methodology called Causecommune proposed by Plattet & Spini (2021). A three-wave longitudinal study (N= 1405 at baseline) was launched to evaluate the impact of this intervention and test some hypotheses on the relationship between social quality and health, both at the individual and collective level using multilevel analyses. Following the social cure paradigm, we hypothesized that engagement in new group activities would increase both well-being and physical/mental health. The analyses will test the hypothesis that engagement in the project and in public activities within the municipality increase the perception of social quality and has an indirect positive impact on various dimensions of physical and mental health.

TALK 1: Household Income and the Risk of Poverty Around the Time of Childbirth*Presenter: Ana Gamarra Rondinel, University of Melbourne**Co-author: Anna Price, University of Melbourne*

The study examines the impact of childbirth on household income and poverty during the crucial first 1,000 days of a child's life, using longitudinal data from the Household, Income, and Labour Dynamics in Australia Survey (2001-2021) and an event study approach. The birth of a first child results in a reduction in household gross income, with one-parent households experiencing, on average, a 27% decrease and two-parent households an 18% decrease. Within five years of the first child's birth, a substantial portion of households (37-40%) either remain in poverty or enter poverty. This is more common for one-parent (63-70%) than two-parent households (34-36%), with childbirth amplifying the likelihood of being in poverty by 0.17 and 0.10 percentage points, respectively. Furthermore, without government family payments, the average poverty rate increases from 26% for one-parent households and 10% for two-parent households before childbirth, to 63% and 20%, respectively, in the years following. With family payments, the average poverty rates after childbirth are 37% and 11%, respectively. This indicates that while government payments assist in mitigating poverty, they do not fully shield families from the risk of falling into poverty after childbirth.

TALK 2: Intergenerational Dynamics of Poverty: Unravelling the Long-term Impact from Childhood to Adulthood*Presenter: Esperanza Vera-Toscano, University of Melbourne**Co-author: Roger Wilkins, University of Melbourne*

The aftermath of the Great Recession has seen a staggering rise in child poverty across almost two-thirds of OECD countries, with Australia reflecting this concerning trend despite economic growth and substantial investments in services. Currently, 13.6% of Australians, including 774,000 children, live below the poverty line. This study delves into the persistent issue of intergenerational poverty, exploring its implications for children's long-term outcomes. Drawing on 22 years of longitudinal data from the HILDA Survey, our research addresses a critical gap in understanding how childhood poverty patterns influence adult outcomes. Unlike previous studies that focused on average effects, our approach emphasizes poverty rather than earnings or household income, allowing for a more inclusive analysis encompassing a diverse pool of households. This shift in focus improves sample selectivity and ensures a balanced examination of the multifaceted nature of poverty. Furthermore, our study focuses on patterns of childhood poverty exposure rather than mere incidence, providing a nuanced exploration of the heterogeneous effects across different poverty spectrums. By doing so, we contribute new insights into the intergenerational dynamics of poverty, shedding light on whether children at various points along the poverty distribution are more or less likely to experience poverty in adulthood. In a pioneering effort, we employ a novel multigroup method to analyse poverty, socioeconomic factors, and health trajectories during (early) adulthood. This method allows us to uncover the intricate relationships between childhood poverty and subsequent life outcomes. The research aims to answer fundamental questions about the chances of economic success for those who experienced poverty during their formative years, informing policymakers and academics alike. Ultimately, understanding the intergenerational dynamics of poverty is crucial for designing effective interventions and support systems. By unravelling the complex pathways from childhood to adulthood, our study contributes to the ongoing discourse on breaking the cycle of poverty and empowering individuals to redefine their economic prospects.

TALK 3: Predictors of Disability Retirement: A Prediction Model for Disability Pension Application Risks Among the Finnish Public Sector Employees*Presenter: Petra Sohlman, KEVA Finland*

Regarding the objective of preventing early exits from labor market, the late life-course years present an important timeframe for preventive actions. From labor attachment perspective it is essential to recognize the groups of employees in the greatest risk of permanently losing their work ability. In practical applications, multifactorial models are needed to evaluate the combined effect of risk factors. In this study the aim is to identify how the disability risk can be modeled based on register data and at the same time assess the effect of sickness absences (SA) of different lengths on the risk. We utilize a logistic model for the risk of filing an application for a first-time disability pension (DP), based on register data on 222 321 Finnish municipal sector employees. The data include employment spells, sickness spells, occupations, and wages from 2016-2018. During the three-year follow-up, 2969 employees (1.4 %) filed an application for DP. The data on sickness spells include all sickness-related absences from work, also short spells, a novelty in these kinds of studies. Disability pension application is used as a follow-up, including employees who receive a rejecting decision but still carry a physician's evaluation of diminished work ability. The panel data also include detailed information about occupational groups, important in this context. According to the modeling results, age, occupation, cumulative days of SA:s preceding DP, and the number of SA spells of different lengths have a significant increasing effect on the DP application risk. Proximity of the retirement age and high earnings decrease the risk of DP application. Surprisingly gender had no effect on the risk. The results indicate that register-based data is very useful in modeling the employee DP application risk in different public sector employee groups. The presented modeling results are already utilized among public sector employers in Finland.

TALK 4: Residential Experiences in Earlier Life Stages and Functional Outcomes at Older Working Ages in the U.S.

Presenter: HwaJung Choi, University of Michigan

Co-authors: Stefan Fors, Karolinska Institute; Stephen Jivraj, University College London

Background: The functioning of current U.S. working-age adults has not improved and is poorer than that of the previous birth cohorts, at the same ages. Residential environments play important roles in one's physical and cognitive functioning. However, less is known about the potential influence of residential experiences at earlier life stages on functional outcomes at older working ages.

Methods: The study estimated the association between residential context (homelessness, housing type, ownership, mobility) and risk of having a limitation in activities of daily living (ADLs), instrumental activities of daily living (IADLs), and cognition, with adjustment for age, gender, race/ethnicity, and education. The study sample included community-dwelling adults aged 55 to 64 from the Health and Retirement Study (HRS). The life course residential experience was measured using the HRS Life History Mail Survey.

Results: Not having home ownership during middle age (i.e., 36-50) and experiencing homelessness before age 50 were significantly associated with a higher risk of having ADL and IADL limitations at ages 55-64. The predicted risk of ADL limitation was three times greater for those who experienced homelessness (26%) compared with those who did not (8%). Living in a mobile home (vs. single-family house) during childhood was related to a higher risk of having an ADL limitation at ages 55-64 (23% vs. 9%). And, living in a housing complex (vs. single-family house) during adulthood was linked to a higher risk of IADL and cognitive limitations. Multiple changes in residence during early life stages (younger than middle age) were associated with lower risks of functional limitation – especially cognitive limitation.

Conclusions: Residential experience in earlier life stages may be a significant predictor of physical and cognitive functioning at older working ages. Interventions to reduce the functional limitations of the population should seek improvement in residential conditions earlier in the life course.

9E

STREAM: WELLBEING IN CHILDHOOD TO ADULTHOOD

INDIVIDUAL PAPERS

Adolescence 1

TALK 1: Change Over Time (Or is There?) in the Prevalence of Anti-Social Behaviours at Age 13: Comparing Teenagers Born in 1998 And 2008

Presenter: Aisling Murray, Department of Children, Equality, Disability, Integration and Youth (Ireland)

Co-author: Emer Smyth, Economic and Social Research Institute (Ireland)

Adolescence is widely associated with exploration and greater independence from parental supervision. However, some of that exploration may be with risky and potentially illegal activities commonly referred to as 'anti-social behaviours' (ASB). Such activities include petty theft, vandalism and getting into physical fights. Some (such as fighting) pose a physical risk to the Young Person and others carry risks in terms of early contact with the Criminal Justice System or exclusion from school. This paper leverages the cross-cohort design of the Growing Up in Ireland study to compare whether certain types of ASB are more or less common among young people who turned 13 in 2021 (Cohort '08) versus another group of young people who turned 13 in 2011 (Cohort '98). It also examines whether the gender differences that were apparent among the older cohort in 2011 persist in the younger cohort. In terms of prevalence of specific types of ASB, there was surprisingly little difference between the two cohorts for some categories. For example, 'taken something from a shop' was circa 7% for both cohorts, and 'written or sprayed paint on things' had been 6% among Cohort '98 and 7% among Cohort '08. Other patterns did appear to change over time, however: 'hit, kicked or punched someone' increased from a rate of 16% among Cohort '98 to 22% among Cohort '08. This behaviour also manifested the biggest gender difference at both timepoints, with boys more likely to engage than girls – 25% versus 10% among Cohort '98, and 26% versus 16% among Cohort '08 – but with the increase over time apparently driven by an increase among girls rather than boys.

TALK 2: Consequences of Ostracism and Violence Against Vulnerable Adolescents: Post-Traumatic Stress Disorder, Depression, Suicide Attempts, and Violent Aggression

Presenter: Mogens Christoffersen, VIVE - Danish Center for Social Science Research

Co-author: Anne A. E. Thorup, University of Copenhagen

Violent victimization and forms of ostracism can have important developmental and psychological implications for children and adolescence during their upbringing.

Method: Post-traumatic stress disorder, depression, suicide attempts, and violent aggression are studied in a large-scale, prospective, longitudinal study of individuals born 1984-1994 followed in ages 12-18 years old in the calendar years 2001-2012 (N=583,923). The four events are analyzed separately by a discrete-time log-odds model until an event occur. Violence against children was defined as parental violence, child maltreatment, or being a victim of a violent or sexual crime.

Results: Violence was followed by increased risk of diagnosed PTSD, depression, registered suicide attempt, and violent aggression among children and adolescents. Further, some children which especially exposed to ostracism and violence (e.g. ADHD, autism or mental retardation) were found to be at higher risk of the mentioned psychological and behavioral implications, while this is not the case with children labeled with communication disorders such as stuttering or dyslexia. Indicators of experienced ostracism e.g. being adopted, being in care or being separated from family members were followed by an increased level of PTSD, depression, suicide attempts, or adolescent's own violent aggression.

Conclusion: A need-threat model of ostracism provides a partial explanation of these associations. Reaction to violence bears resemblance to pain inflicted by repeated and persistent experiences of ostracism from significant others in family, social groups, or local society, but also structural disadvantages and segregation will feed into higher levels of interpersonal violence.

TALK 3: Are the Kids Alright? Using Growing Up in Ireland to Analyse Bullying Trends Amongst 13-Year-Olds

Presenter: Derek Nolan, Department of Children, Equality, Disability, Integration and Youth (Ireland)

Throughout childhood, all children experience moments of conflict with their peers and these episodes are important parts of maturing and learning throughout the life course. However, bullying goes beyond the ordinary threshold of conflict and being bullied, whether physically, verbally or socially, can be detrimental for a child's development and cause undue distress that lasts beyond childhood. However, defining and identifying bullying can be difficult for outside observers, the bully and even the victim. This paper utilises a multi-faceted approach to surveying young people in the Growing Up in Ireland study about bullying to analyse differences between groups, as well as differences between self-reported experience of bullying and meeting an alternative definition of being bullied based on responses to questions about experiencing different behaviours. Additionally, this paper uses cross-cohort analysis to compare responses from two groups of 13-year-olds, born in 1998 and 2008, and investigate the impact of question framing, given that the two cohorts were asked similar-but-different questions. Both cohorts reported similar levels of bullying; 10% of the 1998 cohort to 9% of the 2008 cohort. However, based on responses to questions about bullying behaviours experienced (such as having something hurtful posted online about them), 37% of the 2008 cohort could arguably be categorised as a victim of bullying. There was a gender difference when it came to emotional impact of bullying; boys were much less likely to report that bullying made them feel afraid, angry or upset than girls. The paper also analyses trends and differences across groups in relation to physical vs non-physical bullying, likelihood of confiding in an adult and parental awareness.

TALK 4: The Changing Social Worlds of 13-Year-Olds in Ireland

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

This paper takes advantage of the two-cohort design of the Growing Up in Ireland (GUI) study to compare the experiences of 13-year-olds born a decade apart and surveyed in 2011/12 and 2021/22. This decade was a period of considerable social and policy change, including growing digitalisation and the disruption of the pandemic to all aspects of young people's lives. Between the two cohorts, there was a significant increase in parental educational levels and in the linguistic and cultural diversity of the population, but also a marked increase in the reporting of illness or additional needs among young people. The study findings point to very significant changes in the lives of 13-year-olds, even taking account of the shift in their profile. Both mothers and fathers report much lower levels of conflict than previously while young people see their mothers as more responsive to their needs. Parents are also less likely to use more punitive approaches (such as grounding) to deal with behaviour and more likely to explain what the young person has done wrong. In contrast, the quality of peer engagement has disimproved over time and young people report having smaller friendship groups than previously. Significant changes are evident in day-to-day activities, with an increase in weekly involvement in organised sports and very low levels of engagement in hard and light exercise are less evident than a decade previously. Not surprisingly, there has been a shift away from traditional media (such as TV watching) towards other screentime. The findings point to a remarkable persistence over time in gender and social background differences in adolescent activities and experiences, a pattern that has important implications for our understanding of inequality in adolescence as well as the policy measures to address it.

9F **STREAM: RESEARCH METHODS 4** **INDIVIDUAL** **Developments & Challenges 2** **PAPERS**

TALK 1: The Challenge of Questioning Adolescents in the French National Birth Cohort Elfe: Results of a Pilot Survey

Presenter: Marie Aline Charles, INSERM University of Toulouse

Co-authors: Bertrand Geay, Xavier Thierry, Melissa Arneton, Iris Hourani, Adriana Candea, Géraldine Meyer,

Thierry Simeon, French National Institute for Demographic Study (Ined); Cécile Zaros, French National Institute for Health and Medical Research (Inserm)

The children included in the French national birth cohort Elfe are reaching their teenage. Data has been until now mainly collected via parents. Our challenges are to now stimulate the child own participation, to make the experience attractive so to ensure continuing engagement and to guarantee the confidentiality of their responses. A pilot internet survey was carried out in a small sample of 326 adolescents aged 15-16 years from August to November 2023 in preparation of the survey of the national cohort in 2026. Invitation letters were sent to adolescents and their parents who participate into an Elfe pilot cohort since 2008. A QR code allowed each of them to connect to a personal account. To meet the security standards for on-line sensitive data collection, a double identification was required. Parents had to consent to their child participation before he/she could access questionnaires

on their own account. The questions were split into seven 8-minute thematic questionnaires for the adolescent. Efforts were made to design attractive questionnaires with colors, pictograms and varying modes of response. Cartoon drawing, general knowledge quiz and some summary statistics of all previous respondents were included for a ludic experience. Opened questions were included about the appreciation of the questionnaire but also to make research suggestions. Participation rate was low (115 parents (35%), 91 adolescents (28%)). When one questionnaire was started, 78% of young people completed all questionnaires. A phone post-survey was conducted to explore reasons for non-participation. The main conclusions of this pilot survey for the national survey are that we need 1) to also concentrate to optimize parents' participation, 2) to ease the user journey to the questionnaires 3) to prevent modification of responses following quiz and statistics.

TALK 2: Two New Solutions to the Zero Non-Response Weights Problem

Presenter: Jamie Moore, University of Essex

Co-author: Paul S. Clarke, University of Essex

To correct for non-response bias, household (HH) panel surveys release inverse propensity non-response (IP-NR) weights that adjust selection weights for non-response. However, often some respondents lack selection weights, so cannot be assigned IP-NR weights (the 'zero weights' problem). In addition, previous solutions to this issue, which reduces weighted dataset quality, have limitations. Sharing with unweighted respondents the existing selection weights of HH members then estimating IP-NR weights requires an existing selection weight in the HH. Predicting selection probabilities for such respondents then estimating IP-NR weights is model based, uses only responding HH probabilities, and requires assumptions when adjusting for multiple HH selection paths. Hence, two new weight-sharing procedures are introduced. Both share with unweighted respondents the existing weights of respondents with similar characteristics. Shared Selection (SS) weighting shares selection weights, then re-estimates IP-NR weights. Shared IP-NR (SIP-NR) weighting shares estimated IP-NR weights. Procedure performance is then evaluated empirically, using the UK Household Longitudinal Study COVID-19 Study datasets. Both performed well in increasing weighted dataset size and subgroup analysis feasibility, and in reducing non-response biases and precision loss: indeed, precision loss was lower with SIP-NR weights than IP-NR weights. The use of these new procedures is then discussed.

TALK 3: The UK Longitudinal Linkage Collaboration: A Trusted Research Environment for the Longitudinal Research Community

Presenter: Andy Boyd, University of Bristol

Co-authors: Robin Flaig, Kirsteen Campbell, Stela McLachlan, UK Longitudinal Linkage Collaboration, University of Edinburgh; Jacqui Oakley, Katharine Evans, Richard Thomas, Emma Turner, UK Longitudinal Linkage Collaboration, University of Bristol

Objectives: Our Trusted Research Environment (TRE) provides a centralised infrastructure to pool Longitudinal Population Studies' (LPS) data and systematically link participants' routine health, administrative and environmental records. Data are held in a centralised research resource, certified by UK Statistics Authority as meeting the Digital Economy Act standard.

Approach: We have created an unprecedented infrastructure integrating data from interdisciplinary and pan-UK LPS linked to participants' NHS England records with delegated access responsibilities. Integrated and curated data are made available for pooled analysis within a functionally anonymous TRE. We developed a bespoke governance and data curation framework with LPS data managers and Public/participant contributors. New data pipelines are being built with partners at ADRUK and the Office of National Statistics to link non-health records. Our design supports long-term sustainability, linkage accuracy and the ability to link data at both an individual and household level.

Results: This organisation is a collaboration of >24 LPS with ~280,000 participants. Participants' data are linked to NHS records and geo-coded environmental exposures. This resource is now accessible for public benefit research for bona fide UK researchers. Administrative data (tax, work and pensions, and education) are being added to the resource. This data flow is enabled by: (1) a model where TTP processes participant identifiers for many different data owners; (2) creation of a novel longitudinal data pipeline, enabling linkage, data extraction and update of records over time; (3) an access framework where Linked Data Access Panel considers applications on behalf of data owners, with review by a Public Panel and distributing applications to LPS for approval of appropriate data use.

Conclusion: Our organisation provides a strategic research-ready platform for longitudinal research. The research resource is positioned to allow researchers to investigate cross-cutting themes such as understanding health and social inequalities, health-social-environmental interactions, and managing the COVID-19 recovery.

TALK 4: Using Machine Learning to Identify Qualitative Predictors of Longitudinal Survey Attrition: Do Qualitative Responses Predict Longitudinal Survey Attrition Above Demographic Factors in a National Youth Cohort Study?

Presenter: Ben Edwards, Australian National University

Co-author: Intifar Chowdury, Flinders University

Survey attrition in longitudinal studies is one of the greatest challenges in their implementation and longevity. Survey practitioners of these sorts of studies have often used qualitative data from focus groups and interviews of participants to understand what features of the survey design limit attrition and enhance participation (Calderwood, Brown, Gilbert & Wong, 2021). Developments in natural language processing now mean that large scale analyses of open-ended questions of survey participants can be undertaken to not only understand what participants think would aid survey participation but also predict attrition. In this study we capitalise on this opportunity using data in GENERATION, a youth cohort study in Australia. In wave 1 we asked a random third of participants: "Thanks for completing the survey, what is one thing we could do to make it more likely that other people like you

would complete the survey in the future?” Initial analyses using topic modelling derived six topics including uncertainty, survey length, benefits, gratitude, appeal and incentives. Clustered logistic regression models were used to test whether these topics predict survey attrition over and above demographic characteristics. Results from these models suggested that suggestions about reducing survey length was the only topic that reliably predicted survey attrition in wave 2 over and above demographic variables. We discuss the implications of these results for the practice of cohort studies.

10A STREAM: HEALTH & WELLBEING 5

SYMPOSIUM

‘What Does Wellbeing Mean to Me?’: Taking an Innovative Multimodal Approach to Data Collection and Analysis with Young People

Convenor: Kane Meissel, The University of Auckland

SUMMARY: In Aotearoa New Zealand, research exploring child and youth wellbeing is currently limited by measures that are typically derived from actuarial, deficit-based, adult-centric, uni-dimensional data and that lack a te ao Māori (Māori world) lens. Accordingly, current understandings of wellbeing, particularly of and for young people, may be incomplete. This is of concern given the current inequities that exist in wellbeing outcomes of children in Aotearoa New Zealand. Building upon the trusted relationships established by Growing Up in New Zealand, the ‘Our Voices’ project, funded by the Ministry of Business, Innovation and Employment, sought to address some of the limitations of current wellbeing measures by co-designing a new digital platform with young people to collect their own qualitative views of wellbeing. The result was the development of the Tō Mātou Rerenga – Our Journey app and the collection of large-scale, multi-modal qualitative data. This symposium will discuss the development of this project (Paper 1), the preliminary findings from the different modes of analysis utilised (machine learning and manual thematic analysis) and how these findings align with existing GUiNZ data (Papers 2 and 3), and the methodological insights related to this method of data collection and methods of data analysis (Paper 4).

TALK 1: Tō Mātou Rerenga - Our Journey Digital Platform - A New Way to Engage with Young People

Presenter: Susan Morton, University of Technology Sydney

Understandings and experiences of wellbeing may be misrepresented in research because existing measures of wellbeing are often developed based on narrow subsections of the population (e.g., WEIRD populations). The ‘Our Voices’ project sought to explore young peoples’ understandings of wellbeing to produce more inclusive and representative knowledge. This paper discusses the motivations behind and vision for the ‘Our Voices’ project and maps its progress from inception through to the implementation of the Tō Mātou Rerenga – Our Journey app. Given that the GUiNZ longitudinal study acted as a springboard for the current project, a brief overview of this study will be presented, particularly as it relates to the benefits and challenges of capturing young peoples’ voices in research in contemporary Aotearoa New Zealand. To address the aforementioned challenges, an overview of the ‘Our Voices’ project will then be provided. The collaborative co-design of a digital platform, which was made ‘by young people for young people’ to authentically capture what wellbeing meant to them, was a new approach to data collection for both the research team and young people alike. Accordingly, different stages of the development process will be presented, including the establishment of and engagement with the Cohort Reference Group, piloting the app with the Leading Light group (Te Roopu Piata), and the implementation of the final product to the main GUiNZ cohort. While longitudinal cohort studies tend to use questionnaires to collect data from participants, their whānau, and other sources (e.g., teachers), this presentation highlights that there are alternative modes of data collection that may offer a more engaging experience and, therefore, garner richer data that better represents people’s lived experiences. This, in turn, facilitates the production of meaningful and relevant research.

TALK 2: Multi-Modal Machine Learning to Enable High Throughput Qualitative Analysis of Wellbeing Information - Tō Mātou Rerenga - Our Journey

Presenter: Kane Meissel, The University of Auckland (on behalf of Caroline Walker, UoA)

Co-authors: Yun Sing Koh, Ricky Qiao, University of Auckland; Chris Cunningham, Massey University

Machine learning can provide an alternative to traditional analysis methodologies for both quantitative and qualitative data. Traditionally, qualitative data analysis is generally a manual and therefore, slow process that is not suited to large scale data collection. Machine learning can enable rapid and timely processing of large-scale qualitative information. The Tō Mātou Rerenga – Our Journey digital platform was used to collect multi-modal qualitative wellbeing data from a group of young people who are part of the Growing Up in New Zealand longitudinal study. We are currently developing algorithms and associated pipelines to analyse qualitative wellbeing data from New Zealand young people (age 13-14 years) to improve our understanding of wellbeing and what wellbeing means to our young people. Current challenges with our approach include the lack of large language models for our population, particularly for the indigenous Māori language. Additionally, inherent bias associated with sex and ethnicity is potentially problematic if not addressed adequately. Understanding the bias associated with machine learning algorithms and how this impacts the analysis of our data is currently being explored. Furthermore, our analysis pipeline extends to include the longitudinal quantitative data that has been collected from the cohort in their first 12 years of life. We will use this longitudinal data to identify wellbeing trajectories and segment the cohort according to stability or flux in key socio-demographics parameters measured overtime (e.g. exposure to persistent poverty). We will then explore the relationship between these segments and the qualitative wellbeing data. Our overall aim is to combine both longitudinal quantitative and qualitative information to significantly improve our understanding of wellbeing in young people.

TALK 3: Young Peoples' Understandings and Experiences of Wellbeing: Capturing Their Voices Using Thematic Analysis

Presenter: Georgia Rudd, The University of Auckland

Co-authors: Kane Meissel, Elizabeth Peterson, University of Auckland

Measures of wellbeing inform our understandings of wellbeing, as well as its nature and prevalence within different populations. However, the limitations of some existing measures mean that current research may not be capturing the full spectrum of lived experiences of wellbeing. Drawing on qualitative data collected by the digital platform Tō Mātou Rerenga – Our Journey, this paper focuses on making sense of young peoples' experiences and understandings of wellbeing using traditional data analysis techniques. Prompts from the app were identified for investigation based on their representation of the different components of wellbeing (e.g., family / whānau and culture) and their alignment with existing GUINZ datasets (e.g., young people report at DCW8 and DCW12). Most importantly, however, the prompts explored reflect their significance to the young people themselves, suggested by indicators such as response rate and the richness of responses. For each prompt (e.g., 'How did COVID-19 affect your family?'), or related cluster of prompts (e.g., 'How would you describe your culture?' and 'What helps you to feel connected to your culture?'), reflexive thematic analysis was conducted to authentically capture young peoples' voices. This paper will present the preliminary findings of these analyses. The themes will capture the overarching narratives of wellbeing to understand 'what works' in contemporary Aotearoa New Zealand for different groups of young people. This cross-sectional qualitative data will be contextualised by the addition of longitudinal quantitative data to 1) triangulate our findings, and 2) identify early life predictors of wellbeing during adolescence. By integrating different types of data, this study aims to comprehensively capture young peoples' experiences and understandings of wellbeing and present a holistic understanding of wellbeing that can be used to promote the development and success of all children in Aotearoa New Zealand.

TALK 4: Going Digital: Methodological Reflections and Considerations

Presenter: Kane Meissel, The University of Auckland

Co-authors: Susan Morton, University of Technology Sydney; Chris Cunningham, Massey University

The 'Our Voices' project aimed to explore the efficacy and outcomes of using a non-traditional method of data collection for a longitudinal cohort of young people via the Tō Mātou Rerenga – Our Journey app. Using this approach resulted in the collection of large-scale, multi-modal qualitative data which provided the opportunity to compare different methods of data analysis using the same dataset. This paper discusses the learnings of this project in relation to these methods of data collection and data analysis. Using a digital platform as the access point for young people to participate in our study was intended to promote engagement. We present the preliminary findings about who engaged with the app and the degree of engagement within the context of the wider GUINZ study to understand the effectiveness of this method of data collection for capturing the diverse voices of young people. These insights may be applied to other longitudinal studies looking to engage or re-engage parts of their cohorts, especially during the adolescent years. Engagement is also considered in terms of the nature of participant responses. The prompts within the app were largely open-ended and participants were able to respond via text, image, audio, or video. These data are compared to the data from existing data collection waves of the GUINZ study. In addition, the quantity and varied nature of the data collected lends itself to multiple methods of data analysis, including machine learning, which can process data more efficiently than traditional methods. This paper discusses the insights gained from applying both machine learning and thematic analysis techniques and considers the implications of these different methodological approaches in facilitating the sense-making of qualitative data, highlighting both the myriad of approaches to data analysis available to researchers and the responsibilities that come with choosing an approach.

10B STREAM: RESEARCH METHODS 3

SYMPOSIUM

Enhancing Longitudinal Research with Administrative Data

Convenor: Gergő Baranyi, University College London

SUMMARY: Administrative data drawn from healthcare, educational, and social care records offer unique opportunities for population level research. Linking administrative data to cohort studies has emerged as a promising avenue to mitigate the limitations inherent in each type of data and is increasingly used in longitudinal research. This symposium will showcase opportunities arising from recent data linkages between administrative and cohort data and present new data sources and innovative methodologies to address the limitations of administrative data. The first presentation will introduce a new national intergenerational cohort encompassing 8 million mothers and children in England, linked from administrative health, education, and social care records. Two papers based on world-class British birth cohort studies with linked health and educational data will then demonstrate how linkages between cohort and administrative data can benefit research by examining the relationship between self-reported mental health in adolescence and mental health service use, as well as school exam performance and mental health. The last talk will present a novel methodological approach to address residual confounding in analyses of population administrative data by leveraging linked cohort data, thus enhancing the precision of population-level analyses.

TALK 1: Creating an Intergenerational Cohort of Mothers and Their Children Using Administrative Data from Health, Education and Social Care in England (ECHILD)

Presenter: Katie Harron, University College London

Co-authors: Qi Feng, Ruth Gilbert, Georgina Ireland, Katie Harron, University College London

Background: Maternal physical, psychological, and social risk factors extend beyond impacting mother's individual well-being to

significantly influence their children. Sibling dynamics also play a crucial role in individual development, health and wellbeing. We established a national intergenerational cohort of mothers and their children using administrative health, education and social care data in England (ECHILD).

Methods: We extracted 14.5 million baby records from hospital records for births between 1997-2022 and linked 13.6 million (94.1%) of these to delivery records of 8.0 million mothers using a validated probabilistic algorithm. We then identified clusters of mothers with only-children and mothers with sibling-children by identifying livebirths linked to the same mother.

Results: The cohort captures 87.7% of all livebirths in England and includes mothers aged up to 37 and their children. We identified 4,086,648 mother-only-child clusters and 3,957,856 mother-sibling-children clusters. Compared with only-children, children with siblings were more likely to live in more deprived areas and have younger mothers, but were less likely to be overdue births (>42 weeks gestation), or to have very low birth weight (<1500g). Among the mother-sibling-children clusters, sibship sizes varied between 2-15, with a mean of 2.4 children per mother. The median birth interval was 3.0 years.

Discussion: This national cohort of 8 million mothers and their children (including 4.1 million mother-only-child and 4.0 million mother-sibling-children clusters) linked to hospital, education and social care data is an important resource for investigating the effects of maternal exposures, sibling dynamics and their interplay on individual development, health and wellbeing. This presentation will explore the research potential of these data.

TALK 2: Childhood Screening for Psychological Distress and Mental Health-Related Hospital Attendance Among Young Adults

Presenter: Gergő Baranyi, University College London

Co-authors: Katie Harron, UCL Great Ormond Street Institute of Child Health; Nasir Rajah, Emla Fitzsimons, University College London

Background: Investigating the relationship between self-reported poor mental health and mental health service utilisation can provide evidence on the benefits of universal screening and help to identify treatment gaps; however, cohort studies with linked administrative data are rare. We explored the link between self-reported mental health in adolescence and mental health-related hospital attendance in young adulthood.

Method: Data from a nationally representative English cohort (Next Steps) were linked to NHS Hospital Episode Statistics. GHQ-12 assessed psychological distress in Next Steps at age 15; participants were followed up until their first mental health-related hospital appointment or were censored at the end of the study (age 27). Cox proportionate hazard models with survey weights estimated associations.

Results: Out of 4058 young people included in the analyses, 19% reported high levels of distress at age 15. During the 12-year follow-up, 5.3%, 2.9% and 2.7% of the participants had at least one mental disorder, drug/alcohol misuse and self-harm presentation, respectively, and 4.2% had a mental health treatment. Higher GHQ-12 scores were associated with mental disorder presentations (HR=1.10, 95% CI:1.04- 1.16), and mental health treatments (HR=1.14, 95% CI:1.08-1.20). Associations for treatments were weaker for young people living in deprived areas, or if their main parent had lower education.

Conclusions: Adolescent psychological distress predicts subsequent hospital attendance in young adulthood, but there might be treatment gaps in service utilisation among more disadvantaged individuals. Detecting youth with mental health difficulties through universal screening, may facilitate early intervention, improve life-course outcomes, and ultimately reduce secondary healthcare use.

TALK 3: The Relationship Between Exam Performance and Mental Health: Evidence from England

Presenter: Emla Fitzsimons, University College London

Co-author: Nicolas Libuy, University College London

This research examines the relationship between examination performance in high stake exams (GCSEs) and subsequent adolescent mental health and wellbeing across a nationally representative sample in England. It uses data from the Millennium Cohort Study, a UK-wide longitudinal birth cohort study that started in 2000, linked with administrative school records from the English National Pupil Database. It examines different types of mental health issues including emotional and behavioural symptoms, anxiety and depressive symptoms, and also mental wellbeing. Heterogeneity is examined by sex and socio-economic background. In the absence of quasi-experimental variation to identify the causal effects of interest, the research uses Ordinary Least Squares methods on very rich data and combines this with bounds to provide plausible and robust estimates of the impact of educational attainment on mental health and wellbeing.

TALK 4: Using Linked Cohort Data to Help Address Residual Confounding in Analyses of Population Administrative Data

Presenter: Richard J. Silverwood, University College London

Co-authors: Gergő Baranyi, Lisa Calderwood, George B. Ploubidis, University College London; Katie Harron, Bianca L. De Stavola, UCL Great Ormond Street Institute of Child Health

Objectives: Analyses of population administrative data can often only be minimally adjusted due to the unavailability of a full set of control variables, leading to bias due to residual confounding. Cohort studies will often contain rich information on potential confounders but may not be sufficiently powered to meaningfully address the research question of interest. We aimed to use linked cohort data to help address residual confounding in analyses of population administrative data.

Methods: We propose a multiple imputation-based approach, introduced through application to simulated data. We then apply this approach to a real-world problem – examining the association between pupil mobility (changing schools at non-standard times) and Key Stage 2 attainment using data from the UK National Pupil Database (NPD). The limited control variables available in the NPD are supplemented by multiple measures of socioeconomic deprivation captured in linked Millennium Cohort Study (MCS) data.

Results: The proposed approach is observed to perform well when using simulated data. The association between pupil mobility and Key Stage 2 attainment was attenuated after supplementing the NPD analysis with information from linked MCS data, though with a decrease in precision.

Conclusion: We have demonstrated the potential of the proposed approach, but more work is required. The principles underlying this innovative approach are widely applicable: any analysis of administrative data where confounder control is limited by the availability of information could potentially be strengthened by linking a subset of individuals into richer cohort data and leveraging the additional information to inform population-level analyses.

10C **STREAM: RELATIONSHIPS** **INDIVIDUAL** **Relationships 2** **PAPERS**

TALK 1: Daily Discrimination and Loneliness Among Midlife and Older Couples: A Longitudinal Dyadic Approach

Presenter: Jeffrey E. Stokes, University of Massachusetts Boston

Co-author: Heather R. Farmer, University of Delaware

Loneliness is a serious public health concern among the aging population, as it is associated not only with physical and cognitive health declines, but also with mortality. Moreover, loneliness is driven not only by social isolation but also by dissatisfaction with the relationships one does have, including with a spouse. Indeed, having a lonely spouse is a risk factor for experiencing loneliness oneself. Yet more distant social ties may influence one's loneliness, as well. One area that has not received much research attention is the extent to which experiences of daily discrimination may exacerbate loneliness, both individually and dyadically, by communicating to individuals that they are unwelcome or unaccepted within a broader social milieu. The present study uses longitudinal dyadic data from the 2010-2020 waves of the Health and Retirement Study (N = 2,858 individuals from 1,429 opposite-sex couples) to examine whether experiences of daily discrimination are associated with both one's own and a partner's loneliness over 3 waves of data collection. Results indicated that (1) daily discrimination at Time 1 was associated with increased loneliness 4 years later (Time 2) for individuals; (2) an individual's loneliness at Time 2 was associated with their partner's loneliness 4 years later (Time 3); and (3) this dyadic partner effect served as a mechanism for a significant indirect effect of Time 1 daily discrimination on dyadic partner's loneliness at Time 3, 8 years later. These findings suggest that daily discrimination leads to increased feelings of loneliness in midlife and older age, and that the implications of daily discrimination for loneliness are not limited to individuals themselves but can have dyadic consequences for partners' loneliness as well.

TALK 2: Predicting the Quality of Romantic Relationships in Adulthood from Family, Peer, and Romantic Relationship Experiences in Adolescence

Presenter: Romain Jammal-Abboud, Zefat Academic College / University of Tel Aviv

Co-author: Fred Berger, University of Innsbruck

In this paper, we examine the associations between relationships with parents, peers, and romantic partners in adolescence and the quality of romantic relationships in adulthood. We argue that the competencies that promote an individual's success in establishing a satisfying romantic relationship in adulthood can be traced to relationship experiences in earlier life. Consistent with these arguments, correlations have been reported in previous studies between family experiences in adolescence and the quality of romantic relationships in adulthood. However, the connection between adolescent peer and romantic relationships and relationship quality in adulthood has not been well-demonstrated yet. Analysis is based on data from the German longitudinal LifE-Study (1979-2024). The sample of analysis consists of 344 female and 293 male participants who reported about the quality of their family, peer, and romantic relations at the age of 16 years and the quality of their romantic (marital) relationships at the age of 35 years. Hierarchical regression analyses were conducted. Results indicate that the capacity for romantic intimacy is to a considerable extent passed from one generation to the next. A warm parent-child relation has a positive influence, whereas a conflict-ridden parent-child relation in adolescence is associated with an elevated risk for conflict and dissatisfaction in the later romantic relationship. In addition, the study shows that in adolescence for girls, experiences in romantic relationships and for

boys, experiences in peer relationships are predictive of later romantic relationship quality at the age of 35. One possible explanation of this gender specific pattern of association is that for boys, romantic relationships are not as intense as for girls at the age of 16 years. Altogether, the findings demonstrate that relationships in adolescence both inside and outside of the family of origin contribute uniquely to the development of romantic relationships in adulthood.

TALK 3: Who Stays Living Apart Together (LAT) and Are They Happy? A Longitudinal Analysis of Couples Who LAT and Life Satisfaction

Presenter: Kelly Reeve, University of Essex

Co-author: Michaela Benzeval, University of Essex

Living Apart Together (LAT) is a persistent practice; it remains at a stable level (7-8% of the population) in statistical surveys every year with a steady flow of newly formed LAT relationships, and those moving on to cohabit, marry or separate. Some studies have longitudinally explored factors associated with LAT relationships and separation or co-residence, but less have considered persistent LAT relationships. We take a life course analysis approach to explore how and why individuals practice persistent LAT relationships (with or without the same partner) and their life satisfaction. We use the UK Household Longitudinal Study (UKHLS) to study approx. 2015 individuals LAT in 2011 and their relationship status in 2017-19 (pre-covid). Using logistic regression we found that those who went on to marry had the highest levels of life satisfaction, with lower odds of life satisfaction for individuals in cohabiting relationships (OR 0.64, 95% CI: 0.45, 0.93) followed by those persistently LAT (OR 0.48, 95% CI: 0.32, 0.72) and the lowest odds for those who became single (previously married) (OR 0.44, 95% CI: 0.25, 0.75) and single (never married) (OR 0.43, 95% CI: 0.29, 0.64). This is after adjusting for a range of biographic and demographic attributes and baseline measures of life satisfaction. Additionally, we found that both individuals persistently LAT, and those who became single (previously married), maintained the highest levels of caring responsibilities during this period compared with those who entered marriage or cohabiting relationships. Further, cohabitation intentions, decision to live apart and marriage forecast reports in 2011 were strong predictors of relationship status 6-8 years later. Our findings emphasise the importance of looking beyond de facto marital status or household structure when considering partnerships as persistent LAT relationships positively impact life satisfaction compared with singledom and may also be a source of caregiving.

TALK 4: Interparental Relationship During Childhood as a Predictor of Healthy Social Relationships in Early Adulthood

Presenter: Kristen Power, Australian Institute of Family Studies

Co-authors: Neha Swami, Svjatlana Vukusic, Monsurul Hoq, Australian Institute of Family Studies

Interparental relationships in childhood can provide a positive or negative model for children. Healthy relationships between parents can influence children's development of healthy social relationships as they enter adulthood. Conversely, parental divorce or separation and interparental violence can negatively influence children's development of social relationships. Understanding the effect of interparental relationships during childhood on healthy and respectful peer and romantic relationships in early adulthood has implications for government policy to reduce the risk of gender-based violence and to protect health. One factor that may influence interparental relationships is the experience of socioeconomic disadvantage and financial hardship. In this study we will explore (1) how do interparental relationships during childhood influence healthy peer and romantic relationships in early adulthood? and (2) How the interparental relationship is affected by the experience of social and economic disadvantage. We will use eight waves of data from the Growing up in Australia: The Longitudinal Study of Australian Children (LSAC) for the research. The quality of interparental relationships and quality of peer and romantic relationships are measured using scales, including the Hendrick relationship quality scale. We will use modern best practice statistical methods in causal inference to analyse the data. Results from this study will help provide an evidence base to inform policy and program development that supports the development of healthy and respectful relationships.

10D STREAM: EMPLOYMENT & WEALTH

INDIVIDUAL PAPERS Employment/Wealth Inequalities 3

TALK 1: Does Education Pay Off for Everyone? Employment Security and Earnings of Young Adults in Germany

Presenter: Christine Steiner, German Youth Institute

There is a large body of empirical evidence indicating that the massive expansion of education over the past few decades has resulted in a broadening of who now has access to educational opportunities. This is certainly true for young women, who are not only participating in large numbers, but also outperforming their male peers in all western societies, at all educational levels. Perhaps not as well known, is the growing participation and success of immigrant youth in education. However, in many western countries, including Germany, young people, particularly young women and immigrants, find it difficult to establish themselves in the labor market. The reasons for this discrepancy are not clear. It could be rooted in discriminatory hiring practices as well as different life course patterns. However, it could also be that more education no longer pays off, or not for everyone. Using data from the nationwide survey "Growing up in Germany", which was conducted by the German Youth Institute in 2019, this paper analyses whether or not the time spent in education leads to better earnings and a full-time, permanent job. The latter is important not only for employment but also for German social security schemes. The analysis included data from 1,354 young adults, 25 to 32 years old, who were in employment at the time of the survey, and for whom extensive information on their previous educational

and employment history was available. The findings show that in addition to the successful completion of vocational training or an educational program, the amount of time spent in education plays an important role for both better earnings and for a full-time, permanent job. Work experience is also an important factor. Gender and/or ethnic inequalities are more likely to be associated with income differences than with getting a secure job.

TALK 2: Privileges Among the Privileged: The Effect of Starting Conditions on Occupational Success in an Educationally Privileged Group from Age 16 to 66

Presenter: Heiner Meulemann, University of Cologne

Co-author: Klaus Birkelbach, University of Duesseldorf

Do starting conditions in an educationally selected youth still affect occupational success in adult life? Educational selection depends on starting conditions for the career beyond the school which are either given or controllable. In a group already selected, it intensifies competition and challenges motivations to succeed more strongly. Then, two hypotheses should hold: (1) Occupational success in adult life depends less strongly on given than on controllable starting conditions. (2) The impact of the former decreases and of the latter increases during the life course. The hypotheses are tested in the German High School Panel (CHISP). It starts off with 3240 German Gymnasium (the highest layer of the three German high school forms) students at age 16 in 1969 when only 8 % of the birth cohort attended the Gymnasium. They have been reinterviewed at age 30, 43, 56, and 66 when 1013 remain which are the analysis group. Starting conditions were measured at age 16 and 30, the occupational career success at age 30, 43, 56, and 66. The dependent variable is the occupational career success from 16 to 66, that is, prestige and hourly net income. Their development is tested by regressions on age. The independent variables are the starting conditions at age 16 and 30: gender, intelligence, and social origin as given vs. grades, aspirations, plans, and educational attainment as controllable. Hypotheses are tested by regressions of prestige and income at different ages on these starting conditions, and on the preceding success. In the presentation we will show in how the hypotheses are confirmed.

TALK 3: Reservation Wages and the Motherhood Wage Penalty: Evidence Based on Panel Data

Presenter: Sebastian Prechsl, Friedrich-Alexander-University Erlangen-Nuremberg

Co-authors: Alina Gutwein, Tobias Wolbring, Friedrich-Alexander-University Erlangen-Nuremberg

The present study broadens the knowledge base by studying the labor supply side and asks how the transition to motherhood affects reservation wages as a key determinant of labor supply, job search behavior, labor market participation, wage negotiations, and realized wages. Examining women's adaptation of wage aspirations after the birth of their first child might therefore contribute to a better understanding of the role of the supply side in the actual wage gap. The second goal of our study is to investigate to what extent reservation wages of mothers before the transition to a new job translate into actual wages after the transition. While a narrow economic perspective might lead to the prediction that higher reservation wages on average lead to higher actual wages, a more nuanced socioeconomic view suggests that reservation wage changes do not necessarily need to translate into realized wages, especially for mothers. Our analysis is based on 15 waves of the German panel study Labor Market and Social Security and covers 11,230 observations of 2,720 women in the age of 18 to 49. Based on time-distributed fixed effects models, we find that, compared to the time before motherhood, childbirth increases the reservation wage on average by four percent in the birth year. In the following years, the effect slightly increases. In further analyses, we find no anticipation effects and that higher income needs of the household after childbirth seem to play a major role for the increase in reservation wages. However, we only find a positive association between reservation wages previous to the transition to a new job (i.e., in t_0) and realized wages after the transition (i.e., in t_1) for childless women but not for first-time mothers. Thus, wage claims do not seem to improve the wages of mothers.

TALK 4: The Effect of Separation on Poverty and Employment

Presenter: Barbara Broadway, University of Melbourne

Co-author: Guyonne Kalb, University of Melbourne

This paper uses data from 2001 to 2021 from the Household, Income and Labour Dynamics in Australia (HILDA) survey to estimate impacts of separation or divorce on poverty and employment trajectories for men and women over the first five years after separation or divorce. We use a difference-in-difference approach, comparing changes in employment and poverty before and after separation to changes in the same outcomes for individuals in couples that stayed together. Women with children below school age (0 to 4 years) are 18 percentage points more likely to be poor in the year after separation, than otherwise similar women with pre-school-aged children who remained partnered. After three years, however, the added poverty risk from separation disappears for this group. In contrast, women with older children have on average, a less elevated poverty risk caused by a separation, but the higher poverty risk proves persistent for at least five years after the separation. The impacts for men are not small compared to their baseline poverty risk, but much less dramatic than for women, more short-lived, and non-existent for men with small children. Regarding the impact on employment immediately after separation, we find that men and women without dependent children at the time of separation, are significantly more likely to be employed three to five years after separation. This is plausibly caused by delayed retirement entry. When examining the role of pre-separation employment history, we find that any impact of separation on poverty is the higher the more time an individual spent without employment, especially in the last year before the separation.

TALK 1: Household Vaping Bans in Homes with Adolescents: Longitudinal Changes in Adolescent Vaping and Risk Factors for Ban Relaxation*Presenter: Brian Kelly, Purdue University**Co-authors: Jeremy Staff, Jennifer L. Maggs, Jessica M. Mongilio, Sara E. Miller, Pennsylvania State University; Mike Vuolo, The Ohio State University*

Background: Adolescent e-cigarette use remains a global public health issue; vaping among adolescents has increased in notable ways. Parents are key targets in adolescent health promotion given that they establish both norms and rules related to health behaviors. We aimed to assess whether household vaping bans reduced adolescent past-month vaping as well as to identify risk factors for relaxing household vaping bans over time.

Methods: We used longitudinal data from 16,214 adolescents (ages 12 to 17) from the youth sample of the U.S. nationally-representative Population Assessment of Tobacco and Health study. We examined how household vaping bans may shape adolescent vaping as well as what factors may lead parents to relax existing household bans over time. Coarsened exact matching, logistic regression, and hybrid panel models were utilized.

Findings: Before matching, household vaping bans led to 37% lower odds of youth e-cigarette use (OR=.63). After matching procedures, household vaping bans were associated with 54% lower odds of vaping (OR=.44). Results from hybrid panel models revealed 37% lower odds of vaping when youth lived in vape-free households compared to waves when they did not (OR=.63). 13.5% of households with vaping bans relaxed them in a subsequent wave. The odds of relaxing household bans were higher if parents vaped (OR=2.20) or smoked (OR=2.55), youth smoked (OR=2.27), parents reported no smoking ban (OR=2.68), youth were unaware their household had a vaping ban (OR=1.95), and parents perceived low harm from vaping (OR=1.60).

Conclusions: Household vaping bans were associated with lower odds of past-month adolescent vaping. Thus, maintaining strong household vaping bans are a strategy for parents to reduce adolescent vaping. Yet, parents are not always consistent in maintaining bans. Risk factors for relaxing household vaping bans include both parent and child factors. Parents may benefit from strategies and support to maintain bans consistently.

TALK 2: Social Inequalities in Adolescent Drinking and Smoking: Trends from Two Growing Up in Ireland Cohorts*Presenter: Eoin McNamara, Department of Children, Equality, Disability, Integration and Youth (Ireland)*

Early adolescence is characterised as a time of self-discovery and new experiences, this can include experimentation with risky behaviours like smoking, vaping and drinking alcohol. Social inequalities are often observed for such behaviours, with those from less advantaged families more likely to partake in them. Recent developments, including the COVID-19 pandemic and changing family profiles, may have affected such social inequalities. This study aims to harness the dual cohort design of Growing Up in Ireland to explore changes in the prevalence and social inequalities in adolescent risky behaviours over a ten-year period. Data were gathered from both cohorts of Growing Up in Ireland at age 13; collected in 2011 for the older cohort, Cohort '98, and in 2021 for Cohort '08. Participants were asked about their behaviour with regard to smoking, vaping and drinking, and data on a wide range of broader socio-demographic were also collected. Interactions between risky behaviours and socio-demographic indicators were analysed and compared across both cohorts. For the older Cohort '98, 9% of 13-year-olds had ever smoked; those from less advantaged families (in terms of parental education and social class) were more likely to do so. In terms of alcohol consumption, 16% of 13-year-olds had ever had an alcoholic drink. Again, differences were observed according to family characteristics; those 13-year-olds from less advantaged families were more likely to drink alcohol. For the younger Cohort '08 at age 13, smoking levels were substantially reduced; just 3% of 13-year-olds had ever smoked, and no differences were observed according to any family characteristics. However, vaping had emerged as a new risky behaviour; 9% of young people had ever vaped, with increased risk for those from less advantaged families. Substantially fewer 13-year-olds in Cohort '08 had tried alcohol (10%), although social gradients persisted. Explanations for differences between cohorts are explored.

TALK 3: Differential Effects of Adolescent Health Behaviors on Cardiometabolic Biomarkers in Adulthood by Socioeconomic Background*Presenter: Josephine Jackisch, University of Fribourg**Co-authors: Nazihah Noor, Stéphane Cullati, Cristian Carmeli, University of Fribourg; Olli T. Raitakari, University of Turku; Terho Lehtimäki, Mika Kähönen, Tampere University; Cyrille Delpierre, INSERM University of Toulouse; Mika Kivimäki, University College London*

Adolescence is a sensitive period for cardiometabolic health. Yet, it remains unknown if adolescent health behaviors, such as alcohol use, smoking, diet, and physical activity, have differential effects across socioeconomic strata. Adopting a life course perspective and a causal inference framework, we aim to assess whether the effects of adolescent health behaviors on adult cardiometabolic health differ by levels of neighborhood deprivation, parental education and occupational class. Drawing on the prospective population-based cohort of the Young Finns Study (n=3,596), we first performed a descriptive latent class analysis investigating the clustering of health behaviors (ages 12–18y), we found that smoking and alcohol use strongly clustered in

adolescents leading us to modelling them as a joint exposure in the causal analysis. Fruit and vegetable consumption, and physical activity did not cluster as strongly and were thus modeled as single behaviors. Second, the effects of these three exposures were estimated conditional on parental education, occupational class, and neighborhood deprivation (effect modifiers) on eight biomarkers of cardiometabolic health at age 33–48 (outcomes) – waist circumference, body mass index, blood pressure, low-density lipoprotein cholesterol, apolipoprotein B, plasma glucose, and insulin resistance. This causal analysis was based on inverse probability weighted marginal structural models. We will present results on which of the exposure outcome combinations see substantial differential susceptibility and how such patterns differ depending on whether we use parental occupation, education or neighborhood deprivation as the indicator for socioeconomic background. Overall, our results show greater harms at the same levels of physical inactivity, unhealthy diet and combined alcohol and smoking for adolescents from disadvantaged backgrounds. Differential susceptibility constitutes a relevant mechanism in the generation of inequalities in cardiometabolic health. Better understanding these social disparities in susceptibility to health behaviors can inform policy initiatives to improve population health and reduce socioeconomic inequalities in cardiometabolic health.

TALK 4: Childhood Residential Instability and Exposure to Police-Initiated Contacts in Adolescence: A Longitudinal Analysis from Birth to Age 14

Presenter: Riccardo Valente, Autonomous University of Barcelona

Co-authors: Jonathan Corcoran, University of Queensland; Sergi Vidal, Autonomous University of Barcelona

Research in criminology and urban sociology consistently points to residential instability as one of the leading causes of crime at the aggregated level of a neighbourhood. Population turnover is shown to be detrimental to the formation of strong ties among neighbours, therefore undermining the implementation of informal social control mechanisms. To date, however, there has been much less attention on the individual consequences of residential instability for criminal behaviours and youth exposure to police encounters. Extant literature has linked the increased likelihood of getting involved in police-initiated contacts to traditional measures of accumulated exposure to adverse childhood experiences (ACEs). With our analysis, we address a further layer of complexity by emphasizing the specific role that housing status in early childhood plays in children's future endeavours, considering the heterogeneity of children's residential trajectories in terms of frequency of moves, distance moved, reasons for moving out, and the age at which a move occurs. Data retrieved from 6 sweeps of the UK Millennium Cohort Study (N=11,859; 2001-2015) were used to specify a binomial regression model, and follow-up tests for mediation using the Karlson-Holm-Breen (KHB) method. Our results indicate that structural inequalities in housing (priced-out, evictions, etc.) are emerging as a key and stand-alone explanatory factor of an individual's life chances beyond ACEs. Children who have been exposed to repeated relocations report significant resets in the structure of their social relationships, which mediates their greater exposure to police-initiated contact at the age of 14. We knew already that disadvantaged groups may be disproportionately targeted by the police but with our research, we offer a significant contribution by disclosing some of the underlying mechanisms that link housing precariousness with negative externalities later in life.

10F **STREAM: RESEARCH METHODS 4**

INDIVIDUAL PAPERS **Developments & Challenges 3**

TALK 1: An Intersectional Oaxaca-Blinder Decomposition of the Ethnic and Sex Mental Health Inequities in the UK

Presenter: Facundo Herrera, Lancaster University

Co-authors: Ceu Mateus, Giuseppe Migali, Lancaster University

Objectives: This study aimed to decompose the mental health gap into an explained and unexplained portion across intersectional groups (sex and ethnicity) and explore the contribution of social determinants of health to such a gap.

Methods: The gap in mental health was decomposed by sex, ethnicity and the intersection of both groups through an Oaxaca-Blinder decomposition using the latest twelve waves of the UKHLS.

Results: Estimations reveal that observed characteristics, including age, discrimination experiences, neighbourhood cohesion, and home ownership, explain almost half (47-50%) of the total mental health gap measured by SF-12 and GHQ scores. Unequal distributions of socioeconomic resources, social capital, and discrimination exposure significantly contribute to poorer mental health outcomes for minority women. Notably, the overrepresentation of minority women in younger age groups and higher discrimination levels coupled with limited access to protective resources emerge as critical factors. However, more than 50% of the gap remains unexplained, suggesting deeper structural factors like institutionalized racism and cultural biases that interact with ethnicity and gender, generating mental health inequities beyond current socioeconomic variables.

Discussions: This intersectional Oaxaca-Blinder decomposition provides vital insights into the complex drivers of mental health inequities, emphasizing the need for targeted interventions addressing individual and systemic contributors. This study contributes to a more comprehensive understanding of mental health equity for women from ethnic minorities in the UK.

TALK 2: Healing Pathways: Multigenerational Longitudinal Partnerships with Indigenous Communities in North America

Presenter: Melissa Walls, John Hopkins University

Co-authors: Dane Hautala, Johns Hopkins University; Kelley Sittner, Oklahoma State University

Healing Pathways (HP) is a longitudinal community-based participatory research (CBPR) epidemiological study with 8 American Indian and First Nations (i.e., Indigenous Peoples in the United States and Canada) communities. Three generations of indigenous families are included in HP: Generation 2 (G2) “target participants” were enrolled as adolescents at baseline (2002; N=735). They and their adult caregivers (G1) were assessed annually from 2002- 2008. We revisited G2 for 3 additional annual surveys from 2017-2020. In 2024, we launched data collection efforts to revisit target participants and enroll Generation 3 (G3), who are G2’s offspring aged 5-18 years. The study assesses culturally relevant risk and protective factors for mental health, substance use, family wellbeing, and cross-generational development. HP is the only study of its kind for Indigenous Peoples and one of the few studies to follow families over time and across three generations. In this session, we will offer lessons learned in 4 synergistic areas: 1. Nourishing partnerships in longitudinal research over 20+years; 2. Indigenous research ethics for equitable research processes and impacts; 3. Retention strategies: successes and failures; and 4. Community-driven approaches to enhancing measurement validity within and across generations.

TALK 3: Tracing Inequalities from the Start: The GUIDE Study of Children's Wellbeing Across Europe

Presenter: Gary Pollock, Manchester Metropolitan University

Co-authors: Stephanie Cahill, Klea Ramaj, Tara Poole, Lee Bentley, Manchester Metropolitan University; Seaneen Sloan, University College Dublin; Jennifer Symonds, University College London

Cohort surveys across the world have been central to our understanding of the factors which contribute to examining inequalities and enhancing child wellbeing. Growing Up In Digital Europe (GUIDE) is Europe’s first comparative birth cohort study of children and young people’s wellbeing. GUIDE will track children’s personal wellbeing and psychosocial development, alongside key indicators of children’s homes, neighbourhoods, and schools, across Europe. Using an input harmonised approach enables researchers to comparatively analyse how children’s wellbeing is influenced by their experiences in different European countries. This study is designed to provide evidence for developing social policies for children, young people, and families across Europe. Currently in its research infrastructure preparation phase, GUIDE has completed successful pilot studies in Croatia, Finland, France, Ireland and Slovenia. These pilots have demonstrated the feasibility of undertaking full-wave Europe wide data collection with a harmonised instrument and fieldwork processes. This paper will explore the importance of this new multidisciplinary longitudinal cohort study for child wellbeing policymaking on national and international levels alongside the challenges of bringing it into being. At a national level, GUIDE will support the design of evidence-based policies by providing nationally representative data on child wellbeing. At an international level, it will provide a unique insight into factors contributing to successful policies through rigorous comparisons between European countries. This knowledge will contribute to the improvement of policies and practice for decades to come.

TALK 4: Exploring Heterogeneity in Wellbeing Responses to Functional Disability in Later Life: Identifying Different Reactions and Associated Resources

Presenter: Thibault Kohler, Université Libre de Bruxelles

Co-author: Bram Vanhoutte Université Libre de Bruxelles

Can we age well when our health has been compromised? In the specific context of functional disability, studies agree on an immediate negative impact on wellbeing, but there is still debate about the average degree of adaptation following this event. What is unanimously accepted, however, is the considerable variability in individual trajectories, signifying that not everyone manages health challenges in the same way. This study seeks to delve into the heterogeneity of wellbeing responses to the onset of disability in later life, examining various types of reactions, both adaptive and maladaptive, as well as the resources (social support, economic resources, social position) associated with specific adaptations. We used data from waves 4 to 8 of the Survey of Health, Ageing, and Retirement in Europe (SHARE). Functional disability is defined as the transition from having no limitations to at least one limitation in activities of daily living (ADL). All individual trajectories were aligned at the point of transition, creating a time to/from disability metric. Growth Mixture Modeling (GMM) was employed to move beyond describing a single overall trajectory of change over time, allowing for the identification of distinct sub-groups within the data. Subsequently, multinomial logistic regression was applied to identify drivers influencing specific responses, examining how various background characteristics are associated with different forms of coping.

11A

INVITED TALK

Life Course, Fast and Slow

Francesco Billari, Bocconi University (Winner of the 2023 SLLS Harvey Goldstein Memorial Award)

Abstract coming soon.

11B

PANEL SESSION

Unlocking Insights: Harnessing Longitudinal Datasets for Mental Health Research

Panellists: Winnie Wefelmeyer, Wellcome (Convenor); Louise Arseneault, King's College London; Mauricio Avendano, University of Lausanne; Matthew Brown, Wellcome; Sylvia Muyingo, APHRC; Nicholas Timpson, University of Bristol

Longitudinal data is central to transforming our understanding of how mental health conditions develop, maintain and resolve. These insights will be indispensable to achieving Wellcome's mission, which is to create a step change in early intervention for anxiety, depression, and psychosis. A recent landscaping report by Professor Louise Arseneault (KCL, UK) and colleagues identified a host of promising longitudinal datasets for mental health research globally. This valuable resource highlighted several areas of richness for mental health research as well as untapped opportunities. We are eager to engage with you and our panel to explore strategies for leveraging the richness of longitudinal datasets to transform our understanding of mental health conditions beyond traditional diagnostic categories and pinpoint early identifiers. Additionally, we aim to discuss methods for enhancing the global visibility and utilization of longitudinal datasets, with a special emphasis on those from low- and middle-income countries (LMICs). We hope that you will join us to share learning and thinking about how longitudinal data could best be used to advance our understanding of how the brain, body and environment interact in the trajectory and resolution of mental health problems.

11C

PANEL SESSION

The Future of Research and Theory on the Life Course

Panellists: Claire Kamp-Dush, University of Minnesota Twin Cities (Convenor); Teresa Swartz, University of Minnesota, Twin Cities; Thomas O'Toole, University of Manchester; Evangeline Tabor, University College London; Jeremy Staff, Penn State University

During this final session of the SLLS, join us as panellists synthesize insights and discussions from the event and provide a forward-looking perspective. Specifically, panellists will reflect on diverse viewpoints shared across the SLLS, identify key challenges and opportunities in life course theory and research, and offer their own strategic recommendations for advancing the field. Audience members will have an opportunity to share their own insights as well. The discussion will inform a tentatively planned third volume of the Handbook of the Life Course.

SPECIAL SESSION (SYMPOSIUM)

The Legacy of John Bynner

Convenor: Walter Heinz, University of Bremen and Winner of the 2023 John Bynner Distinguished Scholar Award

SUMMARY: John Bynner died on 22nd August 2023. This symposium is a tribute to John, dedicated to discuss his many contributions to the field of life course studies. John was the central person in establishing the Society for Longitudinal and Lifecourse Studies, 14 years ago. The Centre for Lifecourse Studies at University College London highlighted his role in promoting cohort research: "his name is synonymous with the British birth cohort studies". In this special session, John's numerous contributions are presented by scholars who had long-time working relationships with him.

TALK 1: John Bynner and Academic Access to Data

Presenter: Paul Clarke, University of Essex

On behalf of David Blane, Imperial College London

At the 60th anniversary meeting of the UK's National Child Development Study, John Bynner mentioned in passing that he and his old colleague-in-arms, Harvey Goldstein, had campaigned for the establishment of a UK Data Archive where survey data could be deposited on open academic access. I'm not sure which impressed me more: that he had reached this conclusion decades before me or that he had never mentioned it before. But that was the John Bynner I knew: far-sighted; effective; and anxious to get on with the next thing, rather than recount past achievements. I knew the topic was important and my presentation will briefly explain why.

TALK 2: John Bynner's Contribution to Research on Youth Transitions and Well-Being

Presenter: Amanda Sacker, University College London

In this short talk, the main theories contributing to our understanding of the transition to adulthood will be outlined, followed by John's criticism of their limitations. In 2007, he outlined his ideas around capital accumulation for negotiating the transition to adulthood, identifying multiple dimensions of capital: human, social and identity capital that accumulate from birth and contribute to a successful transition to adult roles and well-being during the transition to adulthood and beyond. The presentation continues with a brief overview of John's most cited and influential research papers that supported his critiques and theory development. Many of his papers would not have been possible without the data found in the British birth cohort studies which were overseen by John for so many years. Not only was he before his time in campaigning for open academic access to data and articles, but he was also a pioneer of social research with policy impact.

TALK 3: John Bynner's Policy Advice

Presenter: Jeylan Mortimer, University of Minnesota

John Bynner considered successive longitudinal cohort studies, incorporating life course principles (time and place, timing, life span development, and agency), of central importance for the development of sound social policy. Given the expense of such studies, he noted "growing pressure for accountability by direct 'impact' of the findings produced." Bynner saw educational policy as pivotal, as his research documented major individual and societal benefits of education in all phases of life (in childhood, during the school-to-work transition, and throughout adulthood). Increasing access to education and heightening its responsiveness to societal needs permeated his recommendations in several policy domains (health, work, family, criminal justice, etc.). Throughout his work, Bynner urged researchers and policymakers to focus on the most vulnerable to lessen risks of poverty and social exclusion. Most recently, in collaboration with Walter Heinz, he called for the formation of educational policies to realize the strong potentials (e.g., unrestricted information access) and to address the challenges (disinformation and widening inequality) posed by the digital revolution. Throughout his career, John Bynner emphasized that to ensure the continued viability of, and support for, repeated longitudinal cohort studies, "public education" must "make the case continually that public investment in life course studies is worthwhile."

TALK 4: John Bynner's Legacy: Building the Field of Life Course Studies as a Social System

Presenter: Dale Dannefer, Case Western Reserve University

Co-author: Ingrid Schoon, UCL Institute of Education

John Bynner's legacy encompasses multiple forms of enduring institutions, including 1) infrastructures and programs of funded research (created and/or expanded at Longview), 2) a professional organization (SLLS), 3) an academic journal (*Journal of LLCS*) and 4) a multidisciplinary partnership to facilitate enhance awareness and visibility and facilitate sharing of information (CLOSER). Even though in many respects they brought to fruition the concerns of John's earlier research career, it is remarkable that virtually all of these institutions were created after his formal retirement from his academic post. Thus, at the personal and professional level, John provided a model par excellence of the open-endedness of life-course possibilities, as well as a model of how to expand an enterprise of wide-ranging and rigorous inquiry with public relevance while developing a strong structure of support for it. Taken together, these four categories of institution-building correspond to the classic "functional requisites" of a viable social system, in Parsons' useful (albeit limited) formulation. *(if time permits)*: In keeping with John's energetic spirit of inquisitiveness and problem-solving, the recognition of systems level dynamics also can raise new questions about the advance of life course theory in relation to other domains of social theory.

*****END OF CONFERENCE*****



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