DAY 1   WEDNESDAY 25th SEPTEMBER 2019

KEYNOTE PRESENTATION

The Interplay of Structure and Agency in Child and Adolescent Development: Comparative Considerations in Life Course Perspective

Marlis Buchmann, University of Zurich, Switzerland

Recent research in child and adolescent life course development has highlighted the importance of better understanding the dynamic interplay of individual agentic capacities and opportunities or constraints linked to social structure or societal institutions. Blending concepts from sociological life course theory and psychological life-span theory, this talk will discuss and demonstrate how child and adolescent agency plays out in contexts differing in the opportunities they provide and the constraints they impose. The comparative elements addressed in this interplay relate to child and adolescent agency in coping with status transitions, co-development of agency components, and the role of time in shaping these processes.

PARALLEL SESSION 1

1A   SYMPOSIUM

Life Course Centre Australia - Social Disadvantage and the Educational Pathway: School Readiness, Educational Achievement and Post School Destinations

Convenor/Chair: Janeen Baxter, University of Queensland, Australia

This session outlines impacts of social disadvantage on children, as they enter- and move through the educational system. The first paper explores school-starting-age effects, finding large gendered effects on academic achievement, where boys fare significantly worse than girls. The second paper investigates how risk factors clusters together and how these clusters affect school readiness. Exploring the he academic achievement of children from same-sex families, compared to peer from different-sex families, the third paper find that children from same-sex families perform better across academic outcomes. The fourth and fifth papers both investigate the link between the socioeconomic gradient and academic outcomes. With one paper focusing how patterns and trajectories of household income influence children's academic achievement, the other investigates the interplay between the socio-economic background and academic aptitude, to understand if disadvantaged children with high aptitude "settle" for less ambitious post-school options. The papers in this session will be delivered by researchers affiliated with the Life Course Centre, a multidisciplinary centre of research excellence established in Australia in 2014, with the goal to investigate mechanisms leading to social disadvantage over the life course and across generations, providing evidence and support to new policies and programs designed to reduce social disadvantage.

Determinants of School Readiness in Australian Children

Presenter: Daniel Christensen, University of Western Australia, Australia

Co-authors: Catherine Taylor, Steven R. Zubrick, University of Western Australia, Australia

A substantial body of work has indicated the importance of school readiness as a predictor of children's onward performance at school. However, many analyses take a 'single cause' approach or traditional multivariable adjustment. Little is known about the accumulation and distribution of risk factors, and how these factors interact across the population. As a rule, children are not exposed piecemeal to individual or single risks but, rather, they are exposed to clusters of risk. Many of these clusters of risks are better thought of as comprising a developmental circumstance with a substantial duration, over which period, additional risk exposures also accumulate. Understanding how individual risk factors cluster together and how different clusters of risks affect school readiness is fundamental to designing and delivering effective interventions to boost school readiness. In this paper, we use latent class analysis to examine patterns of multiple risk exposures for low academic achievement across a sample of 4386 children from the Longitudinal Study of Australian Children to identify qualitatively distinct patterns of developmental circumstance.

Academic Achievement of Children in Same-Sex-Parented and Different-Sex-Parented Families

Presenter: Jan Kabatek, University of Melbourne, Australia

Co-author: Francisco Perales, University of Queensland, Australia

We conduct the first population-level analysis of academic achievement of children in same-sex and different-sex families. We use linked administrative data from the Netherlands, which alleviate the common issues with small same-sex samples and non-random sampling, and which provide us with multiple proxies of academic achievement, including standardised test scores, high school track choice, high school grade retention and college enrolment. We

show that the children raised by same-sex parents perform better than children raised by heterosexual parents across all the available outcomes. The achievement gap becomes narrower when we control for socio-economic characteristics of the family and the matrix of family transitions, however even then it remains statistically significant at the conventional significance levels.

Association of Household Income Patterns and Child's Academic Achievement: An Analysis from the Longitudinal Study of Australian Children
Presenter: Nam Tran, University of Queensland, Australia
Co-author: Mark Western, University of Queensland, Australia
Children born- and exposed to family with lower socioeconomic position have been found to be associated with lower cognitive outcomes, poorer mental health, higher morbidity and mortality rates. However, there is little know about the extent to which patterns of household income influence child's outcomes including academic achievement. This study aims to examine whether different trajectories of household income affects children's reading and numeric scores. We employed the comprehensive data from the Longitudinal Study of Australian Children. The analysis involves nearly 3000 children in K cohort for whom data are available from the baseline, wave 1 (2004) to wave 6 (2014). Household income patterns were determined by group-based trajectory modelling. Children's academic achievement was assessed by NAPLAN reading and numeric scores at year 9. Over the period of study, four household income patterns were identified: lowest, middle-low, middle-high, and highest. The levels of income trajectories were significantly associated with children's NAPLAN reading and numeric scores, controlling for parent's education, health status, cognitive skills and non-cognitive skills. We also find strong evidence to support the influence of children's antisocial behaviours on the association. There are slightly different patterns for male versus female regarding the association.

Academic Aptitude, Socio-Economic Background and Post-School Destinations of Australian Students
Presenter: Wojtek Tomaszewski, University of Queensland, Australia
Co-authors: Matthias Kubler, University of Queensland, Australia; Cain Polidano, Chris Ryan, University of Melbourne, Australia; Buly Cardak, La Trobe University, Australia
There is a wealth of empirical evidence, for Australia and internationally, showing that students from low socio-economic backgrounds are disproportionally more likely to select vocational rather than university-level tertiary education (James 2000; European Commission 2011; Martin et al. 2015). In this context, significant concerns have been expressed by researchers and policy makers around the risk of such students not realising their full potential and settling for less ambitious post-school options as a result of various material and aspirational barriers. This is particularly concerning for those students from low-socioeconomic backgrounds who show high academic aptitude but are unable to pursue university options due to the aforementioned barriers. This study uses large-scale linked administrative and survey data from an Australian state of Queensland to investigate how secondary students' academic ability and their socio-economic background shape their post-school choices. Of particular interest is the difference between selecting university over vocational education or employment options. Specifically, the paper seeks to address the following research question: How does the socio-economic gradient on post-school destinations vary depending on the students' academic aptitude? The study capitalizes on having secured access to a unique large-scale linked administrative and survey data provided by the Queensland Department of Education. Administrative records for a cohort of students from all government schools in the state are linked to a survey capturing their initial post-school destinations at around six months after leaving school, including the course details for those engaged in further education. This is one of the first studies in Australia, and internationally, to employ large-scale administrative and survey data linked over time to address the question about the links between academic ability, socio-economic background and students' post-school outcomes.

1B   SYMPOSIUM

Social-to-Biological Research Over the Life Course: What Insight is Brought Through Different Types of Biological Data?
Convenor/Chair: Michelle Kelly-Irving, INSERM, France
This symposium aims to examine the relative contribution of different types of biological data to examining social-to-biological questions in lifecourse research. Such research requires interdisciplinary approaches involving conceptual and theoretical expertise on the appropriate use of social data, methodological and statistical proficiency and knowledge about biological processes and how they are measured. Outside of the biomedical sciences and in the media different types of biological data often become conflated. The term biological can be used to mean genetic, and misunderstandings are also rife around the term epigenetic. The nature of research questions that can be answered with different types of biological data deserve to be debated and clarified. Three presentations will be made. First, Castagné et al will present results from several analyses exploring social-to-biological questions at different molecular levels. Second, Schmidt will examine theoretical considerations as well as examples of gene-by-

SEP interaction research its. Müller will explore the social challenges stemming from this work regarding social justice, stimatisation and discrimination of disadvantaged social groups who may already experience disadvantage in terms of their health. Following the presentations, an interdisciplinary panel of discussants will highlight points of interest, make connections between the presentations, and open the discussion to the audience.

A Life Course Approach to Explore the Biological Embedding of Socioeconomic Position Through Inflammatory Markers
Presenter: Raphaële Castagné, INSERM-Université Toulouse III Paul Sabatier, France
Evidence suggests that the inflammatory system, which is involved in the risk and development of many chronic diseases, is a potential pathway through which socioeconomic environment is embedded. In this presentation we will examine how biological markers can be used to explore both the depth and breadth of social-to-biological questions regarding the inflammatory response. First, to evaluate the influence played by country and period specific contexts on the social patterning of inflammatory response, we explored the relationship between SEP across the life course and inflammation, determining whether adult intermediate factors explained this relationship in participants from six European cohort studies from 3 countries. Our findings revealed a consistent inverse association between SEP and CRP across cohorts, where participants with a disadvantaged SEP had higher levels of inflammation after adjusting for health behaviours and body mass index. Second, we focused on investigating how socioeconomic position (SEP) over the life course is embedded through the inflammatory system at 3 molecular levels using blood-derived proteomics inflammation, genome-wide expression and methylation profiles measured in 268 participants from the EPIC-Italy study. While we showed that disadvantaged childhood SEP was associated with an increased inflammatory score later in life at two molecular levels, the proteins and gene expression level, analyses at the DNA methylation level revealed global hypo-methylation of the inflammatory methylome score in the disadvantaged SEP group for young and adulthood SEP. These associations were robust to subsequent adjustment for others SEP and health behaviours. These analyses provided insight into the social patterning of the inflammatory response across molecular levels. These two examples allow us to examine socially-driven biological mechanisms both in depth and across contexts.

Gene-by-Environment Interaction Research and Social Inequalities in Health
Presenter: Börge Schmidt, University of Duisburg-Essen, Germany
Since recent advances in genome sequencing technology have led to rapidly decreasing genotyping costs, studies on the interplay between genetic factors, environmental risks and disease outcomes have become more and more feasible in large study populations. Approaches of investigating gene-by-environment interactions have already been incorporated in studies on social inequalities in health. Indicators of socioeconomic position (SEP) such as educational attainment, income and occupational status can serve as proxy markers for a range of socially unequally distributed psychosocial and environmental health risks. Compared to single environmental factors they may be more suitable for investigating how the sum of environmental exposures interacts with genetic health risks. Gene-by-SEP interactions also offer the opportunity to investigate the transition of social to biological risks. One possible mechanism that has been hypothesized to mediate gene-by-SEP interactions is the alteration of the epigenome. In contrast to an individual's genome the epigenome is subject to environmentally induced changes during the life course, but is crucial for the regulation of gene expression. Several studies have indeed reported SEP-related differences in epigenetic markers. However, epigenetic research still faces several unsolved problems that limits its incorporation in epidemiological studies. This presentation will give some theoretical considerations as well as examples of gene-by-SEP interaction research and its implications for social-to-biological transition important for explaining social inequalities in health. It will also demonstrate the relevance of geneby-SEP interaction research in overcoming the nature vs. nurture debate in the study of genetic causes of diseases.

Embodiment of What? Conceptualizing the "Social" in "Social-to-Biological" Research
Presenter: *Ruth Müller, Technical University of Munich, Germany*
This contribution takes a social science perspective on the growing interest in understanding how socio-economic position influences chances for health and risks of illness along the life course. Novel research fields, such as environmental epigenetics, have opened up unprecedented opportunities for tracing the effects of living environments on the body on a molecular scale. Yet, these opportunities come with distinct new challenges and responsibilities, one of which is how to conceptualize living environments and environmental conditions in socially complex way. This is particularly important for research that focuses on group distinctions, such as socio-economic differences or ethnic differences with regard to health status and disease risks. While such research might be able to support struggles for greater social justice and equity in society, it could also aid the further stigmatization of and discrimination against already disadvantaged individuals and groups in society. In this talk, I will outline these challenges and explore how the ways in which "the social" is conceptualized and enacted within "social-to-biological" research at multiple points along the research process can make an important difference for the social and political message of "social-to-biological" research.

1C   SYMPOSIUM

Standard Routes and Detours: Recent Research on Social Inequalities in School-to-Work Transitions

Convenor/Chair: Brigitte Schels, Friedrich-Alexander-University of Erlangen-Nuremberg, Germany

The transition from school to work (STWT) has established itself as an important topic of life course research. Previous research has shown that STWT increasingly depart from standard pathways. More and more young people, for example, follow detours to further education and employment or may even fail. Deviations from standard patterns on the one hand concern low-skilled youth who face restrictions to enter higher education and gainful employment and who often pass through state programs. On the other hand, youth of higher status have increasing opportunities for further education, achieving multiple qualifications and individual time outs, e.g. voluntary work. Regarding the diversification of STWT, we still need more empirical evidence on the change of transition processes and its implications for social inequality. Improved availability of longitudinal data and advanced methods open opportunities to gain deeper insights. This symposium aims at gaining a broader understanding of the occurrence of transition patterns within diverse youth subgroups, its determinants and its consequences. The session connects recent research based on different data sources (survey and administrative data) from different national contexts. Presentations will shed light on social differences according to gender, social origin, as well as on the role of the labour market conditions.

(How) Did You Waste Your Time? A Sequence Analysis of Transitions from Secondary to Higher Education in Germany

Presenter: Nicole Tieben, University of Tübingen, Germany
Co-author: Judith Offerhaus, University of Cologne, Germany

Access to higher education has changed considerably over the past decade in Germany. As tertiary educational institutions have opened for non-traditional students without regular high school leaving certificates (Abitur), transition patterns and pathways leading up to entering higher education and have become more complex and diverse. Despite the lively international discussion about gap-years and delayed entry into higher education, we know only very little about how students in Germany spend the time between leaving secondary education and entering higher education. Our contribution aims at closing this gap. We address two main research questions:
1. How do students use the time between school and higher education?
2. Which differences in pathways and time-use occur between men and women?
3. Which differences in pathways and time-use occur between students from different socio-economic backgrounds?

We use data from the National Educational Panel Study (NEPS), starting cohort 5; the sample consists of approximately 17.000 first-year students who started their first episode I higher education in winter term 2010/11. Employing techniques of sequence and cluster analysis to describe the pathways into higher education, the study utilizes the students' detailed retrospective educational biographies and life histories. By considering the entire educational biography of each individual from age 15 to the first day in higher education, we can identify if "delays" occur during secondary education, during the (alternative) pathway to a higher education entrance certificate, or through intermediate stages in vocational training and employment. Besides, we examine gender and origin-based differences in transition patterns.

Are Low-Skill Young People Increasingly Useless, and Are Boys the Losers Among Them?

Presenter: Thomas Lorentzen, University of Bergen, Norway
Co-authors: Hans-Tore Hansen, University of Bergen, Norway; Kristoffer Chelsom Vogt, University of Bergen, Norway

The issue of early school leaving has risen to the top of the political agenda over recent decades. Claims that that low-skilled young people, and young men in particular, are increasingly being excluded from the labour market and becoming reliant on welfare benefits, have been influential. In this study, we use high-quality administrative data and sequence analysis to investigate the school-to-work trajectories of three birth cohorts of early school leavers in Norway between the ages of 16 and 26 over the period from 1994 to 2015. The observation period thus covered involved several important structural transformations of the Norwegian economy, such as deindustrialization, automatization and labour immigration. We find that a stable share of more than two-thirds of early school leavers follows trajectories predominantly characterized by employment. However, we also see that in the latest cohort fewer succeed in entering high income trajectories. Furthermore, even in the comparatively gender equal country of Norway, a persistently gender-segregated labour market appears to be offering more economically rewarding opportunities to male early school leavers.

Alternative Pathways from School to Work of German Youth with a Low or Intermediate Educational Level
Presenter: Juliane Achatz, Institute for Employment Research, Germany
Co-authors: Brigitte Schels, Kerstin Jahn, Institute for Employment Research, Germany
This study investigates the complexity in the school-to-work transition (STWT) of low and intermediate-qualified youth in Germany, for whom vocational training in firms is still the norm. However, over the past decades, the opportunities for low-qualified school leavers to enter vocational training were increasingly restricted. In the consequence, alternative pathways such as preparatory pre-vocational measures and subsidized vocational training programs have been implemented. These programs engender intermediate stages or detours for young people at the institutional level, besides the regular tracks of the vocational education and training system. While programs intend to improve prospects of low-skilled youth on the training and labour market, critics point out risks of resulting in long-term subsidized careers or discontinuous employment trajectories in subsequent years. Although programs were driven back under prospering economic conditions, there are still a number of young people who are channelled into subsidized alternative routes. This study investigates the STWT patterns of several school leaving cohorts after 2008. To unravel the complexity and diversity of transition processes the study applies optimal matching analysis (OMA) in combination with cluster analysis using a unique set of longitudinal data from two administrative data sources. First results show that youth entering alternative training routes often manage a rather smooth STWT, even though their employment entry is delayed. We identify a small number of youth experiencing at-risk trajectories characterized by discontinuity and sustained detachment from vocational training and labour market. Further analysis will examine which individual and social background characteristics at the time of leaving school contribute to the selection into particular transition patterns. Furthermore, we will analyze whether and how this selection has changed for youth from successive school leaving cohorts.

Is Any Participation in Education Better Than NEET?
Presenter: Christian Brzinsky-Fay, Berlin Social Science Center, Germany
The issue of young people not in employment, education or training (NEET) has risen to the top of the European political agenda. NEETS are considered as a risk group being excluded from the labour market. However, so far there is little empirical evidence whether and how NEETs differ from young people in other problematic STWT. To gain a better understanding of the NEET population, I compare school leavers (15-19-year-olds) without NEET episodes, but with multiple participations in prevocational measures, to those with different NEET patterns, who did not or only once participated in prevocational measures. I use NEPS starting cohort 4 from 2010 (ninth school grade) until 2015/16 and compare differences in the (non/cognitive) competences and aspects of social inclusion at the age of 15 and 19/20. I apply sequence analyses (optimal matching) to detect NEET patterns and estimate Average Treatment Effects on the respective Treated by using Difference-in-Difference (DiD) estimations and Entropy Balancing to control for selection biases.

1D   SYMPOSIUM

Policy and Health Outcomes
Convenor/Chair: Aisling Murray, Economic and Social Research Institute, Ireland
SUMMARY ABSTRACT COMING SOON

Political Economy and Death in the American States
Presenter: Jennifer Karas-Montez, Syracuse University, USA
Co-authors: Julene Cooney, Zeyd Koytak, Syracuse University, USA
Background: The United States is in the midst of a health and longevity crisis. Life expectancy at birth has been declining since 2015, a startling trend not observed in other high-income countries. Studies aiming to explain the crisis have largely focused on behavioral explanations, such as smoking, obesity, and drug-use among Americans. Such methodological individualism overlooks the fundamental role of socioeconomic and policy contexts. Since the 1970s, these contexts have changed markedly between U.S. states. This study investigates how the changing socioeconomic and policy contexts of states from 1970 to 2014 have contributed to troubling trends in life expectancy.

Methods: We merge annual data on life expectancy for each of the 50 U.S. states with annual data on 17 state-level policy contexts (e.g., gun control, abortion, environment, labor) and estimate sex-specific, fixed effects regression models. To assess which portions of the life course have been most affected by the policy changes, we estimate models for life expectancy at birth as well as the expected number of years lived between ages 0 and 24, ages 25 and 64, and ages 65 to 90.

Results: Changes in U.S. states' policy contexts—particularly regarding gun control, the environment, abortion, immigration, and civil rights—have contributed to the troubling trends in life expectancy at birth. While changes in

states' policies during 1970 to 1989 were largely beneficial for life expectancy, changes during 1990 to 2014 were mixed. For instance, gains in female life expectancy associated with (generally liberal) trends in environmental and civil rights policies were largely offset by losses in life expectancy associated with (generally conservative) trends in gun control and abortion policies.

Implications: To fully understand the troubling trends in U.S. life expectancy, it is necessary to move beyond individual-level explanations and examine the role of policy contexts, particularly within U.S. states.

Pediatric Overdoses in the United States, 2000-2016: Comparisons, Contextual Factors, Policy Effects
Presenter: Mike Vuolo, The Ohio State University, USA
Co-authors: Brian C. Kelly, Purdue University, USA; Laura Frizzell, The Ohio State University, USA
The United States is in the midst of an ever worsening drug overdose crisis that has contributed to a decreasing national life expectancy. While attention has been paid deservedly to opiates, there have also been substantial increases in cocaine, methamphetamine, and benzodiazepine overdoses. In this paper, we examine overdoses during the earliest period of the life course, namely pediatric cases ages 0 to 11. We use restricted cause-of-death data from the U.S. Center for Disease Control and Prevention to identify all pediatric deaths resulting from a drug overdose. After aggregating to the county-level by year, we combine this with contextual data from the U.S. Census Bureau and policy data from the Prescription Drug Abuse Policy System. First, we describe pediatric overdoses both temporally and spatially, and compare these trends to the drug overdose rates overall and among other age categories. Second, we use county-level between-effects models to identify contextual factors associated with the pediatric overdose rate. We find that counties in states with average higher per capita investment in public welfare and hospitals have lower average pediatric overdose rates. Finally, we used generalized difference-in-difference models with county and year fixed effects to determine if county-level pediatric overdose rates change when the state implements policies aimed at reducing overdoses. We find that county pediatric overdose rates are lower when their state passes a Good Samaritan law, which removes criminal or civil liability when someone calls emergency services to report an overdose. Our results show that there are mechanisms to reduce the overdose rate at the earliest stage of the life course.

Do Welfare Regimes Moderate Cumulative Dis/Advantage in the Life Course?
Presenter: Stefan Sieber, University of Geneva, Switzerland
Co-authors: Boris Cheval, Dan Orsholits, Bernadette W. Van der Linden, Idris Guessous,
Matthias Kliegel, Delphine Courvoisier, Claudine Burton-Jeangros, Stéphane Cullati, University of Geneva,
Switzerland
Background: By referring to the cumulative dis/advantage framework, this research aims at examining whether the inter-individual divergence with aging in the association of life-course socioeconomic conditions (SEC) (childhood, young adult life, middle age, and old age) with poor self-rated health (SRH) is moderated by welfare regimes.

Methods: We used data of participants of SHARE living in 13 European countries aged between 50 and 96. The countries were grouped into four different welfare regimes: Scandinavian, Bismarckian, Southern European, Eastern European. The six available waves were included in the analyses (2004-2015) which allowed us to examine the longitudinal trajectories over aging. The life-course SEC included were; adverse childhood experiences, childhood SEC, education (young adult life), main occupation (middle age), satisfaction with household income (old age). Confounder-adjusted logistic mixed-effect models were used to examine the association between life-course SEC and risk of poor SRH in old age. Interaction terms with life-course SEC and welfare regime as well as age allowed for analysing the moderation effect of welfare regime on the association of life-course SEC with poor SRH over aging.

Preliminary findings: 24,626 individuals were included in the analyses. Risk of poor SRH increased with age. The risk of poor SRH was significantly higher for participants who experienced childhood adversities. The adult-life socioeconomic circumstances (education, occupation, household income) attenuated the association of childhood adversities with poor SRH. The association of life-course SEC with SRH trajectories were moderated differently across welfare regimes.

Preliminary conclusions: The results support the cumulative dis/advantage model, suggesting that disadvantages are accumulated over the life course from childhood over adult-life and old age. The welfare regimes seem to play a differential role in the accumulation processes over the life course.

China's Economic Reform and Chinese Life Course
Presenter: Xiaochun Qiao, Peking University, China
China has undertaken the economic reform for just 40 years since 1978. However, there have been a lot of researches on the impact of economic reform on the macro development, and a lack of research on the impact of economic reform on the individual development in China. In matter of fact, the economic reform was driven by the reform of the conventional institution, such as changing the planned economy to market economy, releasing the block of the people in rural areas moving to urban areas, and controlling the increase of population, etc., which made huge impact on Chinese people, especially the change of Chinese life course as well. This paper will show the institutions and events (especially some political movements) happening before and after the economic reform in 1978. Then, the evidence of social economic development will be shown, such as the increase of GDP, GDP per capita and income. Finally, some data dealing with the change of the population will be given based on repeated census data and other aggregate data to portray the cohort changes, as we are lack of pure life course data in individual levels. At the last, we will give brief introduction on the research and teaching in the life course in China, including three life course forums we organized in China.

1E   PAPER SESSION: GENDER ROLES

A Woman's Work is Never Done! (By A Man): Gender Divisions in Children's Housework in Ireland
Presenter: Caoimhe O'Reilly, Economic and Social Research Institute, Ireland
Co-author: Mike Quayle, University of Limerick, Ireland
This study used data from the Growing Up in Ireland (GUI) Child Cohort to investigate early-emerging patterns in gender roles for domestic labour. While gender inequalities in household chores have been well established between adults, it is less clear when such roles are established. Specifically, this study examined whether nine and thirteen-year-old girls reported conducting more housework than boys, whether housework time increases with age, whether the gender gap in housework increases with age and whether children spend more time doing sex-stereotyped chores according to gender. This was a secondary analysis using data collected by 'Growing up in Ireland' and compares the same children's behaviour at age nine and thirteen. Participants were a nationally representative weighted sample of children living in Ireland, including 3831 boys and 4135 girls. The independent variables were life course stage (age nine versus age thirteen) and gender. The dependent variables included housework time across a range of housework tasks. Patterns relating to family context variables including parental education and employment status were also considered. The results highlight inequalities in domestic chores as early as 9 years and continuing into the teenage years: girls do more housework than boys and children do 'gender typical' chores. Of those children who do some housework, contributions increase with age and the gender gap increases with age. Consequences of these findings are discussed in relation to gender inequality.

Dual Career Pursuit: The Pathway to Parental Life Satisfaction?
Presenter: Laura Langner, University of Oxford, UK
Are dual-career parents (who maintain or regain equal earnings) more satisfied across the parental life course than those who specialize (invest in only the father's career)? Does satisfaction vary by maternal earnings potential (highest occupational status)? In a dual-curve model, I visualize and test how partners' life satisfaction shifts differently, depending on the pursued relative earnings investment between age 1 and 15 of the youngest child. The paper uses the German Socio-Economic Panel. Mothers in an equal earnings arrangement are eventually more satisfied than those who prioritized their partner's career, and the difference is particularly pronounced for mothers who achieved a high occupational status. For mothers whose earnings eventually equal their partner's, satisfaction eventually increases, in contrast with the continuous decline among specializing mothers. Fathers in an eventually specializing couple also experience a decline in satisfaction, suggesting that equal earnings pursuit is better for both partners' satisfaction, particularly when the mother has a high-status job. This paper innovatively combines several theoretical approaches to studying life satisfaction into a joint life course framework encompassing parenthood, within-couple inequality in the division of labour, and earnings inequality.

Fathers' Job Flexibility and Mothers' Return to Employment
Presenter: Sandra Buchler, University of Frankfurt, Germany
Co-author: Katharina Lutz, University of Bremen, Germany
Gender inequality is driven by the unequal distribution of paid work between men and women, in particular after the birth of a child. The majority of research on women's return to the labour market post childbearing, however, has exclusively examined the characteristics of the women themselves. We argue that labour market decisions are taken with regard to the situation of the couple, and the characteristics of the male partner also need to be taken into account. Using the German Socio-Economic Panel and employing discrete event-history analysis, we examine how a woman's return to the labour market after the birth of a first child is influenced by her male partner's employment flexibility. Results indicate that a father's employment situation influences a mother's employment

behaviour. Specifically, lower hours of employment and more schedule autonomy on the part of the father increases the likelihood that the mother will return to the labour market, regardless of whether she returns to part time or full time employment. We propose that more employment flexibility allows him take on a greater share of the domestic and childcare responsibilities, which in turn leads to a lower level of constraint amongst mothers, giving them the opportunity to increase their attachment to the labour force.

Do More Egalitarian Men Experience Less Union Dissolution?
Presenter: Liat Raz-Yurovich, Hebrew University of Jerusalem, Israel
Co-authors: Barbara S. Okun, Matanel Ben-Avi, Hebrew University of Jerusalem, Israel
As union dissolution and re-partnering have become common occurrences in the life course of individuals in many societies, it is important to understand the implications of these life events for gender role attitudes. If gender role attitudes change following union dissolution, this change may impact the timing and probability of re-partnering, which are important determinants of fertility. Moreover, aggregated across individuals, such changes in gender role attitudes can also lead to macro-level changes in the social and political climate. This paper asks whether individuals' gender role attitudes change following union dissolution, re-partnering and subsequent dissolution; whether these changes depend on the duration of union status; and whether effects differ by gender. Detailed data spanning the period 1991-2016, taken from the British Household Panel Survey and its follow-up study Understanding Society, are analysed using linear fixed-effects models. Preliminary results show a pattern of "zig-zag" effects for men, such that gender role attitudes decline, recover and decline again following union dissolution, re-partnering, and second union dissolution. These effects do not vary by duration in union status. For women, longer durations increase gender egalitarianism among divorced women and reduce it among women who are separated from cohabitation for the second time.

1F   PAPER SESSION: METHODS: RECRUITMENT AND RESPONSE RATE

Response Rates After Longer Breaks in Interviewing
Presenter: Roman Auriga, Leibniz Institute for Educational Trajectories, Germany
Panel studies are mostly meant to survey the respondents over many years with more or less the same time interval between each wave. It could be important, however, for many reasons, to pause the interviewing at times and perhaps for a (longer) period. The expected response rate after the brake needs to be considered as an important factor in such scenario. In this presentation, I will analyse the response rates from studies around the world with an interruption between one and 25 years and more. It seems that a response rate of 50% can be taken for granted, even after longer breaks, regardless the topic, mode of survey, or age of the respondents. However, data from the NEPS-Study show that attrition after the resumption of the interviews can still be high in subsequent waves. This must be taken into account while planning a moratorium in interviewing.

The Effect of Survey Mode on Panel Recruitment Bias
Presenter: Joseph Sakshaug, Institute for Employment Research (IAB), Germany
Co-authors: Sebastian Huelle, Alexandra Schmucker, IAB, Germany; Stefan Liebig, German Institute for Economic Research (DIW), Germany
Panel surveys are increasingly experimenting with the use of self-administered modes of data collection as alternatives to more expensive interviewer-administered modes. As data collection costs continue to rise, it is plausible that future panel surveys will forego interviewer-administration entirely. We examine the implications of this scenario for recruitment bias in the first wave of a panel survey of employees in Germany. Using an experimental multi-mode design and detailed administrative record data available for the full sample, we investigate the magnitude of two sources of panel recruitment bias: nonresponse and panel consent (i.e. consent to follow-up interview). Across 29 administrative estimates, we find relative measures of aggregate nonresponse bias to be comparable between face-to-face and self-administered (mail/Web) recruitment modes, on average. Furthermore, we find the magnitude of panel consent bias to be more severe in self-administered surveys, but that implementing follow-up conversion procedures with the non-consenters diminishes panel consent bias to near negligible levels. Lastly, we find the total recruitment bias (nonresponse and panel consent) to be similar in both mode groups – a result that is facilitated by the panel consent follow-up procedures. The results suggest that recruiting panel participants via self-administration can be a useful alternative to more expensive interviewer modes without substantially decreasing the representativeness of respondents who agree to join the panel. Implications for practice and suggestions for future research are provided in conclusion.

Comparing and Integrating Prospective and Retrospective Reports on Childhood Health Status
Presenter: Narayan Sastry, University of Michigan, USA
Co-author: Robert Bozick, RAND Corporation, USA
Longitudinal surveys on children routinely collect prospective reports on child health as a principal outcome - typically from a parent or other primary caregiver and often from older children themselves. These childhood health measures are usually intended to capture current health status, although for some conditions information is collected on duration or age of onset. However, respondents are rarely asked to describe child health over a span of time equal to greater than the period between survey waves, and hence it is difficult or impossible to create integrated measures that characterize a child's health over different stages of childhood in a comprehensive manner. This means that prospective childhood health measures tend to be potentially poorer measures for studying the effects of childhood health on subsequent life course outcomes. In this paper, we describe a new effort to collect integrated retrospective reports from young adults on their childhood health status, including information on specific conditions as well as the effects of these conditions on various aspects of functioning (such as participating in activities and attending school). These retrospective reports on child health complement prospective reports collected for these same respondents across their childhood years. The retrospective child health data were collected as part of the Transition into Adulthood Supplement (TAS) to the U.S. Panel Study of Income Dynamics (PSID) while the prospective data were collected as part of the PSID Child Development Supplement (CDS). In this paper, we describe, compare, and assess the prospective and retrospective reports on childhood health from CDS and TAS, and investigate ways to integrate these two sets of measures. Our assessment focuses on the predictive value of the prospective, retrospective, and integrated child health measures on subsequent lifecourse outcomes.

Better Governance, Better Access: Practising Responsible Data Sharing in the METADAC Governance Infrastructure
Presenter: Stephanie Roberts, Newcastle University, UK
Co-authors: Madeleine Murtagh, Joel Minion, Newcastle University, UK
Genomic and biosocial research data about individuals is rapidly proliferating both in scale and novelty. The pace of change raises a number of urgent sociotechnical, ethical and legal questions, including responsible access. While the open science movement advocates unfettered access to research data, many of the UK's longitudinal population studies operate managed data access, governed by legal and ethical agreements between stewards of datasets and the researchers proposing to use them. Amongst other things, these agreements aim to respect the reasonable expectations of the research participants who provided data and samples, as expressed in the consent process. Arguably, responsible governance in longitudinal studies is an ongoing part of the consent process; a source of trust in the eyes of participants who repeatedly contribute to genomic and biosocial research. National and international bodies have drawn up necessary policies and guidance on responsible data-access governance. The METADAC infrastructure presented here, informed by an ethnographic case study, embodies the operational processes to implement these national-level objectives. Aiming to maximise data availability in a responsible and transparent way, our infrastructure for Managing Ethico-social, Technical and Administrative issues in Data Access, (METADAC), is operationalised through a committee known as the METADAC Access Committee. We identified and model three key structural features for practising responsible data-sharing: independence and transparency; interdisciplinarity; and participantcentric decision-making. METADAC governs complex data access for five major UK longitudinal studies that share phenotypic and genomic data, and/or biosamples. As the research community works to link research data with health and social care data, and administrative data, these new complex data assemblages will require a range of specialist expertise, including that of study participants to ensure achievable, reasoned and responsible decisions about the use of participant data. The METADAC model provides an example of how this could be realised.

1G   PAPER SESSION: EDUCATION AND EMPLOYMENT TRANSITIONS

Habitus, Career Patterns and the Reproduction of Social Inequality
Presenter: Markus Zielonka, Leibniz Institute for Educational Trajectories, Germany
Co-authors: Frank Goßmann, Michael Bayer, Leibniz Institute for Educational Trajectories, Germany
The study focuses the relation between social origin and habitus on typical patterns of education- and employment trajectories. Therefore, it tries to provide a test of the reproduction theory of Pierre Bourdieu with longitudinal data from the German National Educational Panel Study (NEPS). Theoretically, we assume that the social class of one's origin-family define the process of socialization and hence the habitus of its members and is cumulative predictive for the generalizable patterns of educational- and employment sequences. The individual or class-specific habitus as a "whole set of practices (or those of a whole set of agents produced by similar conditions)" (Bourdieu 1984:170) should explain also differences in sequence-patterns, even after controlling for attainment or competence, as long as the measured personality-traits and attitudes suggest a stable class-specific realization of the habitus.

Coming of Age in Europe: Generational Patterns of the Transition into Adulthood
Presenter: Anne Berngruber, German Youth Institute, Germany
Co-author: Arne Bethmann, Munich Center for the Economics of Aging, Germany
In life course theory finishing school, leaving home, beginning a job, marriage and childbirth are usually considered the five classical transition markers in the status passage from youth to adulthood. It is commonly recognised as a process, which takes place over several decades of a young person's life. Young people usually finish school in their teenage years or in their early 20s, while transition markers like marriage and childbirth often happen in their 30s nowadays. While transition markers used to be homogeneous and linear, it is assumed that these 'have become less linear, more complex and also reversible' (Biggart and Walther 2006, 42). Becoming an adult is supposed to have become more destandardised over the course of the 20th century. Stauber and Walther (2002, 42) have coined the term 'yo-yoisation' to describe this process. However, there are also empirical results, covering several generations, which indicate a far less de-standardised process in the transition to adulthood (e.g. Brückner and Mayer 2005; Nico 2014). Many of the major political, cultural and economic events during the 20th century have affected European countries differently and thus can be hypothesized to influence young people's life-courses in different ways. We investigate whether these patterns of transition into adulthood have changed across cohorts born between the pre-1930s until the mid-1960s. Using the SHARELIFE data collected in waves 3 (2009) and 7 (2017) of the SHARE study we are able to compare life-courses of over 90,000 individuals from 28 countries. Our focus will be on the comparison of ordering and timing of transition markers across countries as well as across birth cohorts within countries.

Societal Change and Educational Trajectories of Women and Men Born Between 1919 and 1986 in (West) Germany
Presenter: Rolf Becker, University of Bern, Switzerland
Co-author: Karl Ulrich Mayer, Max Planck Institute for Human Development, Germany
The aim of this study is to unravel the impact of societal change in Germany on educational attainment and its social disparities for cohorts born between 1919 and 1986. Therefore, we analyse whether modernisation trends have modified access to and success in general, vocational and higher education for consecutive birth cohorts. In order to explain how these processes have had an effect on class differentials in educational attainment, we assume that the interplay of the changing occupational structure at the macro level and intergenerational status maintenance via investment in the education of offspring is – among other influences – the key mechanism for long-term educational expansion and for decreasing inequalities of opportunity in the educational system. The empirical bases of our investigation are clusters of time series for macro changes and retrospective individual data for 11 birth cohorts from the German Life History Study and the National Educational Panel Study for educational outcomes. We apply piecewise exponential event-history models to analyse the direct and indirect impacts of societal change on educational trajectories and social disparities in educational attainment. The results provide an understanding of historical variations in educational transitions and attainment associated with modernisation in the social, political, economic, and cultural spheres.

Life Transitions for Emerging Adults: A Cross Cohort Comparison
Presenter: Ellen Thompson, University College London, UK
Co-author: Morag Henderson, University College London, UK
It has recently been observed that the age at which young adults are achieving typical adult roles has lengthened, with both men and women undergoing key transitional phases much later than previous generations. This is not surprising considering the substantial societal changes that have taken place since the 1980s, including access to university and fluctuations in the economy. Furthermore, evidence has begun to emerge about the predictors and outcomes of developmental trajectories, with some transitional pathways predicting an increase in likelihood of mental and physical-ill health. One key question that remains is whether transitional pathways, as well as their predictors and outcomes, vary across generations. This project aims to investigate generational differences in the life transitions of young adults between the ages of 16 and 25 years in respect to education, family formation, cohabitation and employment. Moreover, we also aim to explore demographic, social and educational predictors of pathways, and investigate the self-rated health and mental health outcomes to determine whether some pathways are developmentally more adaptive than others. A latent variable modelling approach will be applied to data from Next Steps (NS) (n = 16,122) and the 1970 British Cohort Study (BCS) (n = 14,072) in order to derive patterns and timing of key transitions from adolescence through to adulthood. Multi-group latent class analyses will be used to determine whether trajectories diverge according to sex, social class and academic attainment. Furthermore, linear regression will be use to investigate whether distinct profiles of life transition predict mental health and self-rated health. Through this research, we aim to ascertain the life transitions that emerging adults traverse and identify the prevalence and mechanisms of pathways across two generations.

Measuring Educational Participation and Attainment Over the Life Course
Presenter: Lesley Andres, University of British Columbia, Canada
Co-author: Janine Jongbloed, University of Bourgogne, France
Educational attainment is a key variable in the literature on inequality (OECD, 2015a). Most often, the measure "highest level of attainment" is employed in analyses seeking to determine the relationship between education and outcomes such as occupational status and income levels. Usually, educational attainment is categorized as non-university, undergraduate, and graduate completion (e.g., Charles and Bradley 2002) with little or no attention paid to additional forms of participation undertaken and attainment achieved. In this paper, we provide a complete portrait of higher educational participation and attainment by Canadian young adults over a 28-year time period. We document the nature and extent to which individuals study at different types of postsecondary institutions, the length of time they study at each institution, and the credentials that they accumulate along the way. By conducting analyses over time, we capture the full spectrum of educational participation and attainment that may otherwise be missed in research that does not include a longitudinal element (Mayer, 2009). From these analyses, we will generate a typology of educational attainment to determine long term labour market, health, and wellbeing outcomes. Logistic regression will be employed to determine difference between groups. We use data from the Paths on Life's Way project which is comprised of six waves of panel survey questionnaire and interview data (1989, 1993, 1998, 2003, 2010, 2016). The Paths data set contains detailed data including education and work related information on all postsecondary institutions and programs attended and completed; every job held since high school; month by month information since June 1988 on post-secondary, employment, unemployment, and "other" activities; and personal background information. By comparing our typology of more complex measures generated with traditional measures, we will be able to assess whether the former is an improved measure to illuminate factors associated with social inequality.
References: Charles, M., & Bradley, K. (2002). Equal but separate? A cross-national study of sex segregation in higher education. American Sociological Review, 67(4), 573–599.
Mayer, K. U. (2009). New directions in life course research. Annual Review of Sociology, 35(1), 413-433. doi:10.1146/annurev.soc.34.040507.134619
OECD. (2015a). In it together: Why less inequality benefits all. Paris: Organisation for Economic Cooperation and Development (OECD).

1H   PAPER SESSION: PRE-SCHOOL AND PRIMARY SCHOOL

The Impact of Early Collective Childcare Attendance on Early Language Development: Evidence from the French Birth Cohort Survey
Presenter: Anne Solaz, French Institute for Demographic Studies (Ined), France
Co-authors: Lidia Panico, Ined, France; Lawrence Berger, University of Wisconsin, USA
Recently, investing in early childcare and education has been increasingly advanced by policy makers as a way to decrease social inequalities from the earliest age. A rich literature has attempted to study the impact of early collective child care on child development. Results are mixed, possibly due to heterogeneity in the quality of care, and difficulties in measuring this quality. The French context is particularly suited to explore this effect of collective childcare on child development as the quality of center-based care is considered to be high and relatively homogeneous within the country: the majority of children are placed within high-quality, state-funded and state-controlled nurseries. We use a large, population-based birth cohort study, the Etude Longitudinale Français depuis l'Enfance (Elfe) to estimate whether the type of childcare received at about 1 year of age has an impact on language, motor and socio-emotional development as measured roughly a year later. Linear regression results show a significant advantage of children attending center-based care (crèche) compared to those looked after by a childminder in language and motor skills. Children attending crèche have a richer vocabulary, a little more motor skills than those looked after by parents or a nanny but have a few more "problem" behaviours. These differences remains once we control by a large set of child's and parent's characteristics. They do not seem to be related to unobserved characteristics either since the instrumental variables (IV) approach which is proposed using the number of places in crèche per 100 children aged 0-3 in the town of residence, shows similar results. In terms of SES inequalities, children from disadvantaged families benefit more from creches in terms of language (and to a less extend motor skills) that those coming from advantaged faùilies. Therefore, supporting disadvantaged families in attending creche could decrease SES gradient.

A Developmental Perspective on Kindergarten Instructional Policies and Child Academic Growth from Kindergarten Through Third Grade

Presenter: Jane Waldfogel, Columbia University, USA
Co-author: Yi Wang, Columbia University, USA

Research shows that kindergarten instructional policies, such as full versus half-day kindergarten, instruction time, and ability grouping, exert great influence on child academic achievement during kindergarten. However, evidence on whether children from low socioeconomic status (SES) families benefit differently from these instructional policies compared to their high SES peers is lacking. In addition, little is known on whether these effects persist beyond kindergarten. Using a developmental perspective, this research studies the association between these instructional policies and child academic growth rates during kindergarten (ages 5-6) and from spring kindergarten to third grade (ages 6-9) for the 2010 US kindergarten cohort, among whom, a larger proportion of children attended full-day kindergarten and were placed in within-class ability grouping compared to the earlier cohorts. This study also investigates if the association varies for children from low versus high SES families. Results demonstrate that children enrolled in full-day kindergarten had higher growth rates in reading and math from fall to spring kindergarten compared to their peers enrolled in half-day kindergarten. We also found that instruction time and ability grouping were associated with higher growth rates in reading during kindergarten. In terms of math, higher growth rates are found to be associated not with instruction time, but rather ability grouping, during kindergarten. Nevertheless, the advantages associated with these instructional policies during kindergarten diminished gradually as children progressed through elementary school. Findings also reveal that low SES children benefited more from full-day kindergarten in reading and math than their high SES counterparts in both fall and spring kindergarten. No statistically significant differences in the effects are found in the growth rates for low versus high SES children. Factors that contribute to the fade-out phenomenon and policy implications are discussed.

How Do Gaps in Attainment Change Over Childhood? Longitudinal Evidence from Ethiopia, India, Peru and Vietnam

Presenter: Milo Vandemoortele, London School of Economics, UK

Gaps in attainment emerge at young ages, and preschool education can help to narrow or widen these. While we know quite a bit about the role of preschool on attainment in high-income countries, less is known about the situation in low- and middle-income countries (LMIC). Why might it be different? In LMIC there are higher incidences of malnutrition, the provision and quality of preschool education is often meaningfully different, as is the broader context in which the children grow up. In this paper I examine how preschool education is associated with the narrowing or widening of socioeconomic gaps over time, and across four low- and middle-income countries. I use the Young Lives data set. A comparative approach offers a powerful tool to investigate the implications of similar or different social and economic policies and contexts across countries. It can reveal how preschool education is correlated with children's attainment at various points in time and may shed light on structural differences that mediate the relationship in different ways across different countries. Study countries have rather distinct preschool systems. Ethiopia's preschool education system is primarily private, high quality and urban based, excluding large swathes of the population. While, India's preschool system casts a wide net, but compromises on quality. My results show that preschool education is positively associated with children's attainment over time in most countries, but that the association fades as the children reach early adolescence. I provide plausible explanations for similarities and differences identified.

The Transition to Primary School: How Family Background and Childcare Experiences Influence Children's Skills on School Entry

Presenter: Adriana Duta, University of Edinburgh, UK
Co-author: Emer Smyth, Economic and Social Research Institute, Ireland

There has been extensive research on the transition to secondary school but relatively little evidence on integration into primary education, especially from a comparative perspective. This paper seeks to address this gap by using data from Growing Up in Ireland (GUI) and the Millennium Cohort Study (MCS) for Scotland to explore the factors influencing inequalities in children's skills on entry to primary school. The paper looks at the extent to which cognitive skills (such as vocabulary, linking sounds and letters, and number skills) and non-cognitive skills (such as attitudes and dispositions) among five year olds in the two countries reflect their family circumstances in terms of household income, social class and maternal education. This study asks the following questions: (1) Are there social inequalities by parental background in cognitive skills and dispositions on primary school entry? Does the scale of any such differences vary across countries? (2) To what extent do early childcare experiences and family environment explain the differences by parental background? (3) Do different sets of factors explain family background differences in Ireland and Scotland? Several nested regression models are used to unpack the relationship between social background and child skills and dispositions at school entry, and the extent to which this differentiation is mediated by use of childcare and the home learning environment. Finally, this research examines the influence of the policy context by exploring the extent to which school entry patterns in Ireland and Scotland

reflect between-country differences in access to, and take-up of, preschool provision, age on starting school and the nature of the primary curriculum. The paper will provide crucial evidence on the way in which different dimensions of social background result in educational inequalities on school entry and offer insights into the way in which policy can ameliorate or reinforce such inequalities.

Children's School Lives: Ireland's First National Cohort Longitudinal Study of Primary Schooling
Presenter: Jennifer Symonds, University College Dublin, Ireland
Co-author: Abigail Cahoon, University College Dublin, Ireland
Children's experience of primary schooling is a relatively under researched area internationally, compared to studies of students in secondary level and university education. In 2017, the Irish National Council for Curriculum funded by the Government of Ireland made a significant investment for the Irish people: a study of national scale that would track two cohorts of children as they transferred from preschool to primary school, developed in the primary school years, then transferred from primary to secondary school. The resulting Children's School Lives study involves around 3,000 children, their teachers, school principals, parents and grandparents in the longitudinal data generation. The presentation will outline how educational researchers from University College Dublin School of Education designed the study using developmental psychological and sociological frames, intersecting a national repeated measures study in 200 schools with in-depth case study in 12 schools across Ireland. The challenges and benefits of creating an interdisciplinary and mixed methods design, and the particular approach of educational researchers in designing a national cohort study will be detailed as unique features of this landmark research project.

1I PAPER SESSION: FAMILIES AT RISK

Measuring the Quality of the Home Environment of Young Children in Uruguay: Socioeconomic Gradients in the HOME Inventory
Presenter: Christian Berón, Ministry of Social Development, Uruguay
Co-authors: Giorgina Garibotto, Ministry of Social Development, Uruguay; Florencia Lopez Boo, Mavaris Cubides Mateus, Rita Sorio, Inter-American Development Bank, Uruguay
Uruguay is one of very few countries in Latin America that has a nationally representative, longitudinal survey of early childhood development. In 2015–2016, during the second wave of the survey, an observational module on the home environment was administered at scale for the first time. The module included items from two subscales (responsiveness and acceptance) of a widely used instrument that measures the quality of the physical and emotional environment: the HOME inventory. We find that the set of items administered from the HOME has very good concurrent validity with child development and maternal personality traits, as well as with other relevant socioeconomic variables. In line with the literature, our analysis shows that children from the most vulnerable families are exposed to a lower-quality home environment—that is, less responsive and more punitive. Interestingly, Uruguayan children are exposed to better environments as compared to children in predominantly rural samples from the Latin America and Caribbean region; however, they present comparable environments when compared to similar samples from countries such as Brazil and Chile.

Natural Disasters and Violence Against Mothers and Children in the Philippines. Can a Conditional Cash Transfer Program Be Protective?
Presenter: Ben Edwards, Australian National University, Australia
Co-author: Matthew Gray, Australian National University, Australia
The Philippines has the 4th most number of natural disasters of all countries in the last twenty years (274 natural disasters, Centre for Research on the Epidemiology of Disasters and the United Nations Office for Disaster Risk Reduction, 2016). Violence against women and children often increases following natural disasters particularly given the financial strain that accompanies significant disasters. The Pantawid Pamilyang Pilipino Program (commonly referred to as the 4Ps) has been a key component of the Philippines' government focus on addressing poverty of families with children and is the third largest conditional cash transfer program in the world, covering 4.4 million households or 21 percent of the population (Acosta & Velarde, 2015). As one of the most natural disaster prone countries in the world, understanding if the 4Ps does promote resilience in the most vulnerable families in the face of a natural disaster is a critical question. Using new data from a new United Nations funded nationally representative longitudinal cohort study of children and their families, we test whether the 4Ps program mitigates against natural disasters in the Philippines. We capitalize on geographical variation in the expansion of the 4Ps and the location of natural disasters, to estimate the extent to which the 4Ps mitigates against the worst effects of natural disasters on the most vulnerable families with respect to mother's and children's reports of family violence and abuse. We discuss the implications for mitigating the effects of climate change.

Comparing Vulnerability and Social Network Responses Across Lifecourse Stages, Cultures and Socio-economic Strata in Indonesia

Presenter: Elisabeth Schroeder-Butterfill, University of Southampton, UK
Co-authors: Members of the ARC Team on 'Economic, Health and Social Vulnerabilities Across the Lifecourse in Indonesia'
We know that different stages in a lifecourse harbour particular opportunities and challenges due to the specific transitions associated with those lifecourse stages. The successful (or otherwise) navigation of lifecourse transitions and crises then has implications for future outcomes. Despite their specificity, many crises can be reduced to a set of types of losses: loss of health, loss of livelihood, loss of network member, loss of reputation. This simplification facilitates comparative analysis across different lifecourse stages and subgroups.

This paper examines vulnerability at different lifecourse stages by comparing life history data from six Indonesian communities. We ask: What are key sources of vulnerability experienced by people at different stages of the lifecourse, focusing on a) family formation; b) middle age; and c) old age? What are the relevant social networks people at different stages have access to, and how are these shaped by culture, socio-economic position, gender and location? To what extent are networks able and willing to mitigate the vulnerabilities experienced by members at different stages? The paper draws on data from a comparative ethnographic research project, funded by the Australian Research Council, which studies economic, social and health vulnerabilities over the lifecourse in six communities. These capture important ethnic, demographic and socioeconomic heterogeneity in Indonesia. The project employs a common methodology (participant observation, life history interviews, network mapping) across the sites, some of which are familiar from earlier ethnographic research on ageing in Indonesia. The paper first maps key vulnerabilities at the three lifecourse stages in the six communities; it then focuses on a particular crisis (loss of health or loss of livelihood) and compares social network responses across stages and communities. This sheds light on our understanding of how lifecourse disruptions are mitigated differentially depending on location within the lifecourse, socio-economic landscape and local culture.

PARALLEL SESSION 2

2A   SYMPOSIUM

Patterns and Impacts of Childhood Adversity Across Populations, Settings and Contexts
Convenors/Chairs: Naomi Priest, Meredith O'Connor, The Australian National University (ANU), Australia
Childhood adversity such as experiences of violence, parent imprisonment, and racial discrimination, is widely recognised as having harmful effects on mental and physical health throughout life. Addressing childhood adversity is therefore a promising target for the protection of population health and prevention of adult disease. Understanding the patterning of childhood adversity over time across populations, capturing a range of settings, and spanning multiple geographical contexts, is essential work to inform targeting of action to address childhood adversity. This symposium will explore the patterns and impacts of childhood adversity across settings (family, school) and countries (Australia, UK), with a focus on socioeconomic and racial/ethnic inequalities in adversity exposure. The first and second paper describe inequalities in the distribution of childhood adversity across social groups, including socioeconomic disadvantage, ethnicity, Indigenous status, and gender, in the Australian and UK contexts. The third paper focuses on a specific adversity – racial discrimination – that remains under-researched within the wider childhood adversity literature, and its patterning and impacts on cardio-metabolic and inflammatory markers among diverse Australian school children. The fourth paper will consider the current state of the childhood adversity literature and where the next phase of childhood adversity research should (and should not) head.

Inequalities in Childhood Adversity from Birth to 11 Years in Australia
Presenter: Meredith O'Connor, ANU, Australia
Co-authors: Naomi Priest, ANU, Australia; Natalie Slopen, University of Maryland, USA; Laia Becares, Cathie Marsh Institute for Social Research, University of Manchester, UK; David Burgner, Murdoch Children's Research Institute, Australia; David R. Williams, Harvard University, USA
Objective: Exposure to early adversity carries long term consequences for children's health and development. This study aims to 1) estimate the prevalence of childhood adversity for Australian children from infancy to 10-11 years, and 2) document inequalities in the distribution of adversity according to socioeconomic position and ethnicity and Indigenous status.

Method: Adversity was assessed every two years from 0-1 to 10-11 years in the nationally representative birth cohort of the Longitudinal Study of Australian Children (N=5107), including legal problems; family violence; household mental illness; household substance abuse; harsh parenting; parental separation/divorce; unsafe neighborhood; family member death; and bullying (from 4-5 years). Adversities were examined individually and summed to create a measure of multiple adversity (2+ adverse experiences).

Results: The most common types of adversities were harsh parenting (36.73%, 95% CI 34.41-39.06) and family violence (36.02%, 95% CI 33.97, 38.07). By 10-11 years more than half of children (56.83%, 95% CI 54.89-58.78) had been exposed to multiple adversities. Children from visible minority, Indigenous, and low socioeconomic backgrounds had higher odds of exposure to multiple adversities. For example, socioeconomically disadvantaged Indigenous children had 13 times the odds of exposure to multiple adversities, compared to socioeconomically advantaged Anglo children (OR 13.11, 95% CI 5.30- 32.43).

Conclusions: Addressing early adversity is a significant opportunity to promote health over the life course. Childhood adversity needs to be addressed as a likely contributor to the health inequalities experienced by marginalized groups of children in later life.

The Clustering of Adverse Childhood Experiences in the Avon Longitudinal Study of Parents and Children: Are Gender and Poverty Important?

Presenter: *Rebecca Lacey, University College London, UK*
Co-authors: *Laura Howe, University of Bristol, UK; Michelle Kelly-Irving, INSERM, Université Toulouse III Paul-Sabatier, France; Mel Bartley, Yvonne Kelly, University College London, UK*

Background: Previous research has demonstrated a graded relationship between the number of Adverse Childhood Experiences (ACEs) and child outcomes. However, ACE scores lack specificity and ignore the patterning of adversities. The aim of this paper was to explore the clustering of ACEs and whether this differs by gender and is predicted by poverty.

Methods: Data on 8,572 participants of the Avon Longitudinal Study of Parents and Children (ALSPAC) were used. ALSPAC is a regionally representative prenatal cohort of children born between 1991 and 1992 in the Avon region of South-West England. ACEs included parental separation/divorce, death of a close family member, interparental violence, parental mental health problems, parental alcohol misuse, parental drug use, parental convictions, and sexual, emotional and physical abuse, between birth and 19 years. Latent class analysis was applied to derive ACE clusters. Associations between poverty and derived classes were tested.

Results: Death of a close family member and sexual abuse did not cluster with other adversities but a high level of clustering of other adversities was present. Five latent classes were derived: 'Low ACEs' (55%), 'Parental separation and mother's mental health problems' (18%), 'Parental mental health problems, conviction and separation' (15%), 'Abuse and mental health problems' (6%) and 'Poly adversity' (6%). The clustering did not differ by gender. Poverty was strongly related to both individual ACEs and clusters.

Conclusions: ACEs tend to cluster in specific patterns and poverty is strongly related to this. Reducing child poverty might be one strategy for reducing ACEs.

Discrimination and Inflammatory Outcomes in the School Context

Presenter: *Naomi Priest, ANU, Australia*
Co-authors: *Mandy Truong, Shiau Chong, ANU, Australia; Anne Kavanagh, University of Melbourne, Australia; Yin Paradies, Deakin University, Australia; Kevin Dunn, Oishee Alam, Western Sydney University, Australia; David Burgner, Murdoch Children's Research Institute, Australia*

Objective: Racial discrimination is an important, yet under-researched form of childhood adversity contributing to inequalities in the burden of childhood adversity exposure and associated harmful outcomes throughout life for indigenous and ethnic minority populations. This study aims to 1) estimate the prevalence of racial discrimination for Australian children across indigenous and ethnic minority background, and 2) examine associations between racial discrimination experiences and socioemotional difficulties, sleep, and cardio-metabolic outcomes.

Method: Racial discrimination experiences were reported by school students aged 10-15 years within a population representative survey (n=4664). Self-reported socioemotional difficulties and sleep duration and difficulties were also reported by students. Cardio-metabolic outcomes (body mass index, waist circumference, blood pressure, salivary inflammatory markers) were collected from a sub-sample of students (n=124).

Results: Students from Aboriginal and/or Torres Strait Islander and Pacific Islander/Maori backgrounds, and from ethnic minorities (e.g. South Asian, African, Middle Eastern) reported racial discrimination at levels at least 2 times higher than those from Anglo-Celtic and European groups. Experiences of racial discrimination were associated with increased socioemotional difficulties, sleep duration and difficulties, body mass index, systolic blood pressure and some salivary cytokines (IL6, TNF alpha).

Conclusions: Attention to racial discrimination as an important form of early adversity, and contributor to later outcomes, for children from indigenous and ethnic minority groups remains a priority.

A Critique of the Adverse Childhood Experiences Framework in Epidemiology and Public Health: Uses and Misuses
Presenter: Michelle Kelly-Irving, Equity Research Team, LEASP, INSERM/Université Toulouse III Paul Sabatier, France
Co-author: Cyrille Delpierre, LEASP, INSERM/Université Toulouse III Paul Sabatier, France
Adverse childhood experiences (ACEs) have emerged as a major research theme in the field of social epidemiology especially since the late 1990s. The term ACEs makes reference to a wide array of potentially harmful exposures typically occurring from birth to 16 years of age. Such "adversities" have been repeatedly identified as being involved in the construction of health inequalities over the life course across many pathological processes. Along with the 'fundamental causes framework' they have provided an important contribution to describing and understanding the different pathways through which health inequalities may take form. As with many simplified concepts, ACEs present limitations for research. Across the scientific literature they represent very diverse types of exposures, including socioeconomic and relational factors, stressful life events, maltreatment, abuse etc. Methodologically, they are often considered in cumulative terms, can be identified using both prospective and retrospective approaches, and their multidimensional nature may lead to greater measurement error. These limitations have been underlined by researchers, who also use the framework to highlight the relative risks and vulnerabilities of population subgroups. Notably, from a public health perspective, ACEs are useful for describing the need to act upon complex and multi-centric social environments to prevent the development of health inequalities at a population level. An important concern has arisen as the ACEs concept becomes increasingly used in the context of individual-level interventions. With its uses residing as a probabilistic and population-level tool, it is not adapted to predict or diagnose vulnerabilities at the individual-level. In fact, the very problem the ACEs framework may aim to tackle, health inequalities, may ultimately be exacerbated by using a deterministic approach at an individual level. In this paper we will present a critique of the ACEs framework, discussing its strengths and limits in quantitative and population-level research. We will argue that while epidemiological research on ACEs may be useful evidence for population-level or structural policy, it is an insufficient and ill-adapted tool for implementation by social workers, medical practitioners, child protection workers, and likely to stigmatise families and children.

2B SYMPOSIUM

Resilience in Health and Wellbeing Across the Life Course
Convenor/Chair: Bram Vanhoutte, University of Manchester, UK
Resilience, or successfully coping with adverse circumstances, has become a central concept in longitudinal studies, as it offers a way to capture a central and dynamic mechanism that can help us understand heterogeneity in event impact. This symposium wishes to highlight the usefulness of this concept, as well as the variety of approaches in which it is used, by showcasing four approaches to resilience in health and wellbeing in research from members of the Cathie Marsh Institute for Social Research at the University of Manchester. First, Dr. Maria Haarmans will discuss the conceptual and societal backgrounds of resilience in a mental health context, focusing on the importance of gender and ethnicity, and using qualitative data. Second, Drs. Stephanie Cahill will talk about biosocial predictors of resilience to adverse childhood experiences, illustrating her approach based on latent class analysis using longitudinal data from childhood to adolescence. Third, Dr. Patty Doran investigates how emotional support relates to resilience by examining wellbeing of cancer survivors using longitudinal data on later life. Finally, Dr. Bram Vanhoutte examines if there are different types of resilience using a latent class approach to examine wellbeing trajectories after experiencing an adverse event in later life.

Politicising the Resilience Construct: The Shaping of Resilient Racialized and Gendered Identities
Presenter: Maria Haarmans, University of Manchester, UK
Co-authors: James Nazroo, Bram Vanhoutte, University of Manchester, UK
The concept of resilience has been gaining increased interest in life course studies. While the construct is used inconsistently and critiqued for a lack of conceptual clarity (Ayed et al., 2018), a dominant 'depoliticised' positioning emphases resilience as characteristics or processes residing within the individual (e.g. 'hope', 'motivation', 'effective coping', 'adaptive temperament', 'use of social networks', 'immunity'). We interrogate and problematise this positioning for its lack of examination of socio-political, cultural and institutional factors/resources as they operate across the life course, and how this relates to individual characteristics (Hall & Lamont, 2013). Drawing on Pierre Bourdieu's work on capitals and habitus, and extending Michèle Lamont's argument that subjective classed [and racialised and gendered] identities are an important source for social resilience - which can be understood as embodied practices of the habitus – we demonstrate the interdependence of micro-meso-and macro resources that underpin resilience. To do this we use empirical data and case examples from research on ethnic and gender

inequalities in relation to ageing and mental health. We describe how racialised identities have shaped access to resources that are drawn upon to frame a 'good' later life and how this relates to both class and gender. We also explore how social categories of race, gender and sanity have shaped individuals' experiences of hallucinated voices and how voice-hearers' dominant-subordinate positioning vis-à-vis hallucinated voices reproduces their marginalisation in the social world. We argue this framing/positioning can also be understood as embodied practices of habitus, thus linking the intrapsychic and meaning-making with the macrosocial. We conclude by emphasising the need to move away from individualised understandings of resilience within a neoliberal policy framework, and to focus instead on how access to resources at micro, meso and macro levels, and the interplay between them, allows a more complete analysis of risk and vulnerability.

Biosocial Predictors of Resilience to Adverse Childhood Experiences
Presenter: Stephanie Cahill, University of Manchester, UK
Exposure to adverse childhood experiences (ACEs) results in poorer health and social outcomes across the lifecourse. ACEs are highly prevalent, and yet some individuals do not develop stress-related dysfunctions, despite being subject to the same kind of challenges that cause long-term dysfunction in others. This 'resilience' is a well described phenomenon, yet there are considerable differences in the way resilience is defined, operationalised and measured in the literature. In this study I use a novel approach to measure resilience, operationalised as the difference between individuals' score on a health or behavioural measure and the score predicted by their exposure to adversity: the standardised residual scores. Taking data from a longitudinal birth cohort study, the Avon Longitudinal Study of Parents and Children (ALSPAC), with genotype data and repeated measures of stress reactivity, adversity and outcomes, I develop a resilience index across multiple domains of ACEs, beginning prenatally and continuing into adolescence. 19 ACE constructs are derived using a pragmatic approach to handle the high dimensional ALSPAC data. After creating a continuous measure of resilience across the early life course, I then assess how the resilience index varies by age and how individual, familial and community factors influence that variation. Whether the resource factors are 'protective', reducing the negative effects of adversity on functioning for children with high ACEs, or 'promotive', reducing the negative effects of adversity on functioning for all children, is discussed. Using latent class analysis, I partition the continuous resilience index into sub-groups following homogenous developmental trajectories. Previous studies have suggested that trajectory analysis may help to refine the measurement of resilience and provide a more heritable phenotype that will improve signal in genetic association studies. Next steps to assess the SNP heritability of developmental trajectory of resilience are discussed.

Resilience and Living Well Beyond Cancer: The Relationship Between Emotional Support and Quality of Life
Presenter: Patty Doran, University of Manchester, UK
Co-authors: Sorrel Burden, Nick Shryane, University of Manchester, UK
The study aimed to investigate the influence of emotional support on the quality of life of older cancer survivors. We use data from the English Longitudinal Study of Ageing to assess the relationship between perceived emotional support and quality of life, comparing people who were cancer survivors (n=533) to people without cancer (n=8,203). Most people reported high emotional support and had good quality of life (mean 42.57, scale 0-57). However, linear regression modelling showed cancer survivors had on average slightly lower quality of life (-2.10 SE 0.82). Those who reported having low support reported much poorer quality of life; this relationship was similar for both cancer survivors and people without cancer. The impact of low emotional support on quality of life compounds with the independent detrimental effect of being a cancer survivor. Interventions that increase emotional support are likely to promote resilience and improve quality of life for cancer survivors.

Bouncing Back or Keep Calm and Carry On? An Exploration of Varieties of Resilience in Ageing
Presenter: Bram Vanhoutte, University of Manchester, UK
Resilience, or how people manage after an adverse event impacts, is a crucial part of ageing. This study examines resilience by exploring trajectories of wellbeing after experiencing three common adverse events associated with ageing: Health loss, Bereavement and Wealth Loss. We do this using the English Longitudinal Study of Ageing in a growth mixture framework. This technique takes latent growth curve modeling, a statistical method specifically designed to model change over time, as a point of departure. Growth mixture modelling additionally classifies the trajectories, or growth curves, into different groups, based on their similarity. Four different ways of reacting to an event can be distinguished: chronically low wellbeing, a delayed low wellbeing, recovery and hardly any impact at all. While bouncing back and little impact both tend to go under the label of resilience, they suppose very different ontologies of coping. From a developmental perspective, resilient people do not recover from an adverse event, but easily adapt to their new life circumstances. This approach entails a challenge to the common assumption of return to homeostasis as the basis for a healthy system, and embraces swift adaptation to change as equally important.

2C   SYMPOSIUM

The Sequence Analysis Association (SAA)
Convenor/Chair: Matthias Studer, NCCR-LIVES, University of Geneva, Switzerland
Sequence Analysis is a generic framework that aims to provide a holistic view on trajectories coded as a sequence of states. Since its introduction in the social sciences by Abbott, it has been increasingly used to study the life course. The Sequence Analysis Association aims to serve as a meeting point of researcher interested in developing or using Sequence Analysis. Its first symposium will briefly present the association itself as well as a general introduction and some of the most recent developments proposed by its members, including:
• An overview of existing and new development in visualization and summary indicators of trajectories for descriptive purposes.
• An introduction to multichannel sequence analysis through an original application of the study of migration, employment and family formation trajectories of Filipino and Indonesian domestic workers in Hong Kong.
• An overview of validation methods of SA typology to be used in regression models, as well as the presentation of newly develop methods for this purpose.
• A critical discussion on the comparison of typology of trajectories built in different countries as well as a presentation of methodological guidelines to do so.
• A new method for fuzzy clusters' visualization.

Trajectory Description: Visualisation and Indicators
Presenter: Christian Brzinsky-Fay, WZB Berlin, Germany
Increasing complexity, de-standardisation and diversification of life courses makes both a description of trajectories and their normative quality assessment more challenging and comprehensive. The sequence approach to longitudinal social processes allows for both, plausible representation of these rather complex processes as well as intuitive and theory-driven indicators for measurement.

The presentation provides an overview about existing methods of sequence visualisation and indicators aiming at measuring particular sequence characteristics. For both new developments will also be presented. Data visualisations should be constructed and might be optimized according to the theory of graphical perception (Cleveland, 1994). Quantitative indicators shall be based on theories connected to the life course domain. Usually trajectories, such as school-to-wok-transitions, have a pre-defined objective—namely the integration of young people into the labour market. At least policy makers are confronted with the question of whether and how to influence or adjust these pathways. The same is valid for transitions to retirement or to family formation processes. Social sequence analysis proposes a couple of quantitative measures to assess trajectories of any kind, e.g. between education system and labour market or between different forms of cohabitation. In the literature, concepts such as volatility, turbulence, entropy or integrative potential are frequently used, but rarely examined regarding their (construct) validity. I will discuss the question whether it makes sense to construct universal indicators applicable to different research questions.

Migration Trajectories of Filipino and Indonesian Domestic Workers in Hong Kong
Presenter: Tim F. Liao, University of Illinois, USA
This paper presents a portrayal of Filipino and Indonesian women's life courses, using the life history data from the 2017 survey of foreign domestic workers in Hong Kong. We examined the three life course dimensions of migration, employment, and family formation among these domestic workers. Using sequence analysis, we first analysed trajectory features such as duration spent in each state, cross-sectional and longitudinal diversity of state distributions, and numbers as well as patterns of life course transitions. We have found that Indonesian domestic workers, compared to their Filipino counterparts, are more involved in serial migration, have more complex employment histories, and, albeit an overall younger sample, are more likely to be in a family formation stage beyond being single. We also conducted a multichannel sequence analysis by considering the three domains of migration, employment, and family formation jointly. We have found family formation and employment are both tied to migration, a driving force of these women's life trajectories.

Beyond Sequence Typologies: Extracting and Selecting Relevant Properties of Sequence
Presenter: Matthias Studer, NCCR-LIVES, University of Geneva, Switzerland
Co-author: Danilo Bolano, NCCR-LIVES, University of Lausanne, Switzerland
Several studies have investigated the link between a previous trajectory and a given outcome. Trajectories are complex objects. Identifying which aspects of the trajectories are relevant is of primary interest both in terms of prediction and testing specific theories. In this work, we propose an innovative approach based on data mining feature selection algorithms. The approach is in two steps. We start by automatically extracting several properties of the sequences. Using a life course approach, we focus here on features related to three key aspects of the life course: sequencing, timing and duration of life events. Then, in a second step, we use feature selection algorithms to identify the most relevant properties associated with the outcome. We discuss the use of two features' selection approaches: a random forest approach (Boruta) and a LASSO method (Stability Selection). We also discuss the inclusion of control variable such as socio-demographic characteristics of the respondent in this selection process. The proposed approach is illustrated through a study of the effects of family and work trajectories between ages 20 and 40 on health and income conditions in midlife.

Apples and Oranges? Comparing Life Course Typologies Across Countries
Presenter: Anette Fasang, Humbolt University, Germany
Co-authors: Selcuk Bedük, University of Essex, UK; Zafer Büyükkececi, University of Bamberg, Germany; Aleksi Karhula, University of Turku, Finland; Marc A. Scott, New York University, USA
In comparative life course research and family demography it has become increasingly popular to compare typologies of work and family life courses based on sequence and cluster analysis. This paper critically discusses the advantages and limitations of this approach. To what extent are life course typologies really comparable across countries and where do we risk substantively important misinterpretations? Based on an illustrative example comparing typologies of family life courses in Germany, the United Kingdom, Finland, and the Netherlands, we discuss challenges to the cross-national comparability of life course typologies with regard to two substantive goals: 1) comparative description of life course typologies, 2) using life course typologies as determinants and outcomes in further analysis. The statistical soundness and sociological validity of typologies derived with different methods for cluster analysis are compared, including Partitioning around Medoids (PAM), Monothetic and Fuzzy Clustering. We conclude with several guidelines for applied analyses and a discussion of possibilities and open challenges for future research.

Enhancing Fuzzy Clusters' Interpretation Through Visualization
Presenter: Raffaella Piccarreta, Dondena Centre for Research on Social Dynamics and Public Policy, Bocconi University, Italy
Co-author: Emanuela Struffolino, WZB Berlin Social Science Center, Germany
Fuzzy clustering has been recently proposed in the context of sequence analysis as an alternative to the widely used crisp clustering, i.e. when sequences are assigned to one single cluster (Studer 2018; Salem et al. 2016). A fuzzy assignment to clusters implies that sequences can belong to different degrees to more than one cluster. The tools currently available to visualize the results of fuzzy clustering rely either on the identification of the sequence with the highest membership strength for each cluster or use a weight-based approach to assign the sequence to a specific cluster. We suggest that evaluating carefully the "partial" fuzziness is necessary when the results of fuzzy clustering are used to define a set of response variables to relate to covariates using regression methods. Specifically, first, we propose to use index plots with transparency inversely related to clusters' membership. Second, an index plot of the entire set of sequences is combined with an intensity-plot where for each sequence its cluster-membership value is reported for each cluster. This visual inspection of fuzzy clustering solutions ultimately enhances our confidence in how far we can go with their substantive interpretation.

2D   PAPER SESSION: PARENTING AND CHILD OUTCOMES

Parental Divorce and Its Effects on Internalizing and Externalizing Problem Behaviours in Children
Presenter: Lena Weigel, Bielefeld University, Germany
Co-author: Bastian Mönkediek, Bielefeld University, Germany
Research demonstrates that parental divorce can have a negative impact on child development. Two pathways are discussed: through lowering family resources on the one hand, and by increasing exposure to stress on the other. An increase in internalizing and externalizing problem behaviours is a key aspect of such negative consequences for child development, since it is known to have negative consequences for school achievement and educational attainment. However, the causal influence of divorce is also debated in research which shows that divorce mainly occurs in 'troublesome families', i.e. with lower parental educational background, disorder, and a generally higher risk of behavioural problems. Therefore, it remains unclear in how far parental divorce actually explains behavioural

problems in children. Alternatively, behavioural problems in children might be genetically transmitted or be related to other unobserved family factors.

Our paper studies the effects of parental divorce on internalizing and externalizing in children utilizing a multilevel genetic sensitive model (ACE-Model). Using data from the German Twin Family Panel (TwinLife), this model allows us to account for possible confounders related to genetic effects as well as shared environments. TwinLife is based on a random sample and includes about 4,000 twin families across the full range of regions and social strata in Germany. Our preliminary results for children aged 10-12 years old (N = 2,050) show that a substantial part of the variance in internalizing relates to the additive genetic component (A) (21%), highlighting that it is necessary to account for genetic confounders. 21% of the variance relates to shared environments (C) (21%). Accounting for parental divorce in our preliminary model shows no significant effects on internalizing problem behaviours in children. We will add covariates to our models to get insight in what family factors exactly explain the environmental forces.

The Involvement of Grandparents Across Childhood and Their Role in the Development of Prosocial Behaviour
Presenter: Jennifer Hampton, Cardiff University, UK
Co-author: Christopher Taylor, Cardiff University, UK
Grandparents provide a large amount of childcare for working families across Europe, identified as the main source of informal childcare in the UK. Although positioned as a positive influence on parents', particularly mothers', labour force participation (Kanji, 2018), their influence on the cognitive and behavioural outcomes of the children that they care for has often been positioned as problematic. Indeed, in terms of protecting children from the potentially adverse effects of maternal employment, research suggests that such informal childcare practices are less effective than formal alternatives (Gregg et al., 2005). However, the relationship between informal care and behavioural outcomes is less than clear (Hansen & Hawkes, 2009). Of the behavioural outcomes commonly studied, prosocial behaviour is of particular pertinence when considering individuals' relationship to civil society, with evidence suggesting that early prosocial behaviour is positively related to later social and political participation (Silke et al., 2018; Taylor et al. 2018). Additionally, previous research has demonstrated the positive influence that grandparental involvement can have on their grandchildren's prosocial behaviours (Attar-Schwartz et al., 2009). This literature suggests that grandparents can have a positive influence through both indirect and direct pathways, adding to parental influences on the development of these prosocial behaviours. Much of the existing research has a focus on the short-term, rather than long-term, effects that early childhood influences can have on the development of behavioural outcomes. Going someway to addressing this gap in the literature, this paper makes use of the longitudinal nature of the Millennium Cohort Study. We examine both the prevalence of grandparental childcare for pre-school children and the effect that such childcare practices have on children's later prosocial behaviours. Extending the focus beyond childcare practices, patterns of contact with grandparents are mapped across childhood, as are the effects of differing frequencies of contact on future prosocial outcomes.

Mother's Interaction Behavior in Families with Risk and Stress Factors: Applying a Longitudinal Person-Centered Perspective on Data of Starting Cohort 1 of the NEPS
Presenter: Manja Attig, Leibniz Institute for Educational Trajectories, Germany
Co-author: Gwendolin Blossfeld, University of Bamberg, Germany
The quality of early interaction situation between parents and their children plays an important role for the development of children. A full body of research has shown that social background (e.g. income, education), characteristics of the mother (e.g. age, psychological stress) as well as the child themselves (e.g. temperament) have an impact on the quality of mother's interaction behavior. Studies that focus on suitable interventions to foster parenting behavior (especially in disadvantaged families) do not only use single dimension of parenting behavior but investigate a multidimensional construct of parenting. Concentrating on a German sample of families at risk (defined over multiple risk and stress factors), the paper investigates whether (1) the kind of risk and stress factors (social background, characteristics of mother and child), (2) a threshold of risk and stress factors or (3) both influence types of interaction. Based on previous research three profiles of interaction behavior can be assumed: supportive parenting as positive profile for most of the mothers and two negative profiles with smaller amount of positive child-oriented behavior and differences in the amount of harsh or detached behavior. Further, we assume that mothers (or families) with multiple risk factors are more often located in the negative profiles. Using data of the first three waves of the infant cohort study of the National Educational Panel Study (NEPS), a person-centered approach to examine stability and change in mother's interaction behavior was applied after identifying families at risk taking into account the various risk and stress factors in families. Using video-based ratings of mother's interaction behavior during semi-structured mother-child interactions collected in the family's home, latent profile analysis and latent profile transition analysis were applied to identify maternal interaction types and their changes over time. Further, predictors of parenting types (e.g. by various risk and stress factors) were identified.

The Housing Experiences of Australian Children

Presenter: Diana Warren, Australian Institute of Family Studies, Australia

In this presentation, data from Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC) will be used to explore the housing experiences of Australian children between 2004 and 2014. Various aspects of housing, ranging from the types of housing that children live in, whether their parents own or rent and the condition of their home (as observed by their interviewer) are explored. How often children move house and their parents' experience of (short-term or ongoing) housing affordability stress are also examined. While most children do not live in families experiencing issues such as housing affordability stress, overcrowding, or poor neighbourhood liveability, there are some whose families do face these issues. Around one in seven children in the study had lived in households with housing affordability stress at multiple time points. For single parent households, housing affordability stress was more likely to be an ongoing issue. One in four children who were in a single parent household that was experiencing housing affordability stress were in the same situation two years later. For some children, changes in housing are a result of parental separation, and in these cases, housing affordability is more likely to be an issue – with 30% of children who moved house around the time of their parents' separation moving into a situation where their primary carer was experiencing housing affordability stress. Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC) is conducted in partnership between the Department of Social Services, the Australian Institute of Family Studies and the Australian Bureau of Statistics.

Study website: www.growingupinaustralia.gov.au

2E   PAPER SESSION: GENDERED LIFE COURSES

Gendered Barriers and Benefits: A Two-Cohort Study of Life Course Trajectories Among Skilled Workers in Gender-Segregated Occupations in Norway

Presenter: Kristoffer Chelsom Vogt, University of Bergen, Norway
Co-author: Thomas Lorentzen, University of Bergen, Norway

Gender disparities specifically among young workers has only recently emerged as an important area of research (Blossfeld et al., 2015). Evidence from Britain suggests that young women face greater hindrances to career advancement from low level entry jobs than men, and that this disparity has grown over recent decades (Bukodi and Dex, 2010). In this article, we scrutinize the work and welfare trajectories of men and women skilled in gender-segregated vocational programs in Norway. We use population level administrative data to investigate the life course trajectories of two educational cohorts, skilled in 1993 and 2004, and follow each cohort (by monthly statuses) for 10 years. Inspired by the established concepts of the 'glass ceiling' (barriers to female advancement) and the 'glass elevator' (structures enabling male advancement), we investigate work and welfare trajectories of men and women skilled within male- vs. female dominated educational tracks. Using tree-based sequence analysis (Studer et al. 2011) we find a marked stability across the two cohorts, indicating very limited change in the gender dynamics among skilled workers over recent decades. Men skilled in female-dominated tracks have work and welfare trajectories marked by more labour marked exclusion and lower income than their more gender-traditional male peers. Likewise, women skilled in male-dominated occupations tend to follow more beneficial trajectories than their gender-traditional female peers, but less beneficial than their gender-traditional male co-workers. Furthermore, a 'glass elevator' (leading to better income) appears to be open to men in female dominated occupations, but not for women skilled in male-dominated occupations. A supplementary analysis using a discrete-time hazard rate model on leadership transitions demonstrate that men in female dominated vocations are the most likely to acquire leadership positions.

Changes in the Returns to Women's and Men's Education at Entry into the Labour Market in West Germany, 1945–2008

Presenter: Hans-Peter Blossfeld, University of Bamberg, Germany
Co-author: Rolf Becker, University of Bern, Switzerland

In modern societies, there has always been a race between education and technology. The outcome of this race is reflected in the value of education as a 'positional' good. This paper studies to which extent educational expansion, the long-term trend of economic modernisation, and changes in the business cycle have affected the returns to educational certificates of young men and women entering the labour market in West Germany. Using longitudinal data from the German Life History Study and the ALWA study, long-term changes in cohort- and period-specific effects on status attainment at entry into the labour market are investigated between 1945 and 2008. As a measure of women's and men's returns to education at entry into the labour market scores of the Magnitude Prestige Scale (MPS) are used. These scores reflect not only material returns (such as salary differentials or fringe benefits), but also broader non-material benefits of job positions (i.e. job satisfaction, reputation, appreciation, authority, career opportunities). The results of our regression analyses demonstrate that young men's and women's average prestige scores have clearly risen in the process of modernisation. Despite strong educational expansion, increasing skill demands for highly qualified graduates resulted in increasing rates of returns for the most highly educated entrants

across birth cohorts. The expansion of education and the rising skill requirements of occupations are leading to an increasing polarisation of inequality between university graduates on the one hand and less qualified school leavers who only have attained low levels of education and training on the other hand. This gap in returns to education is particularly extending for male first-time employees. Our multilevel analyses suggest that educational expansion has not exceeded the long-term occupational skill demands at entry into the labour market in West Germany.

Gender Specific Differences in the Effects of Social Origin on Income Development: The Case of Germany
Presenter: Hartwig Hümme, University of Potsdam, Germany
The relationship between social origin and future income has been the subject of numerous studies and debates in economics and sociology. It has been proven that there is a strong link between social origin, educational attainment, and social destination in terms of economic success. However, there is still widespread disagreement as to whether social origin has an influence on later children income. The results of previous studies are not unequivocal in their findings and contradict each other in the effects observed. It's also still completely unclear whether there are differences between the genders. However, studies based on correlations between siblings or twins show that there is a strong correlation between social origin and economic success achieved in later working life. But these studies only show that there are effects and not which mechanisms are responsible for them. But it is very important to understand these mechanisms as they are responsible for the persistence of social inequality and gender differences. In this study, I take up the proposal by Bukodi & Goldthorpe (2013) to decompose social origin into its main factors parental class, status and education in order to examine the distinct effect on income over the life course. To do this, I use the data from the German LifE-Study, one of the longest running longitudinal studies in the German regions following the life courses of N=1.359 individuals from the ages of 12 to 45. Different linear regressions and linear structural equation models show that the three factors of social origin have different effects on income. These effects also differ between age 35 and age 45 of the analysed individuals and largely between men and women. For women not only their own education is responsible for the returns to education, it's also the social background in which they grew up.

2F   PAPER SESSION: RISING ASPIRATIONS

Rising Expectations: Educational Attainment Across Three Generations in the Context of Social and Economic Change
Presenter: Lisa Serbin, Concordia University, Canada
Co-authors: Daniel J. Dickson, Dale M. Stack, Concordia University, Canada; Marie-Hélène Véronneau, University du Quebec a Montreal, Canada
Since the 1960's in North America and Europe average education levels have risen, along with widespread expectations for increases in social and economic status in successive generations. Nevertheless, families at the lower end of the education distribution are likely to remain trapped at the bottom of the ladder, despite average increases in education. The present project focuses on three generations within 503 lower-income families from Quebec, Canada, who were first enrolled in the Concordia Longitudinal Research Project in the 1970's. Members of these families received their education in either the 1960s (grandparents, "G1"), 1980s (parents, "G2,") or 2000s (offspring, "G3"). The "G3" young adults, offspring of the G2 participants, are currently completing or have recently completed their secondary or post-secondary studies. The study is a three-generation trajectory analysis of levels of educational attainment. The analyses examined predictors of slope (i.e., increasing, stable or decreasing levels of education), as well as mediators and moderators of inter-generational change. Using a nested hierarchical approach, neighborhood characteristics, occupational status, behavioral, cognitive, and social/relational characteristics and gender were included as predictors of intergenerational change. Educational outcomes included successful secondary school completion, and participation in secondary and postsecondary academic, technical and trade programs. Average educational attainment increased substantially (from a mean of 9 to over 12 years) across the three generations, although stability of levels across generations was also found (R's ranged from .23 to .58). Notably, the G3 group's education level remained low relative to the Canadian and Quebec populations as a whole. Further, G3 males were less likely than G3 females to achieve higher levels of education than their G2 parents. These patterns place these young adults at a disadvantage, as they are entering the workforce in an increasingly technological economy. Results are discussed in the context of major educational policy initiatives, and economic and social changes in Quebec and Canada.

Self-Esteem, Economic Self-Efficacy, and Status Attainment: Evidence from a Panel Study of Three Generations

Presenter: Monica Kirkpatrick Johnson, Washington State University, USA
Co-authors: Kaspar Burger, Jeylan T. Mortimer, University of Minnesota, USA

Despite considerable evidence of the importance of self-esteem and self-efficacy for agentic, goal-oriented behavior, little attention has been directed to these psychological dimensions in the status attainment literature. The present research examines the extent to which adolescent self-esteem and economic self-efficacy affect adult educational and income attainment, and whether these psychological resources are transmitted across generations. This research draws on data from the Youth Development Study obtained from three generations: grandparents (G1), parents (G2) and grandchildren (G3). This study began in the academic year 1987-1988 with a randomly selected cohort of 1139 adolescents enrolled in the ninth grade in the St. Paul Public School District, Minnesota. The panel was surveyed near annually until 2011 (age 37-38). In the first and fourth waves of the study (i.e., in 1988 and 1991) the first-generation respondents (G1), including both mothers and fathers, were surveyed. In 2009, the third-generation respondents (G3) who were age eleven and older were also surveyed. Additional third-generation participants were recruited in 2010 and 2011, including those who had not responded previously and those who had turned eleven. The present study estimates a structural equation model with data from 422 three generation triads, obtained from 265 families (with multiple G3 children from a given family contributing to the sample). Our findings indicate that both self-esteem and economic self-efficacy are implicated in the attainment process. Adolescent economic self-efficacy had a direct positive effect on adult educational attainment and an indirect effect through educational plans. The influence of self-esteem on adult educational attainment was entirely indirect, through school achievement. We also find evidence that economic self-efficacy was transmitted from parents to children. We conclude that future research should more broadly consider social psychological resources in the attainment process from a three-generation perspective.

Reversing the Academic Drift: Raising Academic Attainment and Building College Going Aspirations Through a Longitudinal Widening Participation Programme

Presenter: Katriona O'Sullivan, Maynooth University, Ireland
Co-author: Cliona Hannon, Trinity College Dublin, Ireland

Background: Despite a significant increase in the number of students entering Higher Education (HE), students from Socio-Economically Disadvantaged (SED) backgrounds are less likely to enter HE than those from advantaged backgrounds (HEA, 2017). Widening Participation (WP) initiatives play a central role in changing this; they work with schools to develop academic ability and build educational aspirations, providing pre- and post-entry university supports which facilitate progression to and through HE (HEFCE, 2007).

Methods: This paper presents data from a longitudinal mixed-methods case study which tracked 949 second-year students from 11 secondary schools in the Greater Dublin region participating in the Trinity Access 21 (TA21) Widening Participation project. The 11 schools met the national requirement for educational disadvantage. All students completed survey questionnaires over 3 years which established academic performance, college going aspirations, demographic information and participation in WP activities. A subset of four schools participated in Qualitative Longitudinal Research (QLR) over the three-year period, this included four student focus groups involving 21 student participants and 14 individual student interviews.

Findings and Discussion: Attainment in English and Mathematics increased over the 3 years; suggesting that the WP programme reversed an "education drift" observed in second year of post-primary school. Results also reveal increased HE aspiration was influenced by participation in activities included visiting a college campus, talking to parents about college and talking to a college student. QLR analysis revealed that student capabilities emerge as a result of engagement with leadership, mentoring and college visits. Students also encountered a range of inhibiting factors in developing capabilities and persisting with higher education aspirations, these include the negative pull of peer relations; pressure related to the examinations, limited subject choice and conflicting family expectations.

Does the "American Dream" Still Hold? Historical Changes in How Adolescents' Socioeconomic Status, IQ, and GPA Are Related To Adult Educational and Occupational Success

Presenter: Andrea Hasl, University of Potsdam, Germany
Co-authors: Julia Kretschmann, Dirk Richter, Martin Brunner, University of Potsdam, Germany; Manuel Voelkle, Humboldt University of Berlin, Germany

The present study is among the first to systematically examine how historical changes in the socioeconomic environment in the 20th century may have affected the "American Dream" with regard to whether such changes modulated the extent to which adolescents' intelligence (IQ), their grade point average (GPA), and their parents' SES could predict important educational and occupational life outcomes in adulthood about 20 years later. Since the late 1970s, dominant economic frameworks of neoliberalism and "trickle-down economics", as well as the transition from a manufacturing to a service economy, have been accompanied by dramatic increases in inequality

on the population level in key life outcomes in recent decades. One general explanation for increasing inequality in population-level outcomes are micro-level processes where individual differences (i.e., relative advantages over other individuals) in adolescents' IQ, GPA, and parental SES have led to cumulative advantage (CA) processes in (a) educational, and (b) occupational outcomes across the life course. The data stemmed from two representative U.S. birth cohorts of 15- and 16-year-olds who were born in the early 1960s (N = 3,040) and 1980s (N = 3,524) and who participated in the National Longitudinal Surveys of Youth (NLSY). Cohort differences were analysed with respect to differences in average relations by means of multiple regression and for specific points in each outcome distribution by means of quantile regressions.

In both cohorts, IQ, GPA, and parental SES predicted key life outcomes about 20 years later. Across historical time, the predictive utility of IQ and parental SES remained stable for the most part. Yet, the combined effects of social, economic, and labor-market changes may have increased the utility of GPA to predict educational and occupational outcomes over time for individuals who were born in the 1980s.

2G   PAPER SESSION: VOCATIONAL LEARNING

Adolescent's Vocational Orientation: Vocational Aspiration and the Local Apprenticeship Market

Presenter: Christina A. Zeichner, Leibniz Institute for Educational Trajectories, Germany
Co-author: Melanie Fischer, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

Due to the wide-ranging consequences on shaping the individual's further life course regarding the career and personal life, vocational decisions, especially at the transition from school to work come into focus. Whereas studies show that vocational choices can be put into the same context as other educational decisions before – the concept of social origin – there is little research done on the importance of regional educational infrastructure. Therefore, we examine the relationship between the adolescent's vocational aspirations and the local apprenticeship market. According to Gottfredson (1981) young people's vocational choices are predominantly driven by their sociodemographic characteristics, interests and attitudes. Considering the regional context, we assume that at the end of the school career young people increasingly take local vocational training positions into account. Specifically, we expect individuals to be more likely to choose a particular profession if there are appropriate apprenticeships available in their region. Based on rational-choice theories, we assume young people of lower social origins to be particularly cost-sensitive in educational and vocational decisions (Breen & Goldthorpe 1997). For this reason, these adolescents are expected to more closely align their vocational choices with the local apprenticeship market than those of higher social origins. To test these expectations, survey data of the project "BildungsLandschaft Oberfranken (BiLO)" is used to examine pupils of schools who at the time of the initial survey were in their last year of school and thus are about to enter the apprenticeship market. This data, which contains information on the individual's likely vocational aspirations and intentions, will be linked to georeferenced structural information about objective vocational training positions and educational offerings. Whereas the data of vocational schools were also collected by the project, secondary data of vocational training chambers complement the data basis. Descriptive and regression analyses are carried out for the investigation.

Transitions into Higher Vocational Education in Switzerland: The Role of Intrinsic and Extrinsic Work Values, Expectations and Rewards

Presenter: Ines Trede, Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland
Co-author: Grønning Miriam, Swiss Federal Institute for Vocational Education and Training (SFIVET), Switzerland

Transitions into higher vocational education in Switzerland: The role of intrinsic and extrinsic work values, expectations and rewards vocational education plays an important role in Switzerland. Two thirds of all adolescents enter upper-secondary-level vocational training after compulsory school. Given the shortage of skilled personnel, particularly in healthcare, an increase in the number of young people continuing their education on the vocational tertiary level is highly desirable. Decision theories describe (occupational) values and cost-benefit considerations as subjective attitudes of individuals which influence (educational) decision-making. Sociological or economic decision models focus primarily on financial or status-oriented values and cost-benefit considerations, while socio-psychological models extended the research to social and intrinsic dimension. Recent research points out that a value-reward dissonance impact work satisfaction and thus is likely to influence career choices. However, little is known how these factors influence the transition after a vocational education. Against this background, and based on Eccles' (2005) model of achievement related choices, this paper examines the transition from upper-secondary training into tertiary education, with the example of healthcare apprentices. In particular, we ask how (1) extrinsic and intrinsic work values and cost expectations during education, and (2) work rewards which have been encountered after training, (3) affects young people's decisions to enrol in vocational tertiary healthcare education. The analyses are based on a full sample of healthcare assistant apprentices (N=2089) who were surveyed three times: during upper-secondary training, one and five years after the apprenticeship. The respondents were asked about their values and expectations in the first survey, about their rewards in the second wave and their decisions

in the third wave. The multivariate logistic regressions show that the transition into tertiary healthcare education is affected by intrinsic values and cost expectations as well as by later work rewards at the working place.

Why Do Low-Educated People Often Remain Abstaining from Continuing Education? Motivational and Social Causes Over a Span of 10 Years
Presenter: Matthias Sandau, University of Potsdam, Germany
Changes in labour market and skill requirements entail that workers must continuously develop their abilities and knowledge by pursuing continuing education. Nevertheless, participation in continuing education in Germany is highly differentiated in terms of social structure. Similar social inequalities can be observed in various European countries. Research shows psychological, micro-sociological as well as economic causes explaining the effect of education. In addition, people with a low educational level are highly likely to be absent from continuing education over decades. Therefore, the current study will combine the different approaches and examine which motivational and job-specific effects mediate educational effects on the likelihood to stay abstinent from continuing education over one decade. The present analysis is based on approximately 1300 participants of the German longitudinal study "Pathways from Late Childhood to Adulthood (LifE)" as interviewed in 2002 and 2012. Logistic and poisson regressions are used to model influences of learning motivation, education, occupational status, gender and job satisfaction on the likelihood to participate in continuing education at the age of 35 to 45 and on the number of subsequent continuing education events. The influence of education can be explained above all by the intrinsic motivation for continuing education, the affective reactions to continuing education, the subjective costs, but also by the satisfaction with the occupation. In comparison to less vocational education systems and countries with less allocative transitions into employment, motivational learning barriers of people with low education in Germany should be examined more closely.

Comparing Path Dependency in Lifecourse Trajectories: Training Participation in Older Age
Presenter: Konrad Turek, Interdisciplinary Demographic Institute, Netherlands
Co-author: Kene Henkens, Interdisciplinary Demographic Institute, Netherlands
International panel surveys are increasingly popular and offer an attractive source of data for comparing countries, systems or policies. They allow to see individual life course trajectories in the macro-perspective and aggregate them into patterns and regimes. When applied to comparative analysis, longitudinal patterns of behaviours can reveal essential aspects of broader structures or systems. In this presentation, we describe a novel approach to trace individual behaviours over time and measure path dependency. Path dependency can be viewed as a tendency to continue a particular activity (state), or as a higher probability of an event (state) if it had happened before, or as an autocorrelation at the individual level. Unsurprisingly, path dependency is observed in different areas of lifecourse. The perspective we describe allows comparing the strength of the dependency between groups and countries. As an example, this study focuses on participation in training in older age. Lifelong learning (LLL) is an essential tool for public policies addressing extending working lives and decreasing inequalities within older generations. However, evidence shows that LLL policies in some countries do not contribute to expected improvements; instead they maintain or reinforce the existing disparities. A lifecourse perspective provides more insight into the determinant of participation in educational activities. Particular attention is paid to the accessibility of training for people who have not participated before (indicating the strength of barriers to entering training). The results show that among lower educated the barriers to enter training are stronger, participation is highly selective and path-dependent. Accessibility is higher in countries with more high training attendance, open training systems, more efficient cohesion policies and more old-age friendly labour markets. The analyses are based on comparative panel data for 12 countries (SHARE; population 50+), for which we use Bayesian hierarchical logit models with lagged dependent variable.

2H   PAPER SESSION: LEARNING

How Children Develop Mathematical Skills Over Time: A Latent Transition Analysis (LTA)
Presenter: Abbie Cahoon, University College Dublin, Ireland
Co-authors: Victoria Simms, Ulster University, UK; Camilla Gilmore, Loughborough University, UK
Objective: Children vary in their level of number knowledge prior to school-entry (Manolitsis et al., 2013). Understanding why some children start school more prepared to learn maths than their peers is critical, as early maths skills are among the strongest predictors of later academic achievement (Duncan et al., 2007). This study used longitudinal methods to identify the key predictors of children's maths profile and pathway membership over time.

Method: 152 parent-child dyads were involved in a 3-time point, longitudinal study to assess how children developed mathematical skills during their transition from pre-school to primary school. A total of 136 parents responded to the recently validated Pre-school Home Maths Questionnaire (PHMQ) at T1; measuring home

numeracy activities. 128 children at T1 and 118 children at T3 completed a series of one-to-one tasks that measured mathematical achievement, receptive vocabulary, domain specific skills, (e.g. ordering), and domain-general skills (e.g. working memory). Average age at T1 was 4 years (SD = 3.3 months).

Results: A latent transition analysis (LTA) was used to describe children's precise learner profiles and learning pathways over the 3-time points. An LTA was conducted on four domain-specific skills resulting in three maths profiles; low, developing and advanced maths profiles. Results revealed that five pathways describe the mathematical development of 98.4% of the population. This study considered a variety of individual level predictors, the social environment (i.e. measured by the PHMQ), domain-general skills and language. Conclusion: Overall, the individual learning pathways demonstrate a general trend towards mathematical learning gains over time. Importantly, there was no pathway that demonstrated a decrease in maths knowledge over time. There are two pathways were children move up a profile. 57 (45.2%) children develop in their maths skills between T2 and T3; the transition from pre-school and primary school. Whereas, 69 (54.8%) children remained in their profile.

Early Mother-Child Interactions and the Development of Mathematical Competencies: Can Differences Between Girls and Boys Be Explained by Different Levels of Literacy and Numeracy Stimulation?
Presenter: Loreen Beier, Otto-Friedrich-University of Bamberg, Germany
Co-author: Hans-Peter Blossfeld, Otto-Friedrich-University of Bamberg, Germany
Despite the general success in terms of education over cohorts for women (e.g. cf. Helbig 2010), at least in primary school there are advantages in mathematics or science towards boys (cf. Niklas/Scheider 2012). Nevertheless, considering mathematical competencies in preschool age, research shows inconsistent results: some find no such differences between boys and girls (cf. Kersey et al. 2018; Niklas/Schneider 2012), whereas some find small differences towards boys e.g. Jordan et al. 2006) or even slight advantages towards girls (cf. Anders et al. 2012). Nevertheless, using the NEPS newborn cohort (cf. Blossfeld et al. 2011), we find low advantages for girls at age 4.

The aim of our contribution is to figure out from a life course perspective whereby these differences occur within the family. Various studies point out early mother-child interaction as an important factor influencing children's later development (e.g. cf. Sommer/Mann 2015; Olson et al. 1984). Especially the fields of interaction 'sensitivity' and 'stimulation' are highlighted to have central influence on cognitive development and performance (e.g. cf. NICHD 1998; Pearson et al. 2011). With regard to the bioecological model of human development which states bidirectional influences between individual development and surrounding environmental context (cf. Bronfenbrenner/Morris 2006), we analyze if the different output in preschool mathematical competencies for boys and girls can be explained by a different intense of earlier sensitivity and stimulation. We find no impact of very early (6-8month), but of later (2 years) mother-child interactions on the gender gap of mathematical competencies (4 years). Despite this, mothers almost interact equal with their children with regard to gender. In conclusion, low early differences in mathematical competencies cannot be explained by gender-different mother-child interactions.

The Social Stratification of Sex Differences in Academic Achievement and Behavior Problems
Presenter: Michael Kühhirt, University of Cologne, Germany
Co-authors: Ibrahim Demirer, University of Cologne, Germany; Markus Klein, University of Strathclyde, UK
Using data from the National Longitudinal Survey of Youth (NLSY), we investigate sex differences in academic achievement and behaviour problems between the ages of 4 and 15 in the United States based on children born to NLSY women through 1981 to 2000. Biannual assessments of PIAT math and reading scores and the Behavior Problem Index reported by the mother provided data to model the individual growth of cognitive and behavioral skills over time. The contribution of our research to the literature is threefold: First, unlike many other studies, it follows children for a more extended period with up to five measurements of math, reading, and behavior. Previous studies suggest that the developmental stage and individual growth rates are crucial factors in shaping gender differences in outcomes. Second, we complement existing research on individual variation in skill trajectories by investigating systematic sex differences between social groups. Considering the intersection with race, maternal education, and family structure (i.e., single parent vs two-parent families) in shaping sex differences in children's development has the potential to provide further insights into how these differences originate. Third, our analysis corrects for selective loss to follow-up which is a potential source of bias in longitudinal studies of sex differences in developmental outcomes if children's sex affects the likelihood of remaining in the study. Preliminary results show a stable disadvantage for boys in terms of behavioral problems and a declining disadvantage in reading scores. An initial disadvantage in math scores for boys turns into an increasing advantage over the observed age range. Results also indicate that sex differences are more pronounced for socially disadvantaged groups (i.e., Non-white children, children of mothers without college degree, and children of single mothers) mostly driven by a larger variability of male outcomes between groups.

Gendered Computer Usage and Academic Performance Across Three waves of Growing Up in Ireland
Presenter: Desmond O'Mahony, Economic and Social Research Institute, Ireland
Increased use of computers at home and school is current Irish government policy (Digital Strategy for Schools, 2017). Growth of computer/mobile device ownership, and increasingly available broadband connections has resulted in a greater number of Irish children using computers and accessing the internet from a young age (Eurostat, 2005). This paper conducts a longitudinal exploration of the link between children's home computer use and their academic performance in the areas of reading and mathematics. The analysis also models gendered computer usage patterns around social media and computer gaming and explores differential effects of technology use on Irish children. Questionnaire and time use data from the Child Cohort of the Growing Up in Ireland Survey at nine-years (n = 8,568), thirteen years (n = 7,525), and 17 years (n = 6,450) are used for this study (ESRI, 2010). Latent Growth Curve (LGC) modelling is used to explore the longitudinal trends in computer usage and academic performance. Gender by usage type interaction variables capture differential usage patterns for boys and girls in the sample. Some initial findings related to mathematics performances are presented. The latent growth models show that relative to Moderate Computer Users, both High Intensity (β = -.14, p < .001) and Non-Computer Users (β = -.12, p<.01) show negative developmental academic trajectories in mathematics. This effect occurs across both sexes explaining 5% of the variance in Mathematics development between the ages of 9 and 15 years. Early adoption of social media for boys and girls was associated with poorer initial (β = -0.2, p < .01) and longitudinal (β = -0.11, p < .001) mathematics performances. The initial analyses will be extended with gender by usage type interaction variables which will highlight differential effects of gendered usage patterns.

2I   PAPER SESSION: FERTILITY AND BIRTH

Maternal Qualification and Child Birth-Weight: Findings from the Office for National Statistic's Longitudinal Study
Presenter: Jitka Pikhartova, University College London, UK
Co-authors: Rachel Stuchbury, Nicola Shelton, University College London, UK
Background: Numerous studies have found that socioeconomic disadvantage is associated with worse health outcomes including low birthweight of a child. Low birthweight was consequently shown as a possible risk factor for later health status. We aim to look at the association between maternal qualification and birth weight in large UK data, considering also contextual effects such as gender of child, parity, age of mother, marital status, ethnicity, household size and ownership, and household arrangements.

Methods: Using England and Wales Office for National Statistics Longitudinal Study (ONS LS; study using census and life events data), we used data from almost 119,000 children born between 2001 and 2016 to ONS LS sample members. Mothers' qualification was divided into 5 levels (from no qualification (=level 1, reference category) to the degree (level 4+); and special category if qualification achieved abroad).

Results: In our preliminary results, using full-case analysis from two cohorts (those born 2001-2010, and 2011-2016), crude analysis confirmed significant association between the level of achieved qualification and birthweight (extra 90g and 170g of birthweight for level 2 and level 4+, respectively, compared to level 1 in 2001-2010, and 35g and 125g in 2011-2016). after adjustment for demographic and other socioeconomic characteristics, the association remained strongly significant (extra 60g and 160g of birthweight in 2001-2010, and 20g and 120g in 2011-2016). the birthweights quoted here are rounded. the results for category "qualification achieved abroad" remained non-significant throughout the whole analysis.

Conclusions: We can conclude that our preliminary findings support previous findings using different population samples. children of those mothers with no or low qualification are more vulnerable to be born with lower birthweight leading potentially into health disadvantages in their later life.

The Persistence of Developmental Challenges Among Infants Born Preterm: Results from the 'All Our Families' Cohort
Presenter: Suzanne Tough, University of Calgary, Canada
Co-authors: Jessica-Lynn Walsh, Erin Hetherington, Muci Wu, University of Calgary, Canada; Sheila McDonald, Alberta Health Services, Canada
Background: Infants born preterm (<37 weeks' gestation) are at increased risk for longstanding physical health concerns, such as blindness, deafness and respiratory challenges. The risk of challenges increases with decreasing gestational age at birth. Importantly, the majority of preterm infants are born late preterm (between 34.0-36.6 weeks' gestation) and follow up on long term outcomes is negligible. The objective of this analysis was to describe child developmental outcomes at age 3 (ASQ-3) among preterm infants cared for under a universal health care system.

Methods: Participants included 1,994 children from the All Our Families study, a longitudinal prospective pregnancy cohort, in Calgary, Alberta, Canada. The sample is representative of the pregnant population in an urban Canadian centre. Bivariate analyses determined characteristics of preterm infants and the relationship to their development at age 3.

Results: The mean age of mothers was 34.4 years, 95% were married, 78% had a household income exceeding the median of $80,000, and 45% of women worked 21 hours per week or more. The rate of preterm birth was 6.5%, of which 79% were born late preterm. There was no difference between preterm and term infants on vision, hearing and chronic conditions, although infants were more likely to have been diagnosed with asthma (14% vs 3%). Based on the ASQ-3, 21.9 % of preterm vs. 10% of term infants were categorized with delayed development at age 3. Preterm infants were more likely to experience delays in communication, gross motor, fine motor, problem solving, and personal-social development compared to term born peers.

Conclusion: Despite access to universal health care, the results suggest an independent influence of preterm birth on development. Strategies to reduce the risk of preterm birth, and to optimize early interventions that support all preterm infants may infer positive developmental benefits to children.

Association Between Gestational Age and Autism Spectrum Disorder and Social Communication Difficulties in Childhood: A Population-Based Study
Presenter: Mariko Hosozawa, University College London, UK
Co-authors: Noriko Cable, Yvonne Kelly, Amanda Sacker, University College London, UK
Introduction: Little is known about the risk of autism spectrum disorder (ASD) and social communication difficulties across gestational age. Our study aims to examine the association between gestational age, in particular early term (gestation 37-38 weeks) and moderate-to-late preterm (MLP, 32-36 weeks), and the diagnosis of ASD and social communication difficulties at age 7 and 11, using a population based birth cohort.

Methods: 15,514 children from the UK Millennium Cohort Study with valid answer for ASD diagnosis were analysed. Children were grouped by their gestational age (full-term: 39-41 weeks, early term: 37-38 weeks, MLP: 32-36 weeks, very preterm: <32 weeks). Logistic regression was used to determine the association between gestational groups and diagnosis of ASD. Multivariable regression was used to examine the group difference in relation to the children's social communication difficulties indicated by the subscales of Strength and Difficulties Questionnaire reported by their parents and teachers at age 7 and 11. Covariates were included in each model for adjustment.

Results: The risk of having a diagnosis of ASD increased linearly as gestational age of the group decreased (adjusted Odds Ratio [aOR] early term =1.44, 1.10 to 1.89; aOR MLP =1.46, 1.05 to 2.03; aOR very preterm =2.74, 1.38 to 5.47). Children's social communication difficulties at age 7 and 11 increased with decreasing gestational age. In the final model, both the early term and the MLP children had significantly higher levels of social communication difficulties at age 7 (adjusted difference 0.41; 0.49, respectively) and at age 11 (adjusted difference 0.44; 0.55, respectively) compared to full-term born children.

Conclusion: Non-full-term birth may pose a risk on the child's social communication development. Further clarification of the mechanism underlying this association is warranted.

Heterogeneous Causal Effects of Early Fertility Timing on Mid-Life Mental Health: Evidence from the 1970 British Cohort Study
Presenter: Sara Kalucza, University of Queensland, Australia
Co-authors: Martin O'Flaherty, University of Queensland, Australia; Joshua Bon, Queensland University of Technology
A large literature documents detrimental consequences of early entry into parenthood, for the future life chances of parents and children. However, almost all studies assume that the effects under study are homogeneous, or at best acknowledge the potential for heterogeneity before proceeding to estimate average effects. The assumption of effect homogeneity is useful in simplifying the estimation problem, but is unlikely to hold in most practical applications in the social sciences – individuals differ in a great many ways, and it is therefore unrealistic to assume that they should all respond in the same way to a given event or intervention. Small average effects fail to identify segments of the population where detrimental effects are large, while hiding segments of the population where early parenthood may be unproblematic. Understanding how the responses to alternative fertility timings differ within a population is imperative when planning prevention and intervention efforts, as it helps us better understand when and for whom early parenthood is an issue. Diaz and Fiel's (2016) recent work provides evidence that the effects of teen pregnancy are heterogeneous with respect to socio-economic outcomes in early adulthood, however no previous study has investigated heterogeneous effects of fertility timing on mental health outcomes. In

this paper we use Bayesian Additive Regression Trees (BART) to model individual¬-level causal effects of early- and late- first births on mid-life mental health outcomes, drawing on data from the 1970 British Cohort Study. As a method for estimating causal effects from observational data, BART has a number of compelling advantages over commonly used competing methods, including notably for our purposes the ability to estimate the full sample distribution of the conditional average treatment effects (CATE).

PARALLEL SESSION 3

3A   SYMPOSIUM

Mechanisms Underpinning Child Development: Early Findings from the SEED Programme
Convenor/Chair: James Law, Newcastle University, UK
Marked differences in early child development (specifically oral language skills and socio-emotional development) have opened up before compulsory schooling begins. These manifest as social inequalities which, for many, persist through childhood and into work. Although this is now widely recognised the mechanisms through which this happens are less well understood. These issues will be discussed in relation to a number of analyses carried out as part of the work of the the SEED program. SEED (Social InEquality and its Effects on child Development: A study of birth cohorts in the UK, Germany and the Netherlands) is funded by EU's Norface (New Opportunities for Research Funding Agency Co-operation in Europe) Programmen. In this symposium members of the SEED team we present our most recent findings we look at the role of parent child interaction in the early years (Huang). Although the pattern of inequalities is consistent irrespective of country (Wareham), the mechanisms can vary considerably from measure to measure (Law) over time the changing trajectories of behaviour and language interact in predicting academic outcomes across middle childhood (Tamayo), and finally, we turn to the specific role played by hearing difficulties in compounding pattern of academic behaviour (Labuschagne). The results will be discussed in terms of the characteristics of the four cohorts used in the analyses.

Toddler's Language and Social Competence: The Impact of Socioeconomic Status and Parenting Behavior
Presenter: Wei Huang, Leibniz-Institute for Educational Trajectories, Germany
Co-authors: Manja Attig, Jutta von Maurice, Sabine Weinert, Leibniz-Institute for Educational Trajectories, Germany
The present study aimed to investigate mechanisms underlying the associations between social inequality and toddler's language and social competence by including supportive as well as stimulating parenting behavior as mediators in a structural equation model controlling for various covariates.

Method: 2,200 mother-child dyads from the Newborn Cohort of the German National Educational Panel Study (NEPS) were included in the study. The basic model considered SES (i.e. maternal education years and family net equivalent income) at 7 months (as predictors) and both the supportive and stimulating parenting behaviour observed in mother-child interactions at 26 months (as mediators), and child's language (CDI-like German language check-list) at 26 months as well as child's social competence (SDQ) at 38 months (as child outcomes). Further, we controlled for mothers' and child's age, child's temperament (negative affectivity), gender, and migration background. In an additional step, we modelled early language as an additional mediator of later social competence.

Results: Findings indicated that maternal education significantly predicted toddler's language and social competence even when accounting for all covariates, whereas family net equivalent income did not have any effect on child outcomes. Maternal supportive parenting behaviour mediated the effect of maternal education on toddlers' prosocial behaviour. However, it did not mediate the impact of maternal education on child's language that was partially mediated by mothers' stimulating behaviour. The additional model substantiated child language as a further mediator of the impact of maternal education on toddlers' peer relationship problems and prosocial behaviour. With respect to covariates, child's gender, migration background, and mother's age predicted child language, and child gender and temperament were correlated with child's social competence.

Conclusion: The findings identified effects of social inequality on toddler's language and social competence in Germany and demonstrated the mediating roles of specific facets of parenting behavior between maternal education and child outcomes.

Maternal Education, Inequality, and Children's Vocabulary Outcomes from Three European Longitudinal Studies
Presenter: Helen Wareham, Newcastle University, UK
Co-authors: James Law, Wei Huang, L. Labuschagne, Newcastle University, UK
Child development and the attainment of cognitive skills and communication in the early years of life are vital for later life outcomes, with an individual's lack of communication skills having the potential to affect employability, retention and progression within the workforce (Law, Charlton, and Asmussen 2017). Despite a number of policies and interventions, at both national and international level, there continues to be inequality in educational outcomes and life outcomes within Western countries between people of different socioeconomic status (Reay 2006; Hills 2010). Socio-economic factors, in particular parents' education and income, have been the most enduring and strongest predictors for children's cognitive, social and educational outcomes (Hartas 2012; Reilly et al. 2010). The aim of this paper was to investigate the vocabulary scores of children aged 5-6 by maternal education level. The measure and comparison of parental educational attainment across different education systems and countries is problematic. Comparative Analysis of Social Mobility in Industrial Nations' (CASMIN) is a classification system of education which enables cross-country comparisons of education levels (Brauns, Scherer, and Steinmann 2003). This system was applied to maternal education data in three European longitudinal studies; The National Educational Panel Study (Germany), The Millennium Cohort Study (UK), and Generation R (The Netherlands). All three studies had children's vocabulary scores at either age 5 or 6 years old. Across all three cohorts we observed a similar and significant trend. Children whose mothers have the lowest level of education when the child is born having the lowest vocabulary scores on average and vice versa. The findings of this study contribute to the wider body of evidence, showing that there continues to be inequalities in children's vocabulary outcomes at a young age, and that socio-economic factors such as maternal education are a contributing factor to this.

The Role of Behaviour in Mediating the Relationship Between Home Learning Environment/Parental Mental Health and Structural and Pragmatic Language Outcomes in Middle Childhood
Presenter: James Law, Newcastle University, UK
Co-authors: Robert Rush, Nathalie Tamayo Martinez, Cristina McKean, Newcastle University, UK
While it is commonly reported that early experiences are associated with language language and cognitive development we know less about the relationship of specific aspect of experience and individual outcomes. In this paper we test the relationship between home learning environment and parental mental health in the child's first year of life and two specific communication outcomes, namely structural and pragmatic language development, in middle childhood. Emotional and behavioural difficulties are commonly linked to communication difficulties may well play a role in this process but to date this has not been explicitly tested as a mediational relationship this process.

Methods: The data used in the analyses were the 5000 children in the Growing Up in Scotland population birth cohort born in 2003. Measures of HLE and parental mental health were taken in sweep 1 (1 year) and pragmatic (CCC2) and structural language (WIAT II) were taken at sweep 8 (10 years). SDQ at 5 years was included in the analyses as the mediator. Covariates were age, gender, birthweight, non-verbal IQ and the educational level of the main respondent.

Results: Parental mental was associated with pragmatic language but not structural language and the reverse was true of three of the four aspects of HLE that we identified. The SDQ substantively mediates the relationship of parental mental health to pragmatics. The picture for different aspects of the HLE differed depending on the characteristic and on the outcomes in question but played less of a role in predicting pragmatics. Interestingly book reading only predicted expressive language.

Conclusions: Clearly these data point to the need for a developmental perspective linking data sources from early "health" experiences into school highlighting those most "at risk" of subsequent difficulties. Behavioural interventions early in school clearly have the potential to feed into not only behaviour but the child's later skills and given the salience of communication skills for classroom performance and later employability this is an important consideration.

The Relationship Between Trajectories of Behavior, Emotional and Attention Problems Across Childhood and Primary School Attainment

Presenter: Nathalie Tamayo, Erasmus University Medical Centre, Netherlands
Co-authors: Henning Tiemeier, Frank Verhulst, Jan van der Ende, Pauline Jansen, Erasmus University Medical Centre, Netherlands

Mental health problems are common from early age onwards. Problems are measured most widely in three domains: behavioural problems that cover rule breaking and aggressive behavior, emotional problems that cover anxiety, depressive and somatic symptoms, and attention problems. There is ample evidence that link these problems to a worse educational attainment, particularly behavioral problems and attention, and to a slightly lesser extent, emotional problems. But there are important gaps in the current knowledge. First, the associations for internalizing and externalizing problems can be explained by attention problems, that are often comorbid. Another gap is that several studies had a cross-sectional design, while other studies with a longitudinal design did not take into account the child's current emotional or behavioral problems at the school attainment assessment. As a result, it remains unclear whether earlier problems are a predictor of poor school attainment or whether school attainment is influenced by current problems. Also, there is some evidence that even mild problems predict a worse academic attainment, but this point requires further investigation. With the current study we want to assess: 1) if childhood behavioural and emotional problems from a very early age are related to academic attainment at the end of primary education, above and beyond the trajectory of the symptoms and current symptomatology; 2) if the trajectories of emotional, behavioral and attention problems across childhood independently predict academic attainment; 3) how current problems relate to the school attainment, compared to problems that occurred very early in life.

Methods: This study is embedded in Generation R, a population-based prospective cohort that enrolled 9778 pregnant women living in Rotterdam between April 2002 and January 2006. In total, 7.218 families kept on participating in the preschool period, and 6.804 in the school period. Information has been collected through questionnaires and linkage to national databases. School attainment is determined by the administration of the CITO test at the end of primary education. This test is widely used in schools in the Netherlands as a guide for choosing the appropriate level of secondary education. The exposure variables are the repeated measurements of emotional, behavioral and attention problems measured with the Child Behavior Checklist since age 1 ½ years. Covariates are selected depending on literature review and clinical experience. Individual trajectories of emotional, behavioral and attention problems will be created and used to predict academic attainment.

The Association of Slight-Mild Hearing Loss with Behavior and School Performance in Children

Presenter: Lisanne J.E. Labuschagne, The Generation R Study Group, Erasmus University Medical Center, Netherlands
Co-authors: Carlijn M.P. le Clercq, Pauline W. Jansen, Marie-Christine J.P. Franken, Robert J. Baatenburg de Jong, Maartje P.C.M. Luijk, Marc P. van der Schroeff, The Generation R Study Group, Erasmus University Medical Center, Netherlands

Children with severe hearing loss are known to have more behavioural problems and may perform poorer at school. In order to examine the relevance of slight-mild hearing loss, we studied the association of slight-mild hearing loss with behavioral problems and school performance.

Methods: In a population-based cohort in the Netherlands, audiometric evaluation was performed at age 9-11 years using pure-tone audiometry and speech-in-noise testing. Child behavior was rated by the primary caregiver using the Child Behavior Checklist at age 9 to 11 (n = 4471). School performance was measured with a standardized test at age 12 (n = 2399). Results: Associations of hearing thresholds with behavior differed between boys and girls. Among boys, higher pure-tone hearing thresholds at low frequencies were associated with higher total, social, and attention problem scores (e.g. total problems: standardized β 0.05, 95% CI 0.01 to 0.09 for the better ear). Higher speech reception thresholds were associated with higher attention problem scores among girls (standardized β 0.06, 95% CI 0.00 to 0.11). Higher speech reception thresholds were associated with poorer school performance scores, for both boys and girls (standardized β - 0.09, 95% CI -0.14 to -0.03).

Conclusions: Higher hearing thresholds at pure-tone audiometry and speech-in-noise testing were associated with more behavioural problems and poorer school performance. This supports the relevance of slight-mild hearing loss in school-age children.

3B   SYMPOSIUM

Polygenic Scores in Health and Social Research: Theory, Methodology, Practice

Convenors/Chairs: Tim Morris, University of Bristol, UK; Darya Gaysina, University of Sussex, UK

Birth cohorts and population surveys are increasingly collecting genetic data on their participants, facilitating opportunities for a deeper understanding of how complex socio-biological processes operate and health and social outcomes may be shaped. The growth of Genome-Wide Association Studies (GWAS) which implicate genetic variants associated with traits have revealed two consistent findings: that complex social and health traits are associated with very many genetic variants; and that the associations with these individual variants are often tiny, typically accounting for less than 0.01% of variation in a given trait. The combination of these tiny effects into a single polygenic (literally "many" "genes") score can however provide a powerful measure of genetic influences for use in contemporary social and health research. This interdisciplinary symposium will provide an accessible introduction to the use of polygenic scores in health and social research. Three papers will focus on the theory, methodological constraints, and practical use of polygenic scores, providing an entry level demonstration of the opportunities and challenges for biosocial research. The session will be concluded with an open-floor question and answer session with three speakers, which aims to facilitate further discussion between social and biological scientists on the use of polygenic scores and ways of integrating this approach in health and social research.

The Polygenic Scores Approach in Interdisciplinary Health and Social Research

Presenter: Darya Gaysina, University of Sussex, UK

Many health and social traits have complex aetiology (i.e, are complex traits), being influenced by a broad range of genetic and environmental factors which can combine and interact. Studies using genetically informative designs (e.g., twin, adoption) have shown that there is substantial contribution of genetic factors to individual differences in all complex traits. Modern DNA technologies allow analysing hundreds of thousands of DNA variants across the whole genome that can differ between individuals (i.e., polymorphic genetic variants) and testing for associations of these polymorphic DNA variants with specific traits. This approach has been used in genome wide association studies (GWAS) of various complex traits, from educational attainment to schizophrenia. These studies have demonstrated that, in general, complex traits are influenced by a large number of individual polymorphic DNA variants, and that each of them has a very small effect on susceptibility for complex traits (with few exceptions, e.g., a major genetic risk factor for dementia). However, these tiny effects of multiple DNA variants can be combined together into polygenic scores. The polygenic scores approach is used to derive measures of cumulative genetic influences, with much larger effects, on specific traits. Recent efforts have begun to demonstrate the utility of polygenic scores in identifying groups of people with higher or lower genetic probabilistic susceptibility to complex disorders. In future, these advances may lead to more effective prevention and intervention strategies to improve life outcomes for everyone.

Methodological Challenges with Polygenic Scores: Disentangling Genes from Environment

Presenter: Tim Morris, University of Bristol, UK

The increasing availability, power and ease of use of polygenic scores offers new opportunities for causal inference and a more holistic understanding of health and social processes. Despite this promise, there are a number of methodological constraints to the construction and application of polygenic scores which increases the potential for them to be inadvertently misused in social and health research. All genetic data (and therefore polygenic scores) capture information on several 'hidden' non-genetic processes such as ancestral migration patterns, socially assortative mating, and family environment. Apparent genetic associations may reflect these hidden processes, which where misunderstood could bias estimates, confuse interpretations, and lead to misleading conclusions. It is therefore important that these mechanisms are fully understood by social and health researchers who wish to exploit genetic data. This paper introduces a range of potential biasing mechanisms and demonstrates how they may lead to spurious genetic associations with (and amongst) health and social outcomes. It also outlines methodological approaches that can be used to test the presence of these biases and the strength with which they impact estimates. Using data from mother-father-offspring trios in a UK birth cohort study, the Avon Longitudinal Study of Parents and Children (ALSPAC), empirical examples of these biasing mechanisms are provided in an analysis of educational attainment. Implications for future biosocial research and limitations to both association and prediction studies are discussed.

Using Polygenic Scores to Investigate the Causal Role of Common Health Conditions in Childhood and Adolescence on Educational Attainment
Presenter: Amanda Hughes, University of Bristol, UK
Health in childhood is patterned by family socioeconomic background, but also influences later-life socioeconomic outcomes. This suggests a role for childhood health in the intergenerational transmission of socioeconomic (dis)advantage, but also presents challenges for identifying causal processes. Causal effects are notoriously difficult to estimate from observational data, but the random allocation of genetic variants from parents to children simulates a natural experiment that can be exploited in biosocial research. Polygenic scores can be used as measures with which to instrument health-related exposures, a technique not vulnerable to reverse causality or classical sources of confounding (endogeneity). Using data from the Avon Longitudinal Study of Parents and Children (ALSPAC), this paper investigates the impact of childhood health on educational attainment. We consider mental and behavioural health (depressive or internalizing symptoms, attention-deficit hyperactivity disorder (ADHD) symptoms, autism spectrum disorder) and physical health (asthma, body mass index, migraines). We investigate associations between health at ages 10-11 and 13-14 with examination results at age 16, the end of compulsory education for this cohort. We also explore the mediating role of absenteeism from school. Polygenic risk scores for these conditions are then used as instrumental variables in a Mendelian Randomization framework to estimate causal effects. Two-stage least squares models support an impact of health conditions on educational attainment, but with variation in sizes of effects. For example, genetically-instrumented BMI and ADHD symptoms both significantly ($p<0.05$) predicted lower average GCSE point score, but the effect size per S.D. increase in ADHD symptoms was larger. These results support common child health conditions as causally relevant to educational attainment, with differential impacts between conditions.

3C SYMPOSIUM

Combining and Comparing Different Types of Data: Experiences from the 'Transitions from Education to Employment' Survey
Convenor/Chair: Andrés Gomensoro, University of Bern, Switzerland
The combination, linking and comparison of different types of data has particularly spread in life-course studies. This symposium aims to share experiences and results of combinations of quantitative or qualitative data with the longitudinal "Transitions from Education to Employment" (TREE) survey. TREE is a Swiss nationwide longitudinal panel study that follows two cohorts of compulsory school leavers throughout their transitions from education to employment and middle adulthood. Those contributions use the first cohort survey that is based on the Swiss PISA 2000 sample, and that covered 14-year period from age 15 to 29. This symposium brings together three recent uses of TREE combined with different types of data. The first paper investigates ethnic premia and penalties at the transition to upper secondary education with TREE and DAB datasets. The second paper uses a matching procedure with administrative data to study the selection mechanisms into vocational education and training and related longitudinal effects on the labour market. The third paper uses a mixed method design (qualitative and quantitative) to study educational inequalities between ethnic groups. Methodological challenges and contributions as well as specific findings of each contribution will be discussed.

Ethnic Choice Effects at the Transition to Upper Secondary Education
Presenter: David Glauser, University of Bern, Switzerland
Co-author: Rolf Becker, University of Bern, Switzerland
Disadvantages of specific migrant groups in stratified educational systems are undisputed. However, while ethnic penalties are observed in many countries at different educational levels (Rözer and Werfhorst 2017), ethnic premia are reported for the otherwise low-privileged migrant groups as well (Salikutluk 2016; Dollmann 2017). In the Swiss context, ethnic penalties and premia are observed for youths, whose parents were born in the Balkans, Turkey or Portugal (PorTuBal, see Tjaden and Scharenberg 2017). This paper examines 1) changes regarding educational (dis)advantages of PorTuBal-youths at lower and upper secondary level for two school-leaver cohorts (2000, 2013). In addition, the explanation of ethnic premia for this migration group at upper secondary level is of interest. As an extension to the current state of research, in this article immigrant optimism is operationalized as the difference between the highest socio-economic status of parents and the desired profession of the child. In doing so, the motivation for social advancement is captured as relative distance of ambition and social class (Keller and Zavalloni 1964). OLS is used to estimate and graphically represent differences in aspirations between Swiss and PorTuBal-youths conditional on social origin. Analyses are based on data from TREE (German-speaking Switzerland) and DAB (Determinanten der Ausbildungswahl und der Berufsbildungschancen) panel studies. Regarding changes in educational attainment, we find evidence that integration of PorTuBal-youths has increased and over-representation in low demanding tracks has fallen sharply. However, young PorTuBal- women are more successful than their male counterparts. In case of aspirations, the theoretically expected differences become apparent.

Differences in the motivation for social advancement are particularly pronounced at the lower tail of the socio-economic spectrum regardless of the school type attended. Finally, results of the logistic regressions reveal that ethnic premia in attending baccalaureate schools are mediated by immigrant optimism. However, only parts of the premia are explained by aspirations.

Rationing VET in the Knowledge Society? How Swiss Youths Get Selected into VET Programmes with Poor Schooling and What It Does to Their Careers
Presenter: Thomas Meyer, University of Bern, Switzerland
Co-author: Stefan Sacchi, University of Bern, Switzerland
Swiss vocational education and training (VET) at upper secondary level is characterised by strong vertical stratification. Academically demanding programmes with high potential regarding further education and labour market careers contrast with academically modest programmes of restricted potential. To date, there is little research available on the selection mechanisms at work when youths strive to access this stratified system, as little as on the effects of these VET programmes regarding the subsequent education and labour market careers. Adopting a theoretical perspective of rationing (education) and drawing on the Swiss longitudinal TREE data set, this contribution first models VET entry selection depending on the volume of its academic programme. In a second step and by means of a matching procedure, we estimate the effects of these programmes on the subsequent education and labour market careers. Our findings highlight that VET entry is shaped by strong institutional channelling, a relatively weak influence of student achievement, but a strong impact of social origin. The analysis of effects on subsequent careers shows that entrants of VET with poorly equipped academic programmes, disregarding their skills and achievement and all else being equal, suffer substantially reduced odds to complete tertiary education, as well as significantly restricted opportunities on the labour market, particularly in terms of occupational status and income.

Studying Educational Pathways Inequalities: Between Trajectories and Narrations
Presenter: Andrés Gomensoro, University of Bern, Switzerland
In Switzerland, educational attainment and trajectories differ greatly across social origin and between natives and different ethnic groups. This work explores potentialities of combining quantitative and qualitative data in the study of educational trajectories inequalities by migrant status and ethnic origin. We intend to explain how we link and combine two types of unconnected data in a mixed method design in order to observe both sides of the same coin, that is the extent of educational pathways inequalities and the mechanisms that hide behind statistical explanations. First, we draw on the Swiss youth panel survey TREE. We construct a typology of educational pathways (by sequence analysis) to study the extent of inequalities between ethnic groups. Second, we situate 50 cases of children of Albanian-speaker migrants from former-Yugoslavia in the quantitative typology to identify mechanisms, resources and constraints at play. The results illustrate the contributions of such linking of data. Quantitative analysis shows that second generation from former-Yugoslavia mainly undertake problematic vocational education and training (VET) trajectories marked by transitional solutions, leading to non-certification and/or to unstable insertion into the labour market. Meanwhile, qualitative analysis highlights the role played by early institutional selection at lower secondary level, of limited school, social, economic and legal status capitals on the odds of undertaking a problematic VET pathway. However, studying qualitative cases that attained the general tertiary education illustrates configurations that make it possible to overcome sociological constrains.

3D   SYMPOSIUM

Private Schools in England in the 20th Century
Convenor/Chair: Morag Henderson, UCL Institute of Education, UK
This symposium presents work from an ESRC funded project examining the participation in and the associated outcomes of private schooling in England. Private schools are an ongoing issue for social policy makers concerned about social mobility, as witnessed by debates surrounding whether the 'public benefit' of private schools is sufficient to merit charitable status. To understand the link between private schooling and social mobility, it is necessary to learn the extent to which a private schooling is associated with subsequent labour market and life successes, as well as how far attendance is linked to family income (and whether the strength of this link is changing). Our findings will provide the evidence about private school participation and effects, for the generation going through schooling in the first part of this century.

The Income and Wealth Concentration of Private School Attendance in Britain
Presenter: Golo Henseke, UCL Institute of Education, UK
Co-authors: Jake Anders, Francis Green, Morag Henderson, UCL Institute of Education, UK
This paper studies whether there has been a change in recent decades in the income and wealth concentration of the children who attend Britain's private schools. We use repeated cross-sectional data from the Family Resources Survey and the Household Below Average Income programme. Unlike earlier studies, we model the association of permanent income and wealth with participation; and we distinguish families according to whether they can/cannot afford private schooling from their current income. We find that a £100 increase in permanent weekly income is associated with half a percentage point higher likelihood of private school enrolment. Participation remains especially skewed at the very top of the income distribution with no change since the 1990s. Bursaries and scholarships have neither expanded relative to fees, nor become more directed to low income families. Taken together, the findings reject claims that the sector has become more socially fluid in recent decades.

Determinants of Private School Participation: All About the Money?
Presenter: Jake Anders, UCL Institute of Education, UK
Co-authors: Francis Green, Morag Henderson, Golo Henseke, UCL Institute of Education, UK
For those who grew up in Britain in the latter half of the 20th century, there is known to be a strong association between social class or family income and attending a private school. However, increasing school fees in the private sector and promotion of school choice in the state sector potentially have implications for changing predictors of participation in private schooling. In this paper, through analysis of rich, longitudinal dataset from a recent, representative birth cohort study, we provide new evidence on the determinants of demand for private schooling. Given the high and rising fees required to send a child to private school, one might think that the decision is entirely connected with financial resources. However, while these remain an important factor, we argue that other determinants are also important. In particular, we highlight the importance of parental values and geographical proximity to high-quality state school alternatives, finding that higher levels of parental traditional values and increased travel time to 'Outstanding' state schools both increase demand for private schooling.

Private Schooling, Subject Choice and Upper Secondary Academic Attainment in England
Presenter: Morag Henderson, UCL Institute of Education, UK
Co-authors: Jake Anders, Francis Green, Golo Henseke, UCL Institute of Education, UK
With approximately three times the resources per pupil in private compared with state schools, Britain's private sector presents an interesting case of what could be expected from schools that are extremely well resourced. This paper studies the links between private schooling and educational performance in upper secondary school, as measured through their performance in 'A level', the main school leaving assessment which determines access to universities. Using an English longitudinal study, we find evidence that, compared with otherwise observably similar state school students in upper secondary education and controlling for prior attainment, those at private school study more 'facilitating' subjects, which are known to be favoured by high-status universities; they are placed 8 percentage points higher in the A level rankings (this could be equivalent to the difference between a student with AAB to a student with AAA) and 11 percentage points higher in the rankings for 'facilitating' A levels (this could be equivalent to the difference between a student with ABB to a student with AAA). We find evidence of a private school advantage for participating in undergraduate study, net of socioeconomic status, subjects selected and number of A levels but there is no evidence of a private school advantage for attending an elite university, controlling for the same characteristics. Taken together with earlier studies at primary and lower secondary education levels, our findings mean that private schooling in England is associated with modest but cumulative advantages of education.

Private Benefits? External Benefits? Outcomes of Private Schooling in 21st Century Britain
Presenter: Francis Green, UCL Institute of Education, UK
Co-authors: Jake Anders, Morag Henderson, Golo Henseke, UCL Institute of Education, UK
Recent policy discourse surrounding Britain's unusually well-resourced private schools, surrounds their charitable status and their relationship with low social mobility, but informative evidence is scarce. We present estimates of the extent to which private and external benefits at age 25 are associated with attendance at private school in England in the 21st century. We find a weekly wage premium of 17 percent, and a 12 percentage point lower chance of downward social mobility. By contrast, private schooling is not significantly associated with participation in local voluntary groups, unpaid voluntary work, charitable giving or interpersonal trust. This finding casts doubt on claims that private schooling delivers 'public benefit' in this way.

3E   PAPER SESSION: PREDICTING EDUCATIONAL ATTAINMENT

Stratification and Gender Differences in Germany and Britain: A Comparison

Presenter: Marie Wohlbrandt, University of Potsdam, Germany

Gender differences in educational attainment are a persistent but also a changing problem over time in most of the industrialised nations. While half a century ago men were regarded as the winners of the education system, today more and more women are achieving higher educational qualifications. Often, women have not only been able to catch up with men, but in some cases also overtake them. Men, especially from lower social classes, can in some ways even be seen as losers in the educational system. Following the meritocratic principle, personal factors like gender, religiosity, sexual orientation, or social origin must not be linked to educational attainment (Hadjar, 2008; Solga, 2008). This study is based on the assumption of a structural discrimination in strongly stratified education systems. It is well known that a high degree of stratification and in particular an early selection of the students on different secondary school types has a reinforcing effect on inequalities (Erikson, 2013; Hadjar & Berger, 2011; Horn, 2009; Shavit & Blossfeld, 1993). This study compares educational systems and gender inequalities by using data from two longitudinal surveys, the German LifE-study and the British BCS70. While in Germany there is a high stratified tripartite secondary school system with a very early selection at age 10, the education system of England and Wales is a mainly comprehensive one with a lower degree of stratification at the lower secondary level. It will be examined how school types affect gender differences in the achievement of higher educational qualifications. There is evidence that the British comprehensive school system causes lower inequalities between men and women. Additionally, it will be shown that – in both Germany and Britain – other factors also have an impact on educational attainment, with significant differences according to gender.

What Role for the 'Long Arm of Childhood' in Social Gradients? An International Comparison of High-Income Contexts

Presenter: Steven Haas, Pennsylvania State University, USA
Co-authors: Zhangjun Zhou, Pennsylvania State University, USA; Katsuya Oi, Northern Arizona University, USA

Social gradients in health have been a focus of research for decades. Two important lines of social gradient research have examined 1) international variation in their magnitude and 2) their life course/developmental antecedents. The present study brings these two strands together to explore the developmental origins of social gradients. We leverage data spanning 14 high–income contexts from the Health and Retirement Study and its sisters in Europe. We find that early–life health and SES are important determinants of educational attainment and are subsequently ubiquitous determinants of educational gradients in multi-morbidity and functional limitation across high–income contexts. However, the relative contribution of early–life factors to gradients varies substantially across contexts. The results suggest that research on social gradients, and population health broadly, would benefit from the unique insights available from a conceptual and empirical approach that integrates comparative and life course perspectives. Social gradients in health have been a focus of research for decades. Two important lines of social gradient research have examined 1) international variation in their magnitude and 2) their life course/developmental antecedents. The present study brings these two strands together to explore the developmental origins of social gradients. We leverage data spanning 14 high–income contexts from the Health and Retirement Study and its sisters in Europe. We find that early–life health and SES are important determinants of educational attainment and are subsequently ubiquitous determinants of educational gradients in multi-morbidity and functional limitation across high–income contexts. However, the relative contribution of early–life factors to gradients varies substantially across contexts. The results suggest that research on social gradients, and population health broadly, would benefit from the unique insights available from a conceptual and empirical approach that integrates comparative and life course perspectives.

Adolescent Health Problems and Educational Mobility

Presenter: Janne Mikkonen, University of Helsinki, Finland
Co-authors: Hanna Remes, Heta Moustgaard, Pekka Martikainen, University of Helsinki, Finland

Separate lines of research have documented gradients in childhood health by parental education, intergenerational continuities in educational attainment, and impaired educational outcomes among children with health problems. As suggested by these results, health could play a complicated role in intergenerational educational mobility, but the present study is among the very few to examine this question with contemporary longitudinal data. We used a register-based 20% random sample of Finns born in 1987-1991 (n=60,202) with measurements of highest parental education at ages 11-14, health problems at ages 11-19, and educational attainment at age 26. Using data on visits to inpatient and outpatient care, we formed separate indicators of chronic somatic conditions and mental disorders. At the first stage of the analysis, we employed multinomial logistic regression to estimate the predicted probabilities of different educational attainments by parental education and exposure to adolescent health problems while controlling for several sociodemographic confounders. Next, we assessed the association of health problems with upward and downward educational mobility within groups of health-discordant siblings to take account of

unobserved family-level heterogeneity. Finally, we conducted a counterfactual-based mediation analysis to evaluate whether a hypothetical eradication of health problems would weaken or strengthen the association between parental and offspring education. The results showed that adolescents exposed to mental disorders are more likely to be downwardly mobile and less likely to be upwardly mobile. Even within families, adolescents exposed to mental disorders were 3-10 percentage points less likely to move upward and 8-15 percentage points more likely to move downward, whereas somatic conditions did not show associations. Due to the simultaneous changes in upward and downward mobility, a hypothetical eradication of adolescent mental disorders might even increase the disparities in educational attainment by parental education.

Residential Mobility and Educational Outcomes: Testing Competing Theories Across Three Countries
Presenter: Shana Pribesh, Old Dominion University, USA
Co-authors: Yuanyuan Yue, Old Dominion University, USA; Mikaela Dufur, Jonathan Jarvis, Elizabeth Sigler, Sadie Slighting, John Garbero, Amanda Coffelt, Brigham Young University, USA
Residential mobility has been linked to negative child outcomes since the Coleman Report (Coleman, 1988, Jelleyman & Spencer, 2007). However, only recently have researchers brought together divergent, discipline-based theoretical approaches (author) to illuminate why residential mobility impedes children. Looking at a single country, Author found support for portions of economic, sociological, and psychological explanations. There is merit in economic theories concerning housing adjustments that are often linked to life course (Rossi, 1955). Sociological theories surrounding movers' demographic characteristics such as education levels (Gillespie & Bostean, 2013; South & Crowder, 1998; Straits, 1987) and disruption of social networks and social capital (Adam, 2004; Author, 1999; Morgan & Sorenson, 1999) were also supported. Finally, we found evidence underpinning the social psychology-based model that asserts that family disruption is often intertwined with residential mobility and exerts stress on the household (Astone & McLanahan, 2003; Tucker et al, 1998). This foundational work was conducted using data from one, high-income country with a robust social support system including universal health care and income subsidies for childcare, parenting, disability and unemployment. However, we propose that residential mobility may work differently in various countries with different social safety nets and family transition patterns. To test the importance of context, we use longitudinal data from Australia, the United Kingdom and the United States to compare competing sociological, economic, and social-psychological theories relating residential mobility to educational outcomes. Specifically, we use generalized estimating equations across multiple waves of data to look at teachers' reports of academic performance in math and literacy for children ages 10-12 years in these high income countries.

3F PAPER SESSION: YOUTH TRANSITIONS

Trajectories to Adulthood in China Among the Post 80s: Degree, Job, and Love
Presenter: Mengni Chen, Catholic University of Louvain, Belgium
Co-author: Ester Lucia Rizzi, Catholic University of Louvain, Belgium
With rapid socioeconomic development in China over the past four decades, the transition to adulthood has been greatly shaped, with more years in education, more uncertainty in employment and greater delay in marriage. The post 80s (i.e. the birth cohort of 1980-1989) are the first to experience and bear the impacts from these social changes. This study aims to investigate the life course of the post80s, specifically looking at the trajectories of education, employment and partnership. We make use of the Fudan Yangtze River Delta Social Transformation Survey in 2013, which is a focused survey for the post80 cohort and provides very detailed information on the history of education, employment, cohabitation and marriage. We apply social sequence analyses to examine these events, by visualizing the duration and order of them. Furthermore, we perform a cluster analysis to identify different patterns of adulthood transition and summarize the underlying characteristics. The results reveal both traditional and untraditional trajectories, with the former displaying a standard sequence of graduation-employment-marriage while the latter showing more diverse paths. This study contributes to the existing literature by mapping how the post 80s in China step into the adulthood, as well as unveiling the emergence and heterogeneity of modern adulthood in China.

Analysis of the Labor and Educational Trajectories of Children Who Entered the Labor Market During the Periods of Economic Crisis (1994 and 2009) in Mexico
Presenter: Julio Martínez, The College of Mexico, Mexico City
In the last three decades, Mexico has experienced two main economic crises that caused the devaluation of the value of the country's currency and increased the unemployment rate. Whenever an event of this nature occurs where the level of household's welfare is compromised, people use several strategies to avoid negative effects. One of them has been to incorporate children into the labor market. Nevertheless, in most of the cases this strategy is affects school attendance, their development and goes against the vision of the International Labor Organization. The aim of this research is to compare the educational trajectories of children who entered the labor market during

the economic crises of 1994 and 2009. We use two questions to guide this research that are: what are these trajectories like? And what is the timing of school dropout of those who entered the labor market in 1994 compared to 2009? In order to answer these questions, we use the approach called as life course as well as the Retrospective Demographic Survey (EDER) 2017. This is a longitudinal survey that provides information about migration, education, work, nuptiality, residential arrangements, fertility and mortality. To build the sequences, we use the technique called Optimal Matching Analysis and Cluster Analysis. Finally, the results suggest that there are important differences between both crises: the children who entered in 1994 drop out school attendance faster, while those who entered in 2009 work and study at the same time. In addition, we observed that a high percentage of children who entered in 2009 leave school temporally only for one or two years but return to school to continue their studies.

China's Economic Reform and Chinese Life Course
Presenter: Xiaochun Qiao, Peking University, China
China has undertaken the economic reform for just 40 years since 1978. However, there have been a lot of researches on the impact of economic reform on the macro development, and a lack of research on the impact of economic reform on the individual development in China. In matter of fact, the economic reform was driven by the reform of the conventional institution, such as changing the planned economy to market economy, releasing the block of the people in rural areas moving to urban areas, and controlling the increase of population, etc., which made huge impact on Chinese people, especially the change of Chinese life course as well. This paper will show the institutions and events (especially some political movements) happening before and after the economic reform in 1978. Then, the evidence of social economic development will be shown, such as the increase of GDP, GDP per capita and income. Finally, some data dealing with the change of the population will be given based on repeated census data and other aggregate data to portray the cohort changes, as we are lack of pure life course data in individual levels. At the last, we will give brief introduction on the research and teaching in the life course in China, including three life course forums we organized in China.

Identity Processes and Success in Developmental Tasks During the Transition from Emerging to Young Adulthood
Presenter: Katariina Salmela-Aro, University of Helsinki, Finland
Co-author: Rasmus Mannerström, University of Helsinki, Finland
Forming a sense of identity – making choices regarding roles, and future goals, and committing to them – has long been studied as a one-way developmental task of adolescence, with a multitude of positive outcomes. Little is known of how identity processes develop beyond adolescence and how they interact with the key developmental tasks of young adulthood of independent living, cohabitation/marriage, parenthood and entering work life. In this study we examined (1) how five identity processes (DIDS; Dimensions of Identity Development Scale, commitment making, identification with commitment, exploration in breadth, exploration in depth, and ruminative exploration) evolved between two measurement points among Finnish emerging adults (from age 24 to age 29; N = 854, 63% women), (2) if sex and success in four developmental tasks central to young adulthood moderated development in identity processes, and (3) which developmental task most strongly predicted changes in identity processes over time. The results suggest that identity commitment and exploration levels, in general, decrease over time, that success in developmental tasks but not sex moderate this development, and that parenthood is the strongest predictor of changes in identity processes over time. The results support a view of personal identity as a dynamic process moderated by contextual factors beyond adolescence.

3G   PAPER SESSION: TROUBLED YOUTH

Experience of Maternal and Paternal Adversities in Childhood as Determinants of Self-Harm in Adolescence and Young Adulthood
Presenter: Joonas Pitkänen, University of Helsinki, Finland
Co-authors: Hanna Remes, Mikko Aaltonen, Pekka Martikainen, University of Helsinki, Finland
Background: Self-harm in adolescence and young adulthood is a major public health concern. Previous studies suggest that childhood adversities increase the risk of subsequent self-harm but studies on both paternal and maternal characteristics are few.

Objectives: The study aims to assess if paternal and maternal characteristics have different associations with self-harm in adolescence and young adulthood. Effect-modification by offspring gender and accumulation of adversities are investigated.

Data and Methods: The study uses administrative register data on a 20% random sample of Finnish households with 0–14-year-old children at the end 2000. We follow children born in 1986–1998 (N=153,090) from their 13th birthday until the end of 2011. Parental substance abuse, psychiatric disorders, criminality and hospitalizations due to interpersonal violence or self-harm are used to predict offspring hospitalizations for intentional self-harm.

Results: Preliminary results show a clear increase in the risk of self-harm among those exposed to childhood adversities (e.g. maternal criminality HR=3.0, 95% CI 2.1,4.3, paternal hospitalization for substance abuse HR=3.2, 95% CI 2.4,4.1). The excess risks hold for every measure of childhood adversity after adjusting for economic disadvantage and parental education. There was an additive interaction between any paternal adversity and offspring gender (Relative Excess Risk due to Interaction (RERI)=0.9, 95% CI 0.1,1.7), suggesting that childhood experience of father's problems might increase the risk of self-harm more among girls than boys. The experience of multiple adversities cumulatively increased the risk of self-harm and was especially harmful for boys.

Conclusions: Childhood adversities increase the risk of self-harm in adolescence and young adulthood- Our findings suggest that both parents matter, for both boys and girls but the associations between adversities and self-harm might be slightly modified by offspring gender. Furthermore, accumulation of adversities is especially harmful.

Family Structure Change and Suicidal Ideation Among South Korean Youth
Presenter: Jonathan Jarvis, Brigham Young University, USA
Co-authors: John A. Garbero, Amy Read, Mikaela J. Dufur, Brigham Young University, USA; Shana Pribesh, Old Dominion University, USA
With nearly 800,000 people dying yearly from suicide, suicide is a global health crisis (World Health Organization 2018). While suicide rates vary across nations and regions, among high-income nations the suicide rate has decreased by nearly a third since 1990 (OECD 2017). In contrast to this downward trend of suicide among high-income nations, between 1990 and 2013 South Korea's suicide rate rose nearly 5 times faster than in any other OECD nations (OECD 2016). Today, the suicide rate in South Korea is more than twice as high as the OECD average (OECD 2017), and it is the leading cause of death among South Korean youth (Statistics Korea 2018). Considering that family structure is associated with a number of important child health outcomes (Carballo et al., 2013; Hoffmann, 2002; McLanahan & Sandefur, 1994), we examine how divorce, remarriage, and single parenthood, impact suicidal ideation throughout adolescence in a non-western context with different social norms and historical family patterns. The impact of family stability and instability is particularly relevant in South Korea as suicide is occurring at globally high rates in a context where family structure has been more stable and begun changing only recently. While past research on suicide in South Korea has found that divorce has a strong impact on suicide mortality among adults, and that strained family relationships were related to suicidal outcomes (Park et al. 2014; Park et al. 2018), the impact of family structure change on Korean youth suicidal ideation remains under-researched. Using five waves from the Korea Youth Panel Survey (KYPS), we examine the influence of family structure change on adolescent suicidal ideation in South Korea.

Mortality in Young People Not in Education, Employment or Training (NEET) in England and Wales Using the Longitudinal Study
Presenter: Wei Xun, University College London, UK
Co-authors: Nicola Shelton, Stephen Jivraj, Rebecca Lacy, University College London, UK
Worklessness at early stages in the life-course may have long-term effects on health status in later life, possibly via the perpetuation of socio-economic disadvantage. There is indication of the subsequent shorter-term economic penalties and psychological morbidities. However, the longer-term (decadal scale) consequences in physical health are not clear. This study follows a representative sample of 1% of the England and Wales (E&W) census population aged 16-24, drawn at 1971 from the Longitudinal Study (ONS LS, n=65234). The differences in mortality rates by worklessness status at baseline in 1971 was explored in men and women using a path modelling framework. Preliminary results show that in men (n=24853): not being in work/study in 2001, having routine and lower life-time social class, not being married, reporting poor health in 1991 and not having a working spouse in the household were all significantly correlated to higher mortality rates in the risk period from 2001 to 2015. Being unemployed in 1971 also had a direct effect of increasing mortality rates (HR=1.19, 95%CI 1.02-1.39), in addition to indirect effects through several other variables in the pathway. Results in women are to follow shortly.

In conclusion: in a large, representative, historical sample from E&W, unemployment at the age of 16-24 in men was found to be directly associated with higher mortality rates several decades later, even after adjusting for numerous intervening variables.

Childhood Adversity Within Adolescent Friendship Groups: Implications for Subsequent Substance Use Disorders

Presenter: Lauren Bishop, Stockholm University, Sweden

Background: Research consistently demonstrates that childhood adversity is associated with an increased risk of subsequent health risk behaviors, e.g. severe alcohol and illicit drug use. Adversity experienced in early childhood related to parental socioeconomic problems may become particularly salient during adolescence, an important period during which youth gain agency and peers' influence strengthens. Adolescents from families with socioeconomic problems may form friendships with peers with whom such experiences are shared, or with more privileged peers. Importantly, the composition of childhood adversity within friendship groups may explain long-term health risk behaviors, related to severe use of alcohol and drugs.

Objective: The objective of this paper is to examine the association between childhood adversity and severe alcohol or illicit drug use throughout the life course, and explore the role of adolescent friendships on this association.

Data & Methods: We will estimate Cox proportional hazard models based on a Swedish cohort (the Stockholm Birth Cohort Multigenerational Study) born in 1953 (n=14,562). Childhood adversity (ages 0-12) is identified via six indicators of household socioeconomic inequality: social assistance, single-parent household, overcrowding, criminality, psychiatric disorder, and alcohol abuse. Friendships are identified from socio-metric data collected in the school class setting (age 13). The follow up of severe alcohol and drug use disorders is derived from inpatient register information (ages 19-63).

Expected Results & Conclusions: We expect substance use disorders to be more common among individuals who experienced socioeconomic adversity in childhood, but to a lesser extent if their adolescent friends were more privileged. The study will contribute knowledge regarding the long-term role of adolescent friendships among those who experienced socioeconomic problems in childhood, and may provide insights regarding future programming to support at-risk children, adolescents, and adults.

Adverse Childhood Experiences and Adult Inflammation: Single Adversity, Cumulative Risk and Latent Class Approaches

Presenter: Rebecca Lacey, University College London, UK

Co-authors: Snehal Pinto Pereira, Leah Li, University College London, UK; Andrea Danese, Kings College London, UK

Background: Adverse childhood experiences (ACEs) have previously been linked to inflammation in adulthood. However, the measurement of ACEs is often limited with a heavy reliance on ACE scores whereby the number of ACEs are summed. This approach lacks specificity, assuming each adversity has an equal effect on inflammation but acknowledges that ACEs tend to co-occur. We explore the relationship between ACEs and mid-life inflammation comparing three different adversity measurement approaches using high quality longitudinal data from Great Britain.

Methods: Data from the 1958 British birth cohort were used (n=8,810). Frequently investigated ACEs were available (parental divorce, substance misuse, death, psychopathology, maltreatment, convictions and conflict) across childhood. Inflammatory markers in mid-life were C-reactive protein, fibrinogen and von Willebrand Factor. Three ways of considering ACEs were compared – ACE scores, individual ACEs and clusters derived via latent class analysis.

Results: ACE scores exhibited a graded relationship with mid-life inflammation. When considering individual ACEs, parental convictions and physical abuse were strongly associated with inflammation. Five latent classes were derived ('maltreatment and conflict', 'polyadversity', 'family conflict', 'substance misuse and mental health problems' and 'low ACEs'). The relationship between these classes and inflammation was more complex and varied by whether they were retrospectively or prospectively reported.

Discussion: Critical consideration of the measurement of ACEs is important. ACE scores lack specificity. Considering individual adversities shows that parental convictions and physical abuse are associated with inflammation. Latent class analysis groups ACEs which tend to co-occur but further work is needed to explore the influence of reporting mode.

3H PAPER SESSION: INFLUENCES ON EDUCATIONAL ATTAINMENT

School Absenteeism and Academic Achievement: Is Missing-Out on School More Detrimental to Students from Lower Socioeconomic Backgrounds?

Presenter: Shadrach Dare, University of Strathclyde, UK
Co-authors: Edward Sosu, Markus Klein, University of Strathclyde, UK

Significant social inequalities in academic achievement are well established. Evidence suggests that students from lower socioeconomic backgrounds are more frequently absent from school. Whereas school absenteeism is a potential mechanism for explaining the social inequality in academic achievement, empirical evidence on the link between absenteeism and achievement is sparse. Additionally, it is not clear if different forms of absenteeism have the same detrimental effect on achievement. Absent students miss out on teacher-led lessons, peer interactions or activities that may stimulate their learning and ultimately their performance in exams. In addition, they might feel less integrated into their class and struggle to participate in classroom activities and interactions with peers and teachers which, in turn, is harmful to their learning. Importantly, school absenteeism may be particularly detrimental to children from lower socio-economic backgrounds as their parents have neither the time nor resources to compensate for school absence by supporting their children in engaging with the content of the missed school lessons. In this paper, we first examine the association between different types of school absenteeism (legitimate absence, truancy and exclusion) and academic achievement in secondary school. Besides, we consider whether the association between absenteeism and academic achievement varies between different socioeconomic groups and family structures. We analysed a sample (N=5,000) from the Scottish Longitudinal Study (SLS) by linking census, school administrative and achievement, and administrative health data. The unique SLS data provided us with a rich set of confounders from the Census and health data in estimating the adjusted association between school absenteeism and academic achievement using regression-based approaches. We will discuss the data linkage process as well as the policy and practice implications of our findings.

An Evolution of School Absentees and School Grading Policy: An Analysis Using Prefectural Panel Data

Presenter: Shun Ikemoto, Keio University, Japan
Co-author: Hideo Akabayashi, Keio University, Japan

This study documents the evolution of school absentees across grade levels in Japan, and shows how school grading and admission policies can influence children's school attendance. In Japan, the number of school absentees who do not go to school due to problems with friends or teachers during compulsory education (grades 1-9) has been on the rise. Today, the absentee rates are 1 in 250 students at elementary school and 1 in 36 students at junior high school. Absenteeism is an especially serious social problem in Japan since home-schooling is not officially permitted and access to private school is limited during compulsory education. There is no public support to families who try to get an education opportunity from outside the formal school system. On the other hand, high school education is not mandatory, and the attendance record during the mandatory school years is used as part of the evaluation for the selection process to a various degree by prefecture. Using the official data from 2008 to 2016 about school absentees at the prefectural level, we show how the weight placed on the attendance record for public high school admission influences school attendance behavior. We found that students are more likely to attend school when the weight placed on the attendance record is greater, suggesting that children respond to the cost-benefits of attending school, and the differences in the selection process of high schools partly explains the differences in the prevalence of absenteeism across prefectures.

Do Schoolmates' Personalities Matter in Students' Individual Lives?

Presenter: Richard Göllner, University of Tübingen, Germany
Co-authors: Ulrich Trautwein, University of Tübingen, Germany; Brent Roberts, University of Illinois at Urbana–Champaign, USA

The composition of students in schools or classrooms is crucial for students' individual development. Attending schools with a higher average *achievement* or a more favorable *SES* background leads to higher educational attainment, but can also pose risks for students' academic self-evaluations (e.g., Coleman et al., 1966; Harker & Tymms, 2004; Marsh et al., 2015). At the same time, however, prior research has largely ignored other compositional school characteristics that may also affect students' individual life success. Using data from Project TALENT (see Wise, McLaughlin, & Steel, 1979), a longitudinal study of U.S. high schools in 1960 (N = 377,015 students), the present study investigated whether and to what extent schools' personality composition (self-confidence, sociability, social sensitivity, culture, and conscientiousness) makes a difference for student's individual life success 11 years after high-school. For this, we conducted multilevel analysis to estimate compositional school effects while controlling for student's individual differences. At the student level, the results showed that students' personality characteristics were positively related to students' educational attainment, income, and job prestige. After controlling for their individual background, most consistent effects were found for students' conscientiousness and culture. At the school level, self-confidence ($0.15 \leq b \leq 0.37$) and social sensitivity ($0.46 \leq b \leq 0.67$) were positively

associated with outcomes, whereas sociability and conscientiousness revealed negative effects. Students in schools with a higher proportion of sociable and conscientious schoolmates showed lower educational attainment (sociability, $b = -0.34$, $p < .001$ and conscientiousness, $b = -0.17$, $p = .024$), lower income (sociability, $b = -0.26$, $p < .001$), and lower occupational prestige (sociability, $b = -0.26$, $p < .001$) after controlling for their individual background. These results are finally discussed with regard to potentially adverse peer- and reference group effects of personality.

References:

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). Equality of educational opportunity. Washington, DC: U.S. Government Printing Office.

Harker, R., & Tymms, P. (2004). The effects of student composition on school outcomes. School Effectiveness and School Improvement, 15, 177–199.

Marsh, H. W., Abduljabbar, A. S., Morin, A. S., Parker, P., Abdelfattah, F., Nagengast, B., & Abu-Hilal, M. M. (2015). The big-fish-little-pond effect: Generalizability of social comparison processes over two age cohorts from Western, Asian, and Middle Eastern Islamic countries. Journal of Educational Psychology, 107, 258–271.

Wise, L. L., McLaughlin, D. H., & Steel, L. (1979). The Project TALENT data bank handbook. Palo Alto, CA: American Institutes for Research.

Inequality in Learning from Early Childhood to Adolescence: Longitudinal Evidence from Ethiopia

Presenter: Janice Kim, University of Cambridge, UK

Most of the observable cognitive gap between wealthier and poorer children have emerged before children enter school, and early competencies of children are strong predictors of success over the life course. Using the Young Lives cohort study in Ethiopia, this study aims to examine whether the predictive role of preschool persists in child's learning outcomes in middle childhood: how the association between preschool and child outcomes evolves over time; how this association varies by sub-groups; and whether the subsequent school experience mediates the link between early skills and later outcomes measured at age 15. Results from matched, comparable sample show that positive and statistically significant influence of preschool attendance persists in receptive vocabulary, English achievement and highest grades achieved by 15-years-old students but fades out in math achievement. Moreover, the benefits of preschool tend to be greater for children who are from the wealthy families with educated fathers at the primary level, whereas children who demonstrated lower cognitive skills at age 5 show larger gains from preschool attendance. Exploratory analysis on the mediating role of subsequent school experience indicates that about half of the direct effect from preschool to middle childhood is explained by the mediation effect of school resources in primary school. These findings highlight that a significant part of educational inequalities at later ages could be explained by the level of early childhood investment as the result of "skill begets skill". Given that preschool benefits are conditional on various structural factors it is important to devise more strategic policies on early childhood education targeting to those left behind.

School Social Mix and Lower Secondary Education Performance: Are There Cumulative Effects?

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

There has been a good deal of debate about whether the social composition of a school has effects on student outcomes, over and above the influence of individual social background. However, existing research has tended to focus on effects at primary or secondary school level rather than examining whether there is a cumulative effect of social composition across the two levels. This paper uses cross-classified multilevel modelling to unpack the effects of school social mix at primary and secondary level on exam grades in the nationally standardised lower secondary examination. It uses Growing Up in Ireland data collected at 9, 13 and 17 years of age, data which have rich information on family background, including social class, parental education and household income. At school level, the analyses distinguish between schools provided with additional support under the DEIS programme because of their disadvantaged profile, fee-paying schools and other non-DEIS schools to examine the cumulative effect of school social mix. Ireland represents an interesting case study because of the active choice of secondary school, meaning that there is a good deal of movement between individual primary and secondary schools. The analyses examine whether lower secondary grades are lower if young people have attended a working-class (DEIS) primary and secondary school. In addition, it will examine whether attending a more socially mixed secondary schools has a 'compensating' effect for those who had previously attended a working-class primary school. The paper will thus provide new insights into the dynamics of school social segregation and its impact on educational outcomes.

Extending the Oaxaca-Blinder Decomposition Approach to Longitudinal Data Analyses: A Practical Approach

Presenter: Hannes Kröger, German Institute for Economic Research (DIW), German
Co-author: Jörg Hartmann, University of Göttingen, Germany

The Oaxaca-Blinder decomposition approach has been widely used to attribute group level differences in an outcome to differences in endowment, coefficients, and their interactions. The method has been implemented in different statistical packages for cross-sectional analyses. However, it has been difficult to utilize decomposition methods for the life course approach as general decomposition techniques for longitudinal data are missing. As research questions are increasingly focusing on the decomposition of group based differences in change over time, e.g. diverging income trajectories, as well as decomposition of change in differences between groups, e.g. change in the gender pay gap, we believe decomposition techniques that make use of panel data are necessary. Another way in which decomposition analyses can be extended to longitudinal data is repeated cross-sectional decompositions and time point specific decomposition of group levels differences based on latent growth curve models. We propose to unify these different research interest under a more general, longitudinal perspective that has each of the applications as a special case of the Oaxaca-Blinder decomposition. We present the rationale of this generalized framework and give examples of applied research questions which illustrate its flexibility, strengths and limitations. This gives an overview of the range of research questions that can be answered within the same framework. We also give some examples of a user written program for Stata which can implement the longitudinal decomposition in a user-friendly way. The aim is to maximize flexibility in modeling while still allowing as many ways of implementing longitudinal decompositions as possible according to the researcher question at hand.

Optimal Developmental Trajectory Group Analyses: Which Parameters Should (Not) Be Constrained to Accurately Estimate Growth Mixture Models?

Presenter: Jitske Sijbrandij, University of Groningen, Netherlands
Co-authors: Tialda Hoekstra, Josue Almansa, Ute Bültmann, Sijmen Reijneveld, University of Groningen, Netherlands; Margot Peeters, Utrecht University, Netherlands

Convergence issues and impossible values (e.g. negative variances) appear frequently in Growth Mixture Modeling (GMM), especially for smaller sample sizes. To solve these issues, researchers often limit the number of estimated parameters by constraining either random effect variances to be equal across classes or residual variances to be equal over time or equal across classes. Constraining these variances to be equal, when they in fact differ, can lead to biased estimates. Yet, it remains unknown which variances can best be constrained to obtain the least biased estimates. The aim of this study is to determine which variances are best to constrain in GMM to obtain the least biased estimates, most accurate assignment of individuals to classes, and highest rate of estimated classes corresponding with simulated classes. A simulation study was conducted, followed by an illustration with empirical data of the Tracking Adolescent Individuals' Lives Survey (N = 2,227), a population-based cohort of Dutch pre adolescents followed into adulthood over six measurement waves. In the simulation study, we compared models that differed in variance constraints, sample size (100, 300 or 1000) and distance between the classes. The model constraining random effect variances and residual variances across classes performed worst. For a sample size of 300 or larger, the unconstrained model and the model which constrained random effect variances across classes and residual variances over time but unconstrained across classes performed best. For a sample size of 100, this second model performed best. To conclude, the preferred model depends on the sample size. In general, models that constrained residual variances to be equal over time performed better than models that constrained other variances. Therefore, if model convergence issues arise, we recommend starting with constraining the residual variances over time. Researchers should carefully consider possible constraints of variances, rather than following default software specifications.

Are Scores on Cognitive Measures More Similar to Different Measures with the Same People or the Same Measures with Different Cohorts?

Presenter: Aisling Murray, Economic and Social Research Institute, Ireland

At 17/18 years, participants in the GUI Child Cohort completed three short measures of cognitive ability. One was a traditional written vocabulary test. A second task measured verbal (semantic) fluency, where participants were asked to name as many animals as they could in one minute. This analysis compared the two indicators with each other and with other cross-sectional and longitudinal measures of ability. For the vocabulary test, participants were given 20 target words and asked to choose the word closest in meaning to it from five possibilities. They had four minutes to attempt the test. For the semantic fluency test, participants were asked to call out the names of many animals as possible in one minute. There was one point awarded for each different animal named. The cognitive tests were administered as part of the home visit. Information on Junior Certificate results was recorded from the participants during the interview. The initial analysis indicated a mean score on the verbal fluency test of just over 21 animals in one minute. The mean score on the vocabulary test was just under nine items correct. Both measures

exhibited a normal distribution. Scores on the two tests were moderately correlated with each other (r=.32). Both were also significantly correlated with a score based on grades in State exams undertaken when the participants were around 15 years old (Maths, English and Science). Longitudinally, both tests showed significant correlations with reading and maths ability as measured at age 9 years and 13 years. However, the coefficients for the vocabulary measure tended to be stronger, especially for the earlier reading measures. Findings from the GUI Cohort at 17 will be contrasted with those of the Millennium Cohort Study at 14 years (vocabulary) and Irish adults aged 50+ participating in TILDA (verbal fluency).

Reconstructing the Child's Life: The Triangulation of Longitudinal Data from Parents, Children and Social Workers

Presenter: Ksenia Eritsyan, National Research University Higher School of Economics, Russia
Co-authors: Veronika Odinokova, Sociological Institute of the Russian Academy of Sciences, Russia; Maia Rusakova, Alexandra Lyubimova, Saint-Petersburg State University, Russia

The surveying children raise number of methodological and ethical concerns. Among methodological concerns there are ones related to child's cognitive development, ability to fully reconstruct some factual information and casual relationship which might lead to the data trustworthiness concerns. Therefore, accumulating information from the several sources including adults who are well aware of the child's life might be considered as one of the potentially effective solutions. In the project "Social trajectories of childhood in contemporary Russia" we were focused on the children and young people who are in close connection with social protection system due so some unfavourable life conditions. A total of 90 cases of children aged 10-17 years consisted of extensive quantitative and qualitative data from the three sources (children, their parents or caregivers and social workers) focused on child's personal story and well-being were collected. The informants were to be interviewed 3 times with 6 month intervals. The identified challenges of data triangulation included huge differences in the factual information about child's life received from the three sources; interpretation of the life events origins and importance of those for child's life trajectory as well as evaluation of child's wellbeing. For all types of informant, the social desirability bias was identified however the different types of data was vulnerable to it. The level of adults' knowledge of child's personal life dependent on both the level of trust and involvement in the child's life. The child often missed in their narrative important details about family life and sometimes made significant errors in chronology. Our experience showed that information about child's life received from just one source might be significantly flawed and none of the mentioned sources might be considered as preferable one in terms of identify objective life events of the child. Despite being methodologically and organizationally challenging using several sources of data might give unique picture of children's life.

Using Longitudinal Data to Estimate Scale Reliabilities

Presenter: Harvey Goldstein, University of Bristol, UK
Co-authors: Michele Haynes, Australian Catholic University, Australia; George Leckie, University of Bristol, UK

The importance of adjusting for measurement errors is often overlooked and can lead to misleading inferences if not handled properly in statistical analysis. An example of this will be given followed by a discussion of how to obtain good estimates of measurement error distributions needed to carry out adjustments. The example relates to an analysis of longitudinal data from the UK 1970 birth cohort that had a major impact on policy, but has more recently been criticised for faulty analysis and in particular a failure to account for measurement error (unreliability of test scores). Results will be presented from a simulation study that examined several different approaches to estimating reliability for educational and behavioural data using longitudinal measurements, and the methods demonstrated with an application to a set of Australian standardised test score data.

POSTER PRESENTATIONS

The Contribution of Drinking Culture at Comprehensive School to Heavy Episodic Drinking from Adolescence to Midlife

Presenter: Noora Berg, Uppsala University, Sweden
Co-authors: Marianna Virtanen, Anne Hammarström, Uppsala University, Sweden; Tomi Lintonen, Finnish Foundation for Alcohol Studies, Finland

Background: The school context is associated with adolescent alcohol use, but it is not clear whether this association continues into adulthood. This study examined whether exposure to drunkenness oriented drinking culture in 9th grade school class is associated with individuals' heavy episodic drinking (HED) from adolescence to midlife.

Methods: Participants in the 'Northern Swedish Cohort' study aged 16 years in 1981 were followed up when aged 18, 21, 30 and 43 (N = 1080). Individual-level factors were HED, positive attitudes towards drunkenness, early initiation of HED, and peer-oriented spare-time. School class-level drinking culture was measured as classmate reported HED, positive attitudes, early initiation of HED, and peer-oriented spare time. Multilevel log-binomial regression analyses were adjusted for gender, parental socioeconomic background, family structure and HED at age 16.

Results: After adjustment for sociodemographic factors several cross-sectional and longitudinal associations were found between class-level indicators of drinking culture and individual HED. After additional adjustment for age 16 HED, one association remained: the risk ratio (95% confidence interval) for engaging in HED at age 43 was 1.58 [1.03–2.42] times higher for those who at age 16 had many classmates reporting positive attitude towards drunkenness.

Conclusion: These findings suggest that drinking culture in school may have a long-lasting impact on drinking habits in adulthood. The associations with HED at follow-ups are likely mediated by HED in adolescence. Studies on alcohol use would benefit from taking into account both individual and contextual factors in a life course perspective.

(Dis)Advantaged Childhoods and Premature Mortality: Cumulative Inequalities Over the Life-Course

Presenter: Josephine Jackisch, Stockholm University, Sweden

Background: Social (dis)advantages in early life environments set the stage for life and death in adulthood. In order to understand to what extent childhood advantage or adversity can explain intra-cohort variability in mortality over the life-course, two theoretical models are explored: the theory of cumulative (dis)advantage and the age-as-a-leveler hypothesis.

Methods: Based on prospective data from a 1953 Stockholm birth cohort (n=15,117), survival analysis is used to examine the relationship between childhood environments (ages 0-18) and premature mortality (ages 11-65), and whether inequalities decrease, increase or stabilize throughout the life span.

Results: Among children who were most disadvantaged, as indicated by placement in community care, 3 in 100 had died at the age of 30. Majority population peers reached the same risk of premature mortality at 50 years and the most advantaged children only at the age of 55. Mortality hazards for those with disadvantaged childhoods remained higher throughout adulthood. Even after controlling for gender and socioeconomic family background, the most disadvantaged children had three times higher risk of premature mortality at any point in life than their majority population peers (HR=3.14 [2.61-3.78]) and more than four times higher than in advantaged children. This gap does not converge over time. The population fraction of premature mortality attributable to disadvantage in childhood was 15%.

Conclusions: Inequalities in premature mortality related to childhood (dis)advantage do not wear off after the early phase of predominantly external cause-related deaths in early adulthood. The mortality gap continues to increase throughout the life span, a fact that might suggest chains or accumulation of risks. The cumulative disadvantage theory might be better suited to understand those findings than the age as a leveler hypothesis. If policy interventions could break the chains of risks that underlie the accumulation, a substantive number of cases of premature mortality could be avoided.

The Impact of Life Course Social Adversity On Cognitive Functioning in Old Age: The Mediating Influence of Loneliness and Obesity

Presenter: Morgane Künzi, University of Geneva, Switzerland
Co-authors: Cristian Carmeli, University of Lausanne, Switzerland; Leyla Khenissi, Wiktor Olszowy, Olga Trofimova, Silvia Stringhini, Bogdan Draganski, Matthias Kliegel, Nicola Ballhausen, University of Geneva, Switzerland

Background: Aging is associated with decline in different cognitive functions, especially in memory and in executive functioning. This decline has been shown to be linked to several variables of social adversity. However, the interplay of different factors of social adversity throughout the life course and their impact on health and cognition is still not well understood. Moreover, loneliness and obesity in later adulthood have also been linked to social adversity, and represent risk factors for cognitive decline and Alzheimer disease.

Aim: The aim of this study is to investigate whether life course social adversity predicts performance and decline of cognitive functions such as episodic memory, cognitive flexibility and working memory in older adults and whether this relationship is mediated by loneliness and obesity.

Method: We use data from the Swiss longitudinal study Vivre-Lebe-Vivere (VLV) which started in 2011 with a follow-up in 2017 (n=1077). In this study, social adversity was measured through different life course indicators (e.g., subjective perception of childhood, socioeconomic indicators in child- and adulthood). Global cognition was assessed using the MMSE, cognitive flexibility was tested with the Trial Making Test and specific cognitive functioning (e.g., working memory) with the COGTEL.

Preliminary results: First analyses suggest that social adversity may reduce level of cognitive functioning in older adults and enhance cognitive decline across old age. Further analyses will focus on examining the mediating pathways through which loneliness and obesity may affect the relation between social adversity and cognitive functioning.

Conclusion: Implications of obtained results might concern prevention of loneliness particularly in older adults that suffer or have suffered from social adversity, as well as promotion of a healthy lifestyle.

Industrial Automation and Labor Market Outcomes of Different Sociodemographic Groups

Presenter: Juha Luukkonen, University of Helsinki, Finland
Co-authors: Pekka Martikainen, Elina Einiö, University of Helsinki, Finland; Matti Sarvimäki, Aalto University School of Business, Finland

Background: Recent technological progress is allowing automation to spread across new sectors and occupations, raising concerns how this development will affect the demand of labor and consequently income and employment opportunities of different population sub-groups.

Objectives: The aim is to understand the effects of increasing automation on the labor market outcomes of different population sub-groups. Our study focuses on a well-defined form of automation; the effects of industrial robots that have become increasingly common in the last decades. Special emphasis is placed on individual moderators, such as, age, gender and educational attainment as well as immigrant status.

Methods: We use an 11% sample of people residing in Finland supplemented with information about the proliferation of industrial robots. We compare employment and earnings outcomes of Finns living in commuting zones differentially exposed to automation. This differential regional exposure is based on the long-term changes in the amount of industrial robots in these commuting zones; we take the overall increase in the use of robots over time by industries in Finland, weigh this information with regional historical industrial labor shares and use differences in these exposures to explain job market outcomes. The data are analyzed with Poisson, Logit and linear regressions.

Results: Preliminary results indicate that industrial robots' negative effects -decreased employment levels and lowered earnings- concern especially less educated males and older people. For instance, one additional industrial robot per thousand workers seems to cause one annual employment month less for the persons with only basic education and lower their income by 2%. However, younger people seem to benefit from increased robotization.

Conclusions: Industrial robots appear to push older and less educated individuals out of the labor force and to lower their income level. More educated and younger persons seem to benefit from this development or are more adaptive.

The Transition of the Significant Others Among Japanese Senior Citizens: A Sequence Analysis Approach

Presenter: Tomoo Nakata, Hokusei Gakuen University, Japan

The aim of this study is to examine the transition of the significant others for social support among their social support system using sequence analyses. Cantor (1979) theorized the transition of significant others in social support system and the researcher have tried to reveal it afterwards. The order and its direction and complement of the function of the supplier of the social support over time by comparing emotional support with tangible support among senior citizens in Japan was examined in this study. National Survey of the Japanese Elderly, from wave III (1993) to wave IV (2002), conducted by Michigan University and Tokyo Metropolitan Institute of Gerontology, was used in this study. The independent variables were the patterns of the most significant others for both emotional and tangible support which the respondents recognized. The suppliers of support are divided in to 6 categories, namely, spouse, children, other relatives, friends, neighbours and others. And the independent variables consisted of work status, loss of spouse, the number of family members, the extent of exchange with neighbours, the number of friends in addition to gender, age and the years of education. The histories of the significant others for both support was summarized to 6 clusters. Some of these clusters were dominant by "spouse" and "children". However, while the significant others seemed to move to the outer of concentric circle of the social support system for emotional support, it remain in inward for tangible support. At last, the results of the multinomial logit analysis, gender, the number of family member and the loss of the spouse seemed the main factors determined the clusters. To understand the mechanism of transition of significant others, for example, the loss of suppliers and its complement of function, needs detailed data.

Asset Transfer from Grandparents and Children's Education: Evidence Through the Qualified Educational Fund Giving Trusts in Japan

Presenter: Midori Otani, Keio University, Japan
Co-author: Hideo Akabayashi, Keio University, Japan

Recently, the increasing importance of the grandparent generation's assets on the educational level gaps among the grandchild's generation has attracted much attention from researchers and policymakers. Meanwhile, the Japanese government introduced the "Qualified Educational Fund Giving Trusts (QEFGT)" in April 2013. This is a tax-exemption on the gift tax when grandparents entrust money, up to 15 million yen (120,000 euros, 138,000 dollars), to trust banks as educational funds for their grandchildren under 30 years old. The new policy became so popular, that the number of the QEFGT contracts reached 104,000 in March 2018.However, it is not clear whether the new policy truly increases educational investment, and there is even a possibility of strengthening the intergenerational link in economic inequality and enlarging the education gap if access to the QEFGT is limited to wealthy grandparents. Since no previous study has analysed policies similar to the QEFGT, careful scrutiny is called for.

This study investigates the following two questions through longitudinal data that covers information from three generations: 1) Does the use of the QEFGT increase education expenditure for children? 2) How does the grandparents' socio-economic status relate to the use of QEFGT funds? The results show that there is a positive correlation between the grandparent's financial deposit and the use of the QEFGT. Also, its use is positively correlated with the expenditure on grandchildren's cram school and private tutoring. It indicates that grandparents with many financial assets are more likely to use the QEFGT and that its use increases educational expenditure (cram school/ private tutor), potentially strengthening the intergenerational correlation of economic inequality.

Why Do Low-Educated People Often Remain Abstaining from Continuing Education? Motivational and Social Causes Over a Span of 10 Years

Presenter: Matthias Sandau, University of Potsdam, Germany

Changes in labour market and skill requirements entail that workers must continuously develop their abilities and knowledge by pursuing continuing education. Nevertheless, participation in continuing education in Germany is highly differentiated in terms of social structure. Similar social inequalities can be observed in various European countries. Research shows psychological, micro-sociological as well as economic causes explaining the effect of education. In addition, people with a low educational level are highly likely to be absent from continuing education over decades. Therefore, the current study will combine the different approaches and examine which motivational and job-specific effects mediate educational effects on the likelihood to stay abstinent from continuing education over one decade. The present analysis is based on approximately 1300 participants of the German longitudinal study "Pathways from Late Childhood to Adulthood (LifE)" as interviewed in 2002 and 2012. Logistic and poisson regressions are used to model influences of learning motivation, education, occupational status, gender and job satisfaction on the likelihood to participate in continuing education at the age of 35 to 45 and on the number of subsequent continuing education events. The influence of education can be explained above all by the intrinsic motivation for continuing education, the affective reactions to continuing education, the subjective costs, but also by the satisfaction with the occupation. In comparison to less vocational education systems and countries with less

allocative transitions into employment, motivational learning barriers of people with low education in Germany should be examined more closely.

Marital Biography and Health: Investigating Life Courses of the European Population 50+
Presenter: Johanna Schütz, German Youth Institute, Germany
The research project is motivated by the well-known health and longevity advantage of married persons over the unmarried. In times of population ageing and changing marital behaviour, an investigation of the marriage-health nexus by applying a life course perspective is relevant. Instead of merely considering current marital status, the study compares marital biographies and the connection to health in old age. Using the Survey of Health, Ageing and Retirement in Europe (SHARE), I investigate cross-country differences of marital and partnership biographies of a sample of more than 22,000 Europeans above age 50, from 14 European countries. I discuss national differences and similarities of the following components of the marital life course: current marital status, number of marriages, sequencing and timing of marital transitions, duration of marital status, number, type and timing of non-marital partnerships. In a second step, I analyse the association of the marital life course with health status in later life, using objective indicators of physical and cognitive health (grip strength, expiratory air flow, memory, verbal fluency). I address possible selection effects by adjusting for health and cognitive status during childhood. Results obtained by cross-sectional regressions show that married Europeans have better physical and cognitive health outcomes, compared to the never married and the separated. Widowed Europeans are disadvantaged in terms of cognitive health, but not physical health. With respect to marital biography, marriage before age 20 and remarriage are related to health deficits in old age, whereas length of a marriage shows no effect. Also multiple marital losses seem to affect physical health negatively. A longer period of widowhood is related to a decrease in cognitive health – regardless of current marital status. The latter finding is also supported by longitudinal fixed-effects regressions that draw on over 55,000 observations from 17 European countries and Israel.

Embedded Love: The Interdependence of Intimate Relationships, Previous Relationship Experiences, Social Values and Environmental Factors
Presenter: Andrea Umhauer, University of Innsbruck, Austria
Co-authors: Fred Berger, University of Innsbruck, Austria; Helmut Fend, University of Zurich, Switzerland
In modern societies intimate relationships have a great impact. Especially the relationship between romantic partners is considered particularly important to make life complete and is thus accepted as a developmental goal. In this paper, we analyze how the quality of romantic relationships between partners depends on the societal discourse of love (social values), on the actual life situation of a couple and on previous individual relationship experiences during adolescence and young adulthood. Focusing on personal relationship experiences we take the parent-child relationships, peer-relationships, first romantic experiences and the witnessing of the parental relationship into account. These three developmental contexts are expected to interact with respect to social values and the current life situation and predict the quality of romantic relationships in later life. The data for this paper come from the German LifE Study (Pathways to Young Adulthood), which is a seven wave longitudinal study. About 2.000 adolescents were surveyed between 1979 and 1983. In 2002 and in 2012 this youth study was resumed with two follow-up studies. For this paper we use a sample of about 900 adults who were in a serious romantic relationship at the date of the last questioning and apply hierarchical regression analyses and structural equation modelling to analyze the data. We presume that the dependency of relationship quality in advanced adulthood from relationships in adolescence will get weaker with the increasing age of the subjects but still remains significant. While the predictive strength of experiences in adolescence may get weaker, the influence of the current life situation of a couple is expected to play a weightier role. There will be differences in regard to gender concerning especially the actual life situation. Furthermore, we suppose that the way people imagined romantic relationships during adolescence influence their adult relationship arrangement and their perception of it.

Introducing the Hungarian Birth Cohort Study
Presenter: Zsuzsanna Veroszta, Hungarian Demographic Research Institute, Hungary
Co-authors: Julianna Boros, Krisztina Kopcsó, Laura Szabó, Hungarian Demographic Research Institute, Hungary
Growing Up in Hungary - Cohort '18 as a Hungarian birth cohort study conducted by the Hungarian Demographic Research Institute follows approximately 8500 children born in 2018-19 on a national, representative sample. Data collection started on January 1, 2018, with surveying the pregnant women in their 28-31st week of pregnancy. Within the current funding phase of the project (until 2022), it will be followed by three more interviews, when the child is six-months, eighteen-months, and three years old. In the long run, it's HDRI's aim to follow the children participating in the survey into their adulthood.

Data collections are based on structured personal interviews and self-completed questionnaires, administered with the mother. In addition, administrative data files are subsequently connected to the research database, such as data

from the birth notification system. The range of respondents will be extended to include the fathers at the eighteen months' wave. The main objective of the study is to provide a comprehensive overview of child development and its influential factors in Hungary. The study seeks to catch the various aspects of child development: physical, cognitive, social and emotional development, health, welfare, accomplishment and mobility. The study also aims to define the interacting factors that greatly affect the upbringing, and to reveal the underlying mechanisms. Such variables include the environmental factors of family and society, the social/original differences, the health status, the psychological characteristics, and the institutional provisions, employment situation, lifestyle, expectations and plans of the family raising the child. Since Wave 1 was closed in March 2019, besides summarizing theoretical and methodological principles, the poster presentation also targets to outline the cohort profile of Growing Up in Hungary - Cohort '18.

The Scarring Effect of Youth Unemployment on Mental Health: Does Entering the Labour Market During a Recession Make a Difference?

Presenter: Liam Wright, University College London, UK
Co-authors: Jenny Head, Stephen Jivraj, UCL, UK

Several studies show that youth unemployment is associated with worse mental health in later life. Few have looked at whether this association is limited to certain groups or is pervasive across the population. Our study aims to assess which factors moderate the effect of youth unemployment on mental health measured in the mid-twenties. We use data from Next Steps, a cohort of secondary school children recruited at age 14 and followed up to age 25. We measure youth unemployment as six or more months worklessness between ages 18-20 (2008-2010), a period which includes the high youth unemployment rates following the global financial crisis, and use the 12-Item General Health Questionnaire (GHQ) Likert score collected at age 25 as our measure of mental health. Using OLS regression, we assess whether the association between youth worklessness and GHQ scores differs by: gender, locus of control (measured at age 15), parental socioeconomic class (age 14), preferences regarding unemployment vis---vis work (age 14), and adolescent neighbourhood characteristics. Preliminary results show youth worklessness is associated with worse GHQ scores at age 25, an association which remains significant adjusting for GHQ scores at age 15. Comparing across groups, however, the association is only found to be significant amongst males and individuals from low socio-economic class backgrounds. Associations are also smaller amongst those who disagree with the statement "any job is preferable to unemployment", though effects are imprecisely estimated. Locus of control does not appear to moderate the association. These results suggest the scarring effects of youth unemployment may be confined to certain groups. Future research should examine why youth unemployment may signal future difficulties amongst some individuals and not others. Policymakers looking to improve the long-term outcomes of unemployed young people may consider focusing on particular groups.

Life Course Disorder and Depression Among Older Women in the United States and Europe

Presenter: Sara Zobl, University of Michigan, USA

Socioeconomic status (SES) is a fundamental cause of health inequalities, an association that persists across the life course and strengthens with increasing age (Link & Phelan 1995; Miech & Shanahan 2000). Researchers in the United States and Europe have documented a strong link between low SES and poor physical and mental health (ten Kate, de Koster & van der Waal 2017; Phelan, Link & Tehranifar 2010). Effects are particularly strong among women with low educational attainment and who live in weak welfare states (Hansen, Slagsvold & Veenstra 2017). A cumulative stress model attributes worse later-life health to role conflict: women who complete major life events outside of a normative sequence experience higher levels of stress as they navigate social and economic institutions that were built to support a traditional life path. In this project, I compare incidence of depression in older age among European and American women with different levels of education who have followed traditional and non-traditional life courses. I have three main goals: to determine whether completing events outside of a normative order (defined as completing formal education, beginning full-time work, marrying, and then bearing a first child) predicts depression in older age; to determine if this relationship varies inversely by level of education; and to document whether the association weakens in the context of a stronger welfare state. To meet these goals, I use large-scale survey data to map women's life event sequences and compare incidence of self-reported depression by education level and across countries. I draw data from the 1979 National Longitudinal Survey of Youth (NLSY79), an ongoing nationally representative panel study of Americans currently aged 54-62, and from the third wave of the Survey of Health, Ageing and Retirement in Europe (SHARELIFE), a retrospective life-history survey of adults aged 50 and older in 14 European countries.

Longitudinal Examination of the Importance of Moral Obligation in Predicting Pro-Environmental Behavior

Presenter: Rita Žukauskienė, Mykolas Romeris University, Lithuania

Co-authors: Goda Kaniušonytė, Inga Truskauskaitė-Kunevičienė, Mykolas Romeris University, Lithuania

Fostering pro-environmental behavior (PEB) and designing appropriate interventions that could lead to PEB already in adolescence requires knowledge about its driving determinants (Heimlich & Ardoin, 2008; Steg & Vlek, 2009). Therefore, this study aimed to address this issue investigating for the first time the longitudinal predictors leading to pro-environmental behavior. In this study, we investigated the importance of moral obligations in predicting PEB, when controlling for intentions to apply PEB and behavioral habits. The sample included 450 adolescents (52% girls, Mage = 15.21, SDage = 0.64). A questionnaire designed was based on the comprehensive action determination model (CADM, Klöckner & Blöbaum, 2010). Included items from the model related to awareness of needs, awareness of consequences, social and personal norms, intentions, habits, perceived behavioral control, access to behavior, and pro-environmental behavior. All variables for the psychological model were measured by single indicator. Adolescents were assessed at three time points at schools, during regular school hours. Goodness of fit indices indicated that the structure of our hypothesized model was an adequate explanation of the data: $\chi2$ (df) = 109,17 (51), CFI/TLI= .971/.914, RMSEA [90% CI] = 0.050 [.037; .063]. Our model included hypotheses about several indirect effects. Thus, the bootstrap method with 5000 random samples was used to determine whether the implied indirect effects within our hypothesized model were statistically significant. Results indicated significant indirect effect of moral obligations on adolescents PEB via intentions and habits: specific indirect (Moral obligation at T1 $\rightarrow$ Habit at T2 $\rightarrow$ Behavior at T3) = -.04*; specific indirect (Moral obligation at T1 $\rightarrow$ Intention at T2 $\rightarrow$ Behavior at T3) = -.05*; total indirect (Moral obligation at T1 $\rightarrow$ Habit at T2 + Intention at T2 $\rightarrow$ Behavior at T3) = -.09**. These findings highlight the importance of fostering moral obligation when seeking to foster adolescents' pro-environmental behavior.

DAY 2   THURSDAY 26th SEPTEMBER 2019

PARALLEL SESSION 4

4A   SYMPOSIUM

Out of Home Care During Childhood: Impacts on Individuals and Families
Convenor/Chair: Amanda Sacker, University College London, UK
This symposium contains five papers presenting new research covering health and social aspects of children and families who have experienced out-of-home care, using data from multiple European countries. The first paper by Emily Murray and colleagues uses the UK ONS Longitudinal Study to show that out-of-home care in childhood is associated with increased mortality up to 40 years later. The second paper from Amanda Sacker et al uses the same data set to look at whether long-term health and social outcomes for care-givers' children differs from children without a cared-for child in the family. The third paper, by Ylva Almquist et al, uses a Swedish cohort of children born in 1953 to examine adult trajectories of suicide attempts among those who were placed in out-of-home care in childhood. The fourth paper by Mette Lausten et al uses mixed-method analyses of the Danish Longitudinal Study of Children in Care, to investigate how young care leaver's experience an everyday life, potentially influenced by mental health disorders, substance abuse, and transitions to adulthood. The fifth paper, by Mariela Neagu et al evaluates of the Lifelong Links project, where children in care have relations restored with extended family members or other significant adults.

Non-Parental Care and Mortality: A 40-Year Follow-Up Using the ONS Longitudinal Study
Presenter: Amanda Sacker, UCL, UK
Co-author: Emily Murray, UCL, UK
The adverse life-long consequences of being looked after as a child are well recognised. However, systematic evidence on outcomes for looked-after children beyond the early adult years is currently very limited. Data were used from 360,440 dependent children in the ONS Longitudinal Study (LS) from census years 1971-2001. Participants were followed from their age at baseline until their death or age at right-censoring (31/12/2013). Care status was categorised in three ways: (1) care any time during childhood, (2) in care at ages <10 (yes/no) and (3) in care at ≥10 years (yes/no). We used Cox proportional hazard regression to model hazard of death, fitted separately for each of the three care statuses. In this nationally-representative sample of England and Wales, 3.8% of LS members who had ever resided outside the parental home, and 2.6% who had not, had died by the end of the study. After adjustment for baseline age and census cohort, any care was associated with a 24% (95% confidence interval: 7%-43%) increased hazard of death. When models were fitted with care at <10y and ≥10y, only care ≥10y was associated with increased risk of mortality [age and cohort-adjusted HR: 1.45 (95% CI: 1.17,1.79). For LS members who were in the 1981 and 2001 cohort, reporting any care elevated their hazard of death compared with the 1971 cohort [HR care*1981: 1.47 (1.11,1.94); care*2001: 2.95 (1.64,5.29)]. Decades after they have been in care, children who did not reside with their parents were more likely to die at a younger age than children who had, particularly if they resided in a non-parental home when they were over the age of 10 years.

Childhood Experiences of Out-of-Home Care and Trajectories of Suicide Attempts from Emerging Adulthood Up Until Retirement Age: A Prospective Study of a 1953 Cohort
Presenter: Ylva B. Almquist, Stockholm University, Sweden
Co-authors: Yerko Rojas, Lars Brännström, Stockholm University
Children in out-of-home care (OHC) have higher rates of self-destructive outcomes, particularly suicide attempts, compared to those who grow up in their family of origin. Several studies have shown that this elevated risk persists into young adulthood. Yet, our knowledge about the longer-term influences of OHC on suicide attempts is limited. The aim of this study was to examine the risk for suicide attempts across adulthood among children who were placed in OHC. Drawing on a birth cohort of Swedish children born in 1953 (n=14,562), followed until retirement age, we used group-based trajectory modelling (GBTM) to cluster individuals according to their probabilities of hospitalisation due to suicide attempts (ages 20-63). The risks of following different trajectories was assessed by multinomial regression, comparing children with experience of placements in OHC because of family-related problems to their majority population peers (ages 0-19). For the GTBM results, individuals were grouped into six trajectories: 'Baseline trajectory' without hospitalisation due to suicide attempts, 'Peak in emerging adulthood', 'Peak early adulthood, 'Peak middle adulthood', 'Peak late adulthood', and 'Stable low across adulthood'. Multinomial regression showed that children in any OHC trajectory had 1.75-3.06 higher risks of following trajectories characterised by hospitalisation due to suicide attempts, as compared to the baseline trajectory. The

association did not vary according to the onset of the trajectories. Our findings suggest that the elevated risk of suicide attempts among former child welfare clients does not seize after young adulthood, pointing to the necessity for mental health services to continue to provide support for this vulnerable population across their adult life span.

A Challenging Transition to Adulthood: Mental Disorder, Drug Abuse, and in Neet?
Presenter: Mette Lausten, VIVE – the Danish Center for Social Science Research, Denmark
Co-author: Tea Torbenfeldt Bengtsson, VIVE, Denmark
Long-term outcomes for care leavers are considerably poorer than for youth in general. In addition, care leavers are challenged by mental health disorders, substance abuse and marginalization according to education and labour market. The purpose of this project was to investigate through mixed methods how young care leaver's experiences in everyday life are influenced by mental health disorders, substance abuse, and the challenges of transition to adulthood. Do they manage or do they suffer by being hit twice or even more by their circumstances? We used qualitative and quantitative analyses of Danish Longitudinal Study of Children in Care born in 1995 – (DALSC-CIC) using interviews, questionnaires, and administrative data on placements, risk behaviours, and the educational system. Results showed that mental health disorders, combined with substance abuse, play a significant role in how care leavers face the transition to adulthood. This specifically vulnerable group of young persons are no way near being included in the educational system or being enrolled in employment. In conclusion, it appears as if the Danish social welfare system cannot successfully compensate the young care leavers for their disadvantageous backgrounds and that the health system cannot offer successful psychiatric treatment. These alarming results calls for attention from those working with care leavers, but also policymakers, to rethink how to help these adolescents better overcome the many accumulative adverse events of being in the intersection of the social welfare system and the mental health system.

Lifelong Links: Restoring Identities for Children in Care
Presenter: Mariela Neagu, Rees Centre for Fostering and Education, University of Oxford
Co-authors: Lisa Holmes, Eran Melkman, Rees Centre for Fostering and Education, University of Oxford
Identity is a lifelong process based on continuity and differentiation on one's personal experiences and interaction with others. It is more prominent in some life stages such as adolescence and it can be exacerbated in unusual life circumstance that introduce discontinuity in a young person's environment. Although the process of placing children in out-of-home care is a measure that the state takes to protect children, it often results in severed ties with family members and significant others the child was attached to. Such experiences are likely to have a unique influence on the child's identity formation process making it highly complex and challenging. Recognising the need to support children in care to restore elements of their social networks and identity, the Lifelong Links programme has been developed by Family Rights Group and is being piloted across 12 local authorities in England; it aims to work with children who have been in care for less than three years, are under 16 and do not have a permanency plan (reintegration in the birth family or adoption) to restore their past connections with significant others. The study aims to investigate young people's perceptions and professionals' views in the way identity needs are addressed by the care system. It explores findings on the impact of Lifelong Links perceived by different stake holders: professionals, foster carers and young people in care who were involved in it. It draws on semi-structured interviews with children (20; ages 6-16), on interviews (25) and focus groups (11) with professionals and foster cares. Themes were identified using emerging and thematic coding. It contributes to the underexplored area of identity formation for children in care that may have important implications for social care policy and practice.

Are Care-Givers' Children Affected by Fostering? Long-Term Adult Outcomes
Presenter: Amanda Sacker, UCL, UK
Co-author: Emily Murray, UCL, UK
There is a growing body of evidence on the impact of caring on the children of care-givers, with evidence of both positive and negative impacts. Yet most of the findings are based on small unrepresentative qualitative research. We investigate whether (I) the long-term health and social outcomes for care-givers' children differ from that of children without a cared-for child in the family, (II) whether there are any differences in outcome for caregivers' children depending on their own age or their age relative to that of the cared-for children in the family, and (iii) if there are any differences in outcome depending on the child's gender or their gender relative to that of any cared-for children in the family. Data come from the Office for National Statistics Longitudinal Study (LS), a 1% representative sample of of England and Wales. The LS has linked records for each census after LS members were first sampled in 1971-2011 to create a longitudinal dataset. The children in this study were sampled in 1971-2001 and followed-up until 2011. Adult outcomes cover the domains of health, education, work, relationships and living arrangements. Childhood control variables include age; gender; migration history; ethnicity; family social class, education and employment; and number of other children in the household. Three level multilevel regression models with census years nested within LS children nested within household estimate the adult outcomes at ages 18-30, 31-40 and ≥41 years old for caregivers' and non-caregivers' children after controlling for their

sociodemographic characteristics. Interaction terms with age and gender test for effect modification. The results are important for fostering policy and practice and null findings could provide reassuring information for potential care-givers if they have children of their own.

4B   SYMPOSIUM

Social-Biological Transitions Using Integrated Social and Biological Data: Recent Findings, Europe 2019
Convenor/Chair: David Blane, Imperial College London, UK
Organised as an SLLS Interdisciplinary Health Research group (IHRg) initiative, this is the fourth annual symposium to report some recent findings by European researchers working with combined social and biological data in the general area of social-biological transitions (the processes by which the social becomes biological - social class, for example, producing social class differences in life expectancy and cause of death). This symposium series has presented much high quality research but, from IHRg's perspective, the challenge remains of developing a shared scientific framework from what at present is an impressive body of work which varies by academic discipline and national traditions. It is IHRg's intention to contribute to the emergence of such a framework by bringing together these disparate perspectives in a stimulating environment.

Testing Bioecological Enhancement and Stress Diathesis in a Multidimensional Framework of Socio-Economic Status: Non-Linear Gene-Environment Interactions in the IQ Development of German Twins
Presenter: Martin Diewald, Bielefeld University, Germany
Co-authors: V. Langa, Bastian Moenkediek, Lena Weigel, Bielefeld University, Germany
The Scarr-Rowe-hypothesis is the most prominent example of a bioecological-enhancement-mechanism in behavior genetics. It states that genetic influence on the development of intelligence (IQ) is larger in higher social strata, in other words: a genetic potential for IQ can unfold better in resource-rich rearing environments than in poor ones. Though theoretically convincing, up to now empirical evidence for a Scarr-Rowe-interaction (SRI) is mixed. An explanation for scattered evidence could be that not only a bioecological enhancement of IQ is at work but also a stress-diathesis mechanism, which either could be confounded by stressors associated with higher parental SES ("stress of higher status hypothesis") and thus attenuates the effect of SES, or defines clear cut lines of demarcation between socioeconomic groups that are not adequately identified by the usually applied linear modelling. Based on data of two cohorts of twins aged around 11 and 17 (N = 1,963 twin pairs) from the German Twin Family Panel (TwinLife) we check the relevance of these hypotheses by using a variety of parental resources measures as well as stress indicators linked to occupations, home environment, and individual health. Thus, we identify that indeed not only an enhancement mechanism is at work but also stress-diathesis and demonstrate that mixed evidence on the Scarr-Rowe-interaction is partly due to insufficient theoretical assumptions as well as poor operationalizations.

Working Longer at Older Ages and Morbidity-Mortality Risk Among Those Employed in Arduous Jobs
Presenter: Chiara Ardito, University of Torino, Italy
Co-authors: C. Sacerdote, A. d'Errico, A. Bena, Giuseppe Costa, University of Torino, Italy
Extending working lives is replacing early retirement in many countries of Europe, including Italy where this policy change started earlier than elsewhere. Doctoral research at the University of Torino examined possible unintended consequences of this policy shift, including the age-specific risk of hospitalisation for coronary heart disease & cerebrovascular stroke. An instrumental variable analysis of Italian linked register data (WHIP-Health: Work Histories Italian Panel) found that working longer at older ages increased the risk of such hospitalisation, but only among those employed in arduous jobs. Now the Ministry of Health in Rome has commissioned the University of Torino to conduct further research, some preliminary results of which will be presented to the symposium.

Life Course Analysis, Life Course Biology and the Nature of Health at Older Ages
Presenter: Stéphane Cullati, University of Geneva, Switzerland
Co-author: David Blane, Imperial College London, UK
The presentation will overview the results of recent publications from the LIFETRAIL project in terms of their fit with life course biology, as depicted by the generalised Strachan-Sheikh model. Using mostly data from SHARE (Survey of Health, Ageing and Retirement in Europe), LIFETRAIL examined a range of health outcomes at ages 50 years & older in relation to socio-economic circumstances in childhood and adulthood. The presentation will unite childhood socio-economic circumstances with the phase of biological growth & development and adult socio-economic circumstances with the phase of biological decline, paying particular attention to the association of socio-economic disadvantage with, respectively, suboptimal growth and accelerated decline. Drawing on LIFETRAIL publications, the presentation will identify which of SHARE's measures of health fit the Strachan-Sheikh model, and which do not do so; and ask whether those which do fit can plausibly be seen as indicators & aspects of positive health.

Social and Biological Predictors of Falls at Older Ages
Presenter: Jessica Abell, University College London, UK
Co-authors: Camille Lassale, David Batty, Paola Zaninotto, University College London, UK
In the UK one in three people over 65 years of age experience a fall each year. Falls serious enough to result in hospital admission are especially problematic, since they can lead to an increased likelihood of future disability, loss of independence, and premature mortality. Understanding the factors that may determine the risk of experiencing a fall, which requires admission to hospital, is therefore an important priority. This paper seeks to examine this issue using Hospital Episode Statistics (HES) data that have recently been linked with the English Longitudinal Study of Ageing (ELSA). We examine the association between a range of predictors (demographic, social environment, physical and mental functioning) drawn from wave 4 of ELSA with the first occurrence of hospitalisation due to an accidental fall, identified using ICD-10 codes. Analysis using Cox regression suggest a range of factors are negatively associated with admission to hospital with diagnosis of a fall, such as living alone (HR=1.42; 95% CI: 1.19, 1.68), urinary incontinence (HR=1.33; 95% CI: 1.09, 1.61) and depressive symptoms (HR=1.50; 95% CI: 1.23, 1.82). The prevention of serious falls amongst older people will require these determinants to be identified and where possible to be managed effectively by community health and social care services.

Traumatic Brain Injury and Gastrointestinal Disease
Presenter: Scott Montgomery, University of Örebro, Canada
Co-author: Ayako Hiyoshi, Katja Fall, University of Örebro, Canada
Traumatic brain injury (TBI) has a social gradient due to differences in lifestyle factors and occupational exposures. While concussion without other damage to the central nervous system usually resolves, there may be delayed consequences. Acute gastrointestinal tract dysfunction after TBI has been reported, possibly due to factors such as altered signalling between the central nervous system (CNS) and small intestine, resulting in functional changes including impaired motility. The presentation is concerned with assessing whether this dysfunction can persist after being triggered by concussion, resulting in diagnosis of irritable bowel syndrome (IBS) at least one year after exposure. National Swedish linked register data were used to identify all individuals born in Sweden during 1970-2000, including those who as hospital patients were diagnosed with concussion and, as controls, fractured limb bones and those hospital outpatients diagnosed with IBS; a total of some four million people were followed from birth to a maximum of age 44 years. After age 10 years the association between concussion and subsequent IBS was found to increase with age (by 31-40 years the adjusted hazard ratio was 3.22, 1.61-6.44 95% CI); associations not found with limb fractures. Irritable bowel syndrome could be a delayed and persistent consequence of concussion; a finding which, if replicated, could be examined further for evidence of a more general relationship between head injury and gastrointestinal disease.

4C SYMPOSIUM

Harmonising Data for Comparative Research: New Findings and Resources on Mental Health, Cognition, Physical Activity and Epigenetics from the CLOSER Consortium
Convenor/Chair: Dara O'Neill, UCL Institute of Education, UK
CLOSER, a consortium of 8 leading UK longitudinal studies and related organisations, works to maximise the use, value and impact of longitudinal research nationally and internationally. As part of this, CLOSER coordinates efforts to make longitudinal data collected by social and biomedical studies more comparable and amenable to cross-study and cross-generational inquiry. Synthesising data from different sources can be highly challenging, but through the sharing of experiences and learning, we can help establish best practice and improve the viability and efficacy of our harmonisation efforts and comparative research aims. This symposium will offer insights from four new CLOSER harmonisation projects, covering a broad range of applied research areas but with a common focus on the role that data harmonisation can play in facilitating life-course research. The talks will address harmonisation issues specific to their topics (mental health and cognitive measures, physical activity, and epigenetic data), and in the process identify common considerations of relevance to all longitudinal researchers. The symposium will conclude with a reflection on the new insights established and an overview of the varied resources that CLOSER makes available to facilitate longitudinal and life-course research.

Harmonisation of Mental Health Measures in the British Birth Cohorts
Presenter: Eoin McElroy, UCL Institute of Education, UK
Co-authors: Praveetha Patalay, Dawid Gondek, Alissa Goodman, George B. Ploubidis, UCL Institute of Education, UK; Marcus Richards, MRC, University College London, UK; Kate Northstone, University of Bristol, UK; Pasco Fearon, University College London, UK
Common forms of psychological distress (e.g. depression, anxiety) contribute substantially to the global burden of disease. The British birth cohorts contain rich data on these difficulties, and therefore represent a key resource in our attempts to understand the developmental course of these phenomena, along with changes in trends across

generations. However, the instruments used to assess mental health vary substantially both within and across these studies. As such, this project aims to harmonise the various measures of mental health that are available in the British cohorts. This study uses data from NSHD, NCDS, BCS70, ALSPAC and MCS. This paper will discuss the two-step process that is currently being used to construct these harmonised measures. In the first step (completed), two researchers independently identified candidate items from different measures that tapped the same underlying construct (e.g. low mood, fatigue, worry). Tests of inter-rater reliability indicated a high level of agreement between the two researchers. In step-two (ongoing), the suitability of these items for harmonisation will be explored by testing for measurement invariance both within and across the cohorts. Challenges, limitations and learnings from this project will be discussed. In summary, by harmonising these measures, we will be able to explore the development of mental health difficulties across the life course, compare trends across generations, and examine whether established predictors of mental health difficulties have remained stable in the context of societal change. Moreover, this project will provide guidance for future researchers and will inform the development of future sweeps/studies.

'The Devil is in the Detail': Assessment and Harmonisation of Cognitive Measures in British Birth Cohorts

Presenter: Vanessa Moulton, UCL Institute of Education, UK
Co-authors: Eoin McElroy, Gabriela Conti, Emla Fitzsimons, George B. Ploubidis, Alice Sullivan, UCL Institute of Education, UK; Marcus Richards, MRC, University College London, UK

A widely-used feature of the British birth cohorts is the cognitive measures collected throughout childhood, and in adult life. Nevertheless, the cognitive tests vary greatly, both within and between cohorts. The overall aim of the project was to assess and harmonise the cognitive measures in five British cohorts the NSHD, NCDS , BCS70 , ALSPAC and MCS. Our work consisted of identifying and documenting, where possible, the cognitive tests, leading to establishing candidates for harmonisation within and across cohorts, and where possible constructing factors at different levels of granularity. This paper discusses our work, types of decisions made, challenges, limitations and learnings. A first step was to identify which tests to include, as measures of 'cognition' vary depending on academic discipline, historical context and characteristics of the population studied. Over 140 cognitive tests were documented covering (where available) details of the test (measurement, administration, procedure, source, scoring, technical resources), data (variables, age of participants, descriptive statistics) and journal reference examples. In preparation for harmonisation, we included cross-referencing of the same tests and the classification of tests using the Cattell-Horn-Carroll framework to facilitate harmonisation. Some other major challenges included, few identical tests administered or comparable item-level measures within and across cohorts, differences in ages and populations completing the tests and varying complexity of test scores. In conclusion, this work will provide detailed documents and technical resources to inform individual work, however the use of retrospective harmonised cognitive measures will depend on the research question, the academic discipline and the acceptability of using the lowest common denominator.

Socioeconomic Differentials in Physical Activity by Age and Cohort: Findings from Six UK Longitudinal Studies

Presenter: Meg Fluharty, UCL Institute of Education, UK
Co-authors: Snehal Pinto Pereira, Barbara Jefferis, University College London, UK; Nicholas Timpson, University of Bristol, UK; Lucy Griffiths, Swansea University Medical School, UK; David Bann, UCL Institute of Education, UK; Mark Hamer, Loughborough University, UK; Rachel Cooper, Manchester Metropolitan University, UK; Michaela Benzeval, University of Essex, UK

Physical activity is an important modifiable determinant of health across life. Despite public health campaigns highlighting the importance of physical activity, the prevalence of physical inactivity remains high in the UK, particularly amongst socioeconomically disadvantaged groups. However, it is unclear if these inequalities vary systematically by age, sex, or ethnicity. This work package uses data from six studies included in the CLOSER consortium: Understanding Society, and birth cohorts initiated in 1946 (MRC National Survey of Health and Development), 1958 (National Child Development Study), 1970 (British Cohort Study), 1991-92 (Avon Longitudinal Study of Parents and Children), and 2000-01 (Millennium Cohort Study). It seeks to address two main objectives, to: 1) identify and document all measures of physical activity and sedentary behaviour available; and 2) test whether associations between lifetime socioeconomic position and physical activity vary by: a) age, sex and ethnicity in Understanding Society; b) age, sex and birth year in the British birth cohorts. In Understanding Society (n=44,903), differences in activity were found by education, age, sex, and ethnicity—yet the direction of associations differed by activity domain (travel, occupational, and leisure-time). For example, OR of mild exercise once/week (vs none) was 1.77 (95% CI: 1.67-1.88) for degree-level vs GCSEs/lower; 1.15(1.10-1.20) for females vs males; 1.89(1.74-2.05) for adults 60y+ vs 20-29y; and 1.28(1.12-1.46) for Asian vs Caucasians. Education related differences were largest among older ages (P<0.001) and females (P<0.001). We aim to extend these analyses using the birth cohorts, enabling us to better understand how these inequalities change with birth year and age.

Characterizing the Human Methylome Across the Life Course

Presenter: Esther Walton, University of Bristol, UK

Co-authors: Riccardo Marioni, University of Edinburgh, UK; Hannah Elliott, Caroline Relton, University of Bristol, UK; Juan Castillo-Fernandez, Jordana Bell, King's College London, UK

Epigenetic mechanisms regulate gene expression and can impact health and disease at different stages throughout life. However, there is no clear understanding of what constitutes healthy patterns of epigenetic variation and how these patterns change during life. To synthesise a life course methylome using multiple datasets, we need methods to assess heterogeneity in methylomic data across cohorts and harmonise these data. We obtained DNA methylation data from 7 cohorts across the UK (age 0-98 years; n=10,043 with an average of 60% females per cohort (range: 0-100%). Cohorts spanning several decades were split into 10- year age bins, resulting in 28 datasets. To assess cross-study heterogeneity, we used principal component analysis over eleven summary statistics (e.g. mean, standard deviation) on up to n=857,071 methylation probes and carried out epigenome-wide metaregressions of age. Principal component analysis showed that some summary statistics (e.g. mean methylation) were more affected by study heterogeneity than others (e.g. variance in methylation). Based on meta-regression, we found age effects in 87% of methylation probes, but study heterogeneity was large (average I2=98%). These findings will be compared to cross-harmonized data. Our analyses show that substantial heterogeneity between datasets limits our ability to describe methylation patterns across the life course. We will minimize these effects through cross-cohort harmonization methods. This map of a life course methylome may highlight critical windows for healthy development or vulnerability to disease.

The Role of Harmonisation in Comparative Research: Overcoming Obstacles, Uncovering Opportunity

Presenter: Dara O'Neill, UCL Institute of Education, UK

Co-author: Rebecca Hardy, UCL Institute of Education, UK

Comparative research can be a particularly challenging endeavour, particularly where data are sourced from different studies or time periods. Bringing together such diverse data requires us to consider a wide range of potential sources of divergence, each of which could impact on the ease and feasibility of harmonisation. Pertinent differences may exist between the measurement tools used, assessment practices adopted, or data management decisions made. More broadly but as importantly, there may be wider contextual issues that could differentially inform the meaning of the data we are seeking to integrate. However, the importance of addressing such challenges is demonstrated by the opportunity that can be obtained through these comparative research efforts to establish improved understanding of our development over the life course and across generations. The preceding presentations in this symposium have illustrated some specific examples of the challenges that researchers can experience when harmonising and analysing longitudinal data from different sources. This brief concluding talk will summarise the learning these and other CLOSER harmonisation projects can offer and will provide an overview of the diverse and growing number of additional resources that CLOSER makes available to facilitate longitudinal and life course research.

4D   SYMPOSIUM

Advances to the Life Course Approach from Mexican Socio-Demography

Convenor/Chair: Nina Castro-Mendez, Facultad de Ciencias UNAM, Mexico

This symposium presents research findings from sociodemography in Mexico that use the life course to analyze diverse topics and population groups through multiple methodological tools. The first paper presents a compilation of Mexican research that has used the life course as a theoretical and methodological approach. The second paper systematizes a large amount of information from a panel to approach to the short-term work trajectories for young people. The objects of study of the last two research are diverse domains of women's trajectories. One of them focuses on the living arrangements trajectories of single mothers, a population subgroup that has gained importance in the last decades. The other one concentrates on the work trajectories, paid work and care work, of Mexican women at the end of the 20th century. This symposium is a space where we share different views of life courses in a particular context, Mexico, which is a country that in many ways represents the Latin American region. The region evolves in a different way from the European and North America. In Mexico the life expectancy is 75 years, the global fertility rate is 2.3 children per woman and the average schooling is 9 years.

The Life Course Approach and Mexican Socio-Demography

Presenter: Mercedes Blanco, Centro de Investigaciones y Estudios Superiores en Antropología Social/ El Colegio de México

Co-author: Edith Pacheco, Centro de Investigaciones y Estudios Superiores en Antropología Social/ El Colegio de México

In Mexico, the life course approach began to be known and used, particularly in the sociodemographic field, in the late 1990s. Even though there was some exceptional production in the late 1980s, such as a doctoral dissertation by

a Mexican student who had studied in the United States, it was not until the new millennium that this approach - which some already consider a paradigm- acquired much greater presence. The purpose of this paper is to review the emergence and development of the theoretical-methodological orientation of the life course approach in Mexico. The guiding principles and central concepts used will also be presented, offering samples of the main topics addressed in Mexican literature since the 1980s in order to answer the question of how historical events and economic, demographic, social and cultural changes shape individual lives and population aggregates (cohorts or generations) in Mexico.

Short-Term Work Trajectories for Young People in Mexico: Changes in the Long Term and Generation Time
Presenter: Ana Escoto, Facultad de Ciencias Políticas y Sociales UNAM, Mexico
The labor insertion of young people is a transition to adulthood of great importance in Mexico. Although the expansion of education has delayed this transition, a large part of the working population is young, in a context of low wages and precarious working conditions. Hence, studying the insertion of young people and their evolution over time becomes essential, as well as the changes that have meant being young in the last decade. The National Survey of Occupation and Employment, since 2005 has provided information in Mexico on short-term trajectories, following individuals for five quarters. This information has already developed a set of 50 short longitudinal waves. Previous studies have shown that Mexico has high levels of labor mobility even when insertion is analyzed in such short periods. The present analysis focuses on examining the trajectories of inclusion and exclusion of the short-term labor market -within a longer time frame and following five-year pseudo-cohorts of young individuals (15- 29 years) from 2005 to date. The trajectories are constructed from the sequences of permanence and impermanence in the labor market. The typologies of these trajectories are compared between long-term periods (between 2005, 2010 and 2015), as well as between generational groups. This strategy allows establishing the changes that have arisen in the calendar time and among the cohorts of the individuals through multinomial analysis of the probability of belonging to a specific sequence type among individuals.

Inequality and Living Arrangements Trajectories of Single Mothers in Mexico
Presenter: Landy Sánchez Peña, El Colegio de Mexico
Co-authors: Julieta Pérez Amador, Edith Pacheco, El Colegio de Mexico
Income inequality has increased substantially in Mexico since the 1980s, with major implications for family behavior, health, child wellbeing, and the intergenerational transmission of disadvantage. The consequences of rising inequality on households' economic resources undoubtedly vary by their position in socioeconomic spectrum. At the same time, the Mexican population has experienced important demographic change that started with a fast mortality and fertility decline and had continued with a switch between cohabitation and marriage prevalence and a notable increase in separation and divorce. The later, in tandem with gender segregation of migration flows, has resulted in an increase of single mothers living without a co-resident partner, either in one-family or in extended-family households. While income inequality has shaped these demographic transformations, in a sort of feedback loop, uneven demographic change has the potential to further increase inequality—a rising number of families headed by single mothers is often consider as an important factor of rising income inequality. In this paper we use data from the 2017 Mexican Retrospective Demographic Survey and apply event history analysis and decomposition technics to analyze the effect of macroeconomic conditions on the risk of (1) becoming a single mother and (2) changing living arrangements as a result of single motherhood. We conduct the analysis focusing on cohort change by socioeconomic status and origins, in an effort to assess the contribution of (1) increasing levels of single motherhood and (2) changes in single mother's living arrangements to the rise in household income inequality. With this study we aim to contribute to the debate on the effects of demographic change in the reproduction of inequalities.

Women's Working Trajectories in the Second Half of the XX Century
Presenter: Nina Castro, Facultad de Ciencias UNAM, Mexico
In Mexico, research has documented the increase of women's paid work more than three times during the last 65 years (12.9% in 1950 to 43.93% in 2016). In addition to paid work, women are the main ones in charge of unpaid work, that is, housework and care work. Some estimates indicate that women spend almost three times weekly hours on domestic activities compared to men. The social inequalities between women and men are reflected in different moments of the life course as a greater difficulty for women to access to paid work. The objective of this research is to present an approach to paid work and unpaid work from a biographical perspective. To carry out this task, the patterns inherent to work experience are described in their association with the family life course of Mexican women. I used the information provided by the Retrospective Demographic Survey (EDER) of 1998. The analysis included the cohorts of women born in the 1930s and the 1950s, women who have been identified as pioneers of the increase in paid work. Optimal Matching is used to analyze labor-family sequences. The distances between the sequences are grouped through Cluster Analysis. The analysis grouped the sequences into a typology with 3 categories: 1) the trajectories that focus on unpaid work, 2) the trajectories that prioritize paid work and 3)

the trajectories that postpone the arrival of the children. One of the main contributions of the research is the longitudinal approach to the work, paid and unpaid work, performed by Mexican women of the last half of the XX century. A novel finding for these birth cohorts is the postponement of the family formation.

4E   PAPER SESSION: SEQUENCE ANALYSIS

Linked Lives and Couples' Later Life Well-Being in Finland and Germany: A Three-Channel Sequence Analysis of Couples' Life Courses Across Countries

Presenter: Andreas Weiland, Mannheim Centre for European Social Research, Germany
Co-authors: Katja Möhring, Mannheim Centre for European Social Research, Germany; Miika Mäki, Anna Rotkirch, Population Research Institute, Finland

We apply a multichannel sequence analysis (MCSAQ) to the life courses of couples of the birth cohorts 1926-1967 in Finland, East- and West-Germany covering the age 18 to 50 (N=2428). Based on life history information from the Survey of Health, Ageing and Retirement in Europe (SHARE) for the subdomains working life and fertility we define three channels of trajectories including both spouses' employment histories and their common fertility history. Our country cases represent different types of welfare states and gender cultures as well as partly diverging historical developments. Based on comparative welfare state theory and a bargaining perspective on the division of labour within couples, we present a theoretical framework to explain cross-national and cross-cohort differences in couples' life course arrangements. We identify seven clusters of couples' life courses by means of MCSQA and link these types to later life subjective well-being (SWB) for each partner and the difference in couples' SWB. Our results show, in line with previous research, that couple's with high symmetry, i.e. dual earner couples, and high fertility are much more prevalent in Eastern Germany and Finland. West German couples with high fertility predominantly depict an asymmetric gendered division of labor alongside a Male Breadwinner or 1.5-earner arrangements, whereas Dual Earner arrangements are linked to low fertility. Preliminary regression analyses indicate that clusters with high fertility and high symmetry are linked to higher life satisfaction of both spouses in Finland and East Germany, while West Germany high fertility couples with an asymmetric division of labor exhibit a higher SWB. We find the largest differences in spouse's life satisfaction in those couples that deviate from the predominant couples' life course arrangement within a country: i.e., Male Breadwinner and 1.5-earner couples in Finland, and Dual Earner couples in West Germany.

Trajectories of Family Economy and Family Structure and Health Consequences Among U.S. Heterosexual Couples: A Multichannel Sequence Approach

Presenter: Wen Fan, Boston College, USA

With increasing female labor force participation, rising male unemployment, and more widespread gender-egalitarian attitudes, recent decades have witnessed a profound change in heterosexual family dynamics. Despite growing research on the consequences of the family economy and family structure on housework division and marital outcomes, little is known regarding its health consequences, and most research is static in nature, capturing only a snapshot at one particular time. To fill these research gaps, I draw on the U.S. Panel Study of Income Dynamics to analyse 15 years of data of heterosexual men and women since their first year of marriage. I first use multichannel sequence analysis to identify patterned clusters that simultaneously capture (1) sequences of respondents' contribution to the couple's total earnings (dependent: 0%; secondary-earners: 1%-39%; equal-earners: 40%-60%; primary-earners: 61%-99%; and sole-earners: 100%), and (2) sequences of marital status and parental status (married no kid, married with a pre-schooler, married with an older kid, divorced with no kid, divorced with a pre-schooler, and divorced with an older kid). I identify 6 patterned constellations for women: (1) secondary/equal-earner with intact marriage (40%); (2) secondary-earner with kids (15%); (3) equal/primary-earner with kids (14%); (4) transition to sole-earner and divorced (14%); (5) transition from dependent to secondary-earner with premarital births (10%); (6) transition from secondary-earner to dependent with kids (7%). Seven patterned constellations are identified for men: (1) primary/sole-earner with intact marriage (32%); (2) equal/primary-earner with intact marriage (21%); (3) equal-earner (14%); (4) transition to primary-earner (14%); (5) transition to sole-earner with high divorce risk (10%); (6) transition from equal-to primary/sole-earner with premarital kids (6%); (7) secondary-earner with divorce and remarriage (2%). Binary logit regression models will be used as the next step to determine the health consequences of long-term sequences of the family economy and family structure.

An Introduction to the Sequence Analysis Association (SAA)

Presenter: Emanuela Struffolino, WZB - Berlin Social Science Center, Germany
ABSTRACT COMING SOON

4F   PAPER SESSION: PHYSICAL HEALTH

Socioeconomic Status Disparities in Early Child Obesity: Lessons from Eight Latin American Countries

Presenter: Alejandra Abufhele Milad, Pontificia Universidad Catolica de Chile, Chile

Co-authors: Jane Waldfogel, Columbia University, USA; Marigen Narea, Kasim Allel, Universidad Catolica, Chile

Child obesity has become a global public health crisis, affecting both developing and developed countries1. Obesity is associated with short and long-term adverse health outcomes such as chronic diseases, cognitive/socio-emotional deterioration, and unhealthy lifestyle practices and habits2,3,4. While obesity is rising overall, there is an emerging socioeconomic gradient that has implications for child outcomes6. The objective of this study is to analyse how families' socioeconomic status (SES), proxied by maternal education, is associated with obesity prevalence in young children under the age of five in eight Latin American countries. This study uses eight nationally representative child cohort datasets. Each of the datasets has detailed data about families' SES, a rich array of family factors in early childhood, and objective measurements of child height and weight. To understand the main associations between SES and obesity, we use logistic multivariate analyses controlling for demographic confounders. The results from the models will then be used to decompose the factors that explain SES gaps. This study uses harmonized data across the eight countries. To construct consistent measures of SES, proxied by maternal education, we studied the national educational system of these eight countries and described the distribution of educational status (maternal education) by country. Then we categorised the different levels of maternal education into 4 or 6 categories. Then, we plotted two types of graphs: 1) with four educational categories; 2) with six educational categories. Previous evidence shows that low SES is the most significant predictor of child obesity5; however, the magnitude of this association varies largely between countries. The next step is to analyse to what extent the gradient in maternal education observed across these eight countries is associated with early childhood obesity and the factors accounting for those associations.

References:

1. Ebbeling CB, Pawlak DB, Ludwig DS. Childhood obesity: public health crisis, common sense cure. The Lancet 2002;360(9331):473- 482.

2. Flegal KM, Kit BK, Orpana H, Graubard BI. Association of all-cause mortality with overweight and obesity using standard body mass index categories: a systematic review and meta-analysis. Jama 2013;309(1):71-82.

3. Erickson SJ, Robinson TN, Haydel KF, Killen JD. Are overweight children unhappy?: Body mass index, depressive symptoms, and overweight concerns in elementary school children. Archives ofpediatrics & adolescent medicine 2000;154(9):931-935.

4. Renehan AG, Tyson M, Egger M, Heller RF, Zwahlen M. Body-mass index and incidence of cancer: a systematic review and meta-analysis of prospective observational studies. The Lancet 2008;371(9612):569- 578.

5. Rogers, R., Eagle, T. F., Sheetz, A., Woodward, A., Leibowitz, R., Song, M., Sylvester, R., Corriveau, N., Kline-Rogers, E., Jiang, Q., Jackson, E. A., … Eagle, K. A. (2015). The Relationship between Childhood Obesity, Low Socioeconomic Status, and Race/Ethnicity: Lessons from Massachusetts. Childhood obesity, 11(6), 691-5.

6. Viner RM, Cole TJ. Adult socioeconomic, educational, social, and psychological outcomes of childhood obesity: a national birth cohort study. Bmj 2005;330(7504):1354.

Trajectories of Depressive Mood Following the Onset of a Chronic Health Condition

Presenter: Caroline Debnar, Swiss Paraplegic Research, Switzerland

Co-authors: Valérie Carrard, Claudio Peter, Swiss Paraplegic Research, Switzerland; Davide Morselli, University of Lausanne, Switzerland; Michel Gisela, University of Lucerne, Switzerland; Nicole Bachmann, University of Applied Sciences and Arts, Switzerland

Due to the global population aging, the prevalence of Chronic Health Conditions (CHC) is increasing. The onset of a CHC can have a severe impact on individuals' life affecting well-being and mental health. Nonetheless, people react differently and present different trajectories. This study's goal was to investigate depressive mood trajectories from one year before to four years after onset of a CHC. Its specific objectives are to identify the number and shape of longitudinal depressive mood trajectories and to test biopsychosocial factors predicting these trajectories. Two samples were drawn from the Swiss Household Panel dataset: a CHC sample (n = 361) and a 1 to 1 matched comparison sample of healthy individuals. Latent growth mixture modelling was used to identify depressive mood trajectories over six years. Biopsychosocial factors predicting trajectories were then tested using multinomial logistic regression. Four depressive mood trajectories have been identified in the CHC sample: resilience (53.9%) characterized by stable low depressive mood, chronic (22.2%) displaying persistently high depressive mood irrespective of CHC onset, delayed (15.0%) with low depressive mood at baseline followed by progressive increase of depressive mood, and recovery (8.9%) showing an increase of depressive mood around the onset followed by a gradual decline. In the comparison sample, two trajectories were identified: a stable low depressive mood (90%) and a chronic elevated depressive mood (10%). Protective factors associated with resilience trajectory membership in the CHC sample are: less daily impediment, higher satisfaction with health, higher extraversion, higher emotional stability, less past negative life event, less spirituality, higher relationship satisfaction, and being male. This study

shows that individuals with a CHC have a higher risk of elevated depressive mood compared to more healthy individuals. Furthermore, this study identified protective factors offering avenues for targeted intervention to alleviate the psychological impact of a CHC.

Tracking the Physical Activity Levels of the Growing Up in Ireland Child Cohort from Childhood to Adolescence
Presenter: Desmond O'Mahony, Economic and Social Research Institute, Ireland
Co-author: Eoin McNamara, Economic and Social Research Institute, Ireland
Late adolescence is marked by a combination of health risks, including reduced levels of physical activity and increased prevalence of overweight. These issues are strongly associated with the early development of many life-threatening non-communicable diseases. This study aims to identify gender differences in longitudinal physical activity trends amongst a large cohort of Irish children over 8 years of follow-up; highlighting predictors of reduced physical activity separately for boys and girls. Longitudinal self-report physical activity data was gathered from the Growing Up in Ireland Child Cohort (n=6,039; 51% male), a nationally representative group, at ages 9, 13 and 17/18 years. Time spent in moderate-to-vigorous physical activity (MET-minutes per week) was estimated for all participants at all ages, and changes in activity levels between 9 and 17/18 years were calculated. Trends in overweight/obesity were also measured via repeated body mass index (BMI) measurements. Following a priori stratification by gender, sociodemographic, behavioral, psychological and biological predictors of physical activity decline were explored via hierarchical regression analysis. Boys were more active than girls at both 9 (1645±557 versus 1516±577 MET-mins/wk) and 17/18 years (1158±611 versus 833±569 MET-mins/wk). Both groups experienced a significant decline in physical activity levels between 9 and 17/18 years, although the decline was greater for girls (711±771 MET-mins/wk) than boys (550±791 MET-mins/wk). Key predictors of physical activity decline for boys included baseline activity, BMI, family income/structure, chronic illness and self-perception. For girls, key predictors included baseline activity, parental education, friendships and self-perception. As expected, boys were consistently more active than girls, although physical activity levels for both groups declined significantly throughout adolescence. This is a complex issue, influenced by both personal and contextual factors. Furthermore, some predictors of decline were only relevant to one gender, pointing to a need for gender-specific interventions in policies aiming to improve physical activity levels.

Childhood Socio-Economic Position and Midlife Physical Functioning: Exploring Associations and Underlying Mechanisms in the 1958 British Birth Cohort
Presenter: Ayesha Ahmed, University College London, UK
Co-author: Snehal Pinto Pereira, University College London, UK
Background: Evidence suggests childhood socioeconomic position (CSEP) is associated with adult physical functioning (PF). However, literature is scant on key intermediaries that explain this relationship. In the 1958 British birth cohort, we aimed to examine (1) the association between CSEP and PF in midlife, and (2) potential pathways (social, psychological, behavioural and biological) that explain the CSEP–PF relationship.

Methods: CSEP was recorded at birth (father's occupational class: 4 categories). PF was assessed at 50y using the validated PF subscale of the SF-36 questionnaire; the bottom (gender-specific) 10% classified as poor PF. Prospectively collected data represented each potential intermediary pathway: social (42y socioeconomic position, 33y education), psychological (42y mental health), behavioural (41y smoking and drinking, 42 physical activity) and biological (45y adiposity, blood pressure, lung function, HbA1c, blood lipids). Associations and pathways between CSEP and PF were examined using logistic regression. Adjustments were made for early-life covariates (birthweight, maternal smoking, childhood disability and childhood illnesses).

Results: In unadjusted analysis (n=4056 men, n= 4375 women) ORs for poor PF successively increased with decreasing CSEP. After adjustment for covariates, this trend was maintained e.g. in men, compared to the professional/managerial class, adjusted-OR for skilled non-manual was 1.42 [0.77,2.62]; skilled manual was 2.61 [1.69,4.04] and partly skilled/unskilled was 3.35 [2.10,5.33]. A sizable magnitude of the CSEP–PF association was explained via the social pathway, particularly in women. Behavioural factors explained associations to a lesser extent. Biological factors completely attenuated associations in women, whereas associations remained in men. Associations were little affected by psychological factors.

Conclusion: While there was a trend between lower CSEP and higher risk of poor midlife PF in men and women, intermediary pathways differed by gender. Better adult education and employment opportunities may help alleviate the burden of low CSEP for all, however improving biomedical profiles may have greater benefits for women.

Socioeconomic Position and Body Composition Across the Life Course: A Systematic Review

Presenter: Charis Bridger Staatz, University College London, UK
Co-authors: Rebecca Hardy, Yvonne Kelly, Rebecca Lacey, Anitha George, Joanna Blodgett, University College London, UK

The relation between socioeconomic position (SEP) and obesity measured by body mass index (BMI) has been extensively reviewed, but there is less research on the association between SEP and body composition. Fat distribution and muscle quality have been linked to adverse health outcomes such as cardiovascular disease, diabetes and poor physical capability. There is some evidence of secular changes in body composition, but it is unclear whether there have been secular increases in social inequalities in body composition. The aim is to perform a systematic review of the existing literature on the association between SEP and body composition, specifically investigating the associations between (a) SEP and body composition in childhood, (b) SEP and body composition in adulthood, and (c) childhood SEP and adult body composition. We also aim to assess any secular changes in socioeconomic inequalities in body composition. The systematic review will be carried out according to PRISMA guidelines and the protocol has been registered with PROSPERO. An electronic search of MEDLINE, Embase Classic + Embase and SPORTDiscus will be conducted. Two independently working reviewers will complete abstract screening, full-text screening, data extraction and quality assessment. Disagreements will be resolved through discussion. Studies will be included if written in the English language, using any recognised measure of SEP and a recognised measure of body composition in the general population. A citation search will be used to identify additional papers. Due to expected heterogeneity, a narrative synthesis is expected. In the case of consistency in reporting of associations, a random-effects meta-analysis will be used. Preliminary searches have identified 5,802 potential abstract for screening. Full results to be reported following completion of systematic review and will summarise the existing evidence on social inequalities in body composition. Findings will identify where there are gaps in knowledge and where further research is required.

4G   PAPER SESSION: PRECARIOUS TRANSITIONS

All You NEET is …? The Effects of Programme Participation on the Labour Market Integration of Young Welfare Recipients

Presenter: Tamara Harrer, Institute for Employment Research (IAB), Germany

The average European youth unemployment rate of 16.8% in 2017 still indicates to the ongoing problems young people face even nearly ten years after the Great Recession. One critical life stage is the transition from school to work. If problems, such as periods of disconnectedness, occur during this transition, this can lead to long-lasting and scarring consequences over the whole life course. With (long) periods of neither participating in the labour market nor the educational system, youth experiencing NEET (Not in Employment, Education or Training) might face disadvantages for the rest of their lives compared to people without (or with short) NEET experience. One solution to help young individuals overcome these disadvantages lies in their participation in active labour market policies that aim at increasing the participants' employment opportunities. Using administrative data and methods of propensity score matching, this paper finds positive participation effects on the probability of employment and vocational training for unemployed welfare recipients aged 20 to 25 years. Further, participation decreases the probability of withdrawing from the labour market. The effects are more pronounced for individuals with longer NEET periods during the transition from school to work. The paper's findings suggest the following: First, participation in active labour market policies helps integrating young welfare recipients into the labour market, especially if they take place within firms. Second, active labour market policies address young people's individual deficits adequately as they especially manage to help participants with longer NEET durations and employment impediments. However, there are still welfare recipients with too low labour market attachment – for them the mere participation in active labour market policies might not be enough.

Exploring the Concept of "Long Term Precariousness": Towards a New Indicator

Presenter: Magda Nico, CIES-IUL /ISCTE-University Institute of Lisbon, Portugal
Co-authors: Nuno de Almeida Alves, Helena Carvalho, Diana Carvalho, CIES-IUL /ISCTE-University Institute of Lisbon, Portugal

Precariousness' increasingly academic and political popularity and its undeniable presence in the contemporary labour market call for a more critical and thorough analysis and measurement of the process, especially when arguments of it being "the new normal" for the younger generations are so current. The team of the Project "Linked Lives: a mixed multilevel longitudinal approach to family life course" develops a two-folded argument in this presentation. 1) The conceptual confusion and ambiguity of the term "precarity" is tackled, even if recognized as consequence of the complexity and variation of the phenomenon over historical time and across generations. Labour market precarity has varying definitions, ranging from aspects of salary to dignifying work, to stability or existence of contract, to relative inequality towards other professional classes, genders or qualifications, to moral or sexual harassment, or failure to fulfil promises concerning social mobility. An alternative, but more comparable

– namely generationally -, definition is proposed. 2) On the other hand, albeit the conceptual vagueness of "precarity", longitudinal qualitative evidence has shown that the effects of precarity, such as what happens with unemployment, are not immune to the influence of the duration of the experience, nor are they equal across generations. Therefore, just as long term unemployment produces more serious and scarring effects than isolated or short episodes of unemployment, so does the experience and effects of precarity vary in intensity, content, and duration. We argue for the need to create a "long term" precarity indicator, and explore some of the existing longitudinal variables and data sets to do so.

Precarious Employment Trajectories and Health: Combining Qualitative and Quantitative Approaches Based on a Patient Cohort to Study the Association at the Population Level
Presenter: Emilie Counil, Ined - French Institute for Demographic Studies, France
Co-authors: Sofyane Issa, Aude Leduc, DREES, Ministry of Health, France; Mélanie Bertin, Inserm, France; Giscop93 Team, France
While the reference to workplace risk factors prevail within the field of occupational health, the major changes in work and employment observed over the last 40 years question the mechanisms through which both work and employment contribute to the shaping of social inequalities in health over the life course. Among these trends, the development of non-standard forms of employment and the substantive part of unemployment, particularly along women's working life, invite us to consider precarity of occupational trajectories as a potential determinant of ill health in adulthood and older age. Based on a qualitative survey conducted among working-class cancer patients, we have built a quantitative classification of employment trajectories according to the accumulation of hazardous working conditions (here, carcinogenic exposures), together with poor employment conditions (job instability, career discontinuity, low-skill jobs, versatility). Based on multiple correspondence analysis followed by hierachical ascending classification, this allowed us to build a typology reflecting some dimensions of precarization of occupational trajectories as observed in France over the last decades. We then applied the same typology to a representative sample of the French population aged 40-74 based on the SIP (Santé itinéraire professionnel) national survey which collected extensive information on occupational career and health events over the life course. The classification showed that women were over-represented among highly precarious trajectories and those who started to work after the 1970's. Based on the three items of the Mini European Health Module, we found that people with precarious job trajectories more often reported less than good self-perceived health, currently experiencing longstanding illness or health problem, and activity limitation due to health problems. The trend was similar among men and women. We now seek to integrate a gender and historical perspective to further the analysis, while taking into account working conditions as a potential mediating pathway.

4H   PAPER SESSION: WORK STRESS

Trends of Psychosocial Work Stressors in Europe: A Comparative Analysis Using the European Working Conditions Survey
Presenter: Thorsten Lunau, University of Düsseldorf, Germany
Co-author: Mariann Rigo, University of Düsseldorf, Germany
Background: It has been documented in the literature that psychosocial work stressors are related to poor health and contribute to health inequalities among the working population. Therefore, examining their spread over time, with focus on differences between countries and demographic groups, might provide important inputs for policy interventions. Surprisingly few studies have investigated this topic and the present study aims to fill in this gap and provide evidence on the prevalence of psychosocial work stressors along various dimensions.

Methods: To answer these research questions, we use repeated cross-sectional data from waves 2000, 2005, 2010, 2015 of the European Working Conditions Surveys including 27 European countries. Our data includes longitudinal information at the country level, and is equipped with detailed information on psychosocial work stressors coupled with demographic characteristics. Estimation results are provided by various multilevel models.

Results: Our preliminary results indicate heterogeneous trends between countries and demographic groups. However, some robust patterns can already be detected. Some measures show an improvement from 2010 to 2015, e.g. job security, career prospects, financial satisfaction as well as our composite reward measure. Our effort index decreased from 2005 to 2010. We also found a slight decrease of the effort reward imbalance ratio. Some of the working conditions have deteriorated over time, e.g. those related to employees' self-esteem. Work-life balance also worsened, but only among the lower qualified. The next step of our analysis will examine the link between specific policies and prevalence of work stressors.

Discussion: Results of our project will be instrumental, first, as they will help to identify national policies affecting changes in work stressors, and second, because we will be able to evaluate if some occupational groups are more

affected by changes in work stress than others. The latter helps to identify promising entry-points of policy regulations to reduce health inequalities.

The Development of a Life Course Index of Stressful Events in a UK Birth Cohort Study
Presenter: Frances Harkness, University College London, UK
Co-authors: Aradhna Kaushal, Marcus Richards, University College London, UK
Background: Stressful life events (SLEs) have been frequently associated with poor psychological health. Data is typically gathered using checklists of SLEs occurring in the previous year, which whilst useful disregards an individual's SLE history. Longitudinal datasets make it possible to examine SLEs across a life span. Using the MRC National Survey of Health and Development (1946 British Birth Cohort) this paper aims to create an index of SLEs across the life course, discuss the methodological considerations involved in its development, and test associations with psychological health in older age.

Methods: The Medical Research Council National Survey of Health and Development (NSHD) is a representative sample of 5362 singleton births in mainland Britain that occurred during a week in March 1946. Participants were 1146 study members with survey data for all variables.

Exposure: At age 36, 43, 53 and 60-64 a SLE checklist of the past year was collected. This was extended with data on childhood SLEs and job loss, divorce and bereavement until age 68. Event experienced=1, not experienced =0. Events were totalled (range 0-65) and subcategorised by domains (childhood, social, economic).

Outcomes age 68: Mental health: General Health Questionnaire-28 (GHQ-28). Somatic and anxiety symptoms, social dysfunction, severe depression (0-84(high)). Perceived control: Pearlin's mastery scale, "the extent to which one regards one's life-chances as under one's own control" (7-28(high)).

Analysis: Multivariable regression tested gender and social class adjusted associations between total and domain specific SLEs and psychological outcomes aged 68.

Findings: Females reported more social and less economic SLEs than men (p<0.001). Higher lifetime SLEs were associated with poorer mental health (β 0.12, 95% CI 0.01, 0.02) and lower mastery (β -0.14, 95% CI -0.20, -0.09). Social SLEs showed similar associations whilst job events were only associated with poorer mental health and higher childhood events were associated with lower mastery.

Social Inequalities in Medical Rehabilitation Outcomes: A Registry Based Study on 240,676 Insured Persons in Germany
Presenter: Simon Götz, University of Duesseldorf, Germany
Co-authors: Morten Wahrendorf, Nico Dragano, Johannes Siegrist, University of Duesseldorf, Germany
Objectives: Given limited knowledge on the extent of social inequalities in longer-term work ability of people with a chronic disease this study analyses social inequalities of three consecutive indicators of work ability following medical rehabilitation in a large representative sample of insured employees.

Methods: Based on data from the German statutory pension insurance, a representative 20 percent random sample of all insured persons undergoing medical rehabilitation between 2006 and 2008 was included in a longitudinal analysis (N=240.676 persons). Three measures of consecutive work-related outcomes (physicians' assessment of work ability at discharge; return to work in the year thereafter; disability pension during follow-up) and socioeconomic position (SEP) (education, occupational position, income) were assessed. Adjusted relative risks (RR) for each outcome were calculated according to SEP, applying Poisson regression analysis.

Results: In a majority of cases, the measures of SEP were associated with all three outcomes of work ability in the fully adjusted models. Relatively strongest relationships were observed for income as SEP measure, and they were particularly pronounced with regard to "Failed Return to Work" in the year following medical rehabilitation (RR=1.8 for low income compared to high income; 95% CI: 1.78, 1.83). Based on average marginal effects, absolute differences of SEP indicate a socially graded pattern, with only few exceptions.

Conclusion: Despite Germany's universal access to medical and vocational rehabilitation social inequalities in longer-term work ability following chronic disease persist. Efforts to strengthen work ability following rehabilitation should target primarily people in lower socioeconomic positions.

When Intrinsic Work Values Hurt: Job Stress and Affective Health
Presenter: Jutta Heckhausen, University of California, Irvine, USA
Co-authors: Monica Kirkpatrick Johnson, Washington State University, USA; Jeylan Mortimer, University of Minnesota, USA

The linkages between occupational values and job characteristics, as well as between job stressors and health, are well known. This paper addresses the potential moderating effect of occupational values on how individuals respond to job stressors. Mainstream motivational approaches, such as self-determination theory, propose that intrinsic work values are generally beneficial. The motivational theory of lifespan development proposes instead that the adaptivity of individual motivational orientations depends on their fit with the action field in a given social and developmental ecology. In the context of work, intrinsic work values, emphasizing the importance of rewards directly derived from work activities (rather than extrinsic benefits of the job), may become a burden if goals are unattainable in a given occupational setting. Specifically, we investigate whether high intrinsic work values render goal-blocking stressors at work harder to bear than low intrinsic values or extrinsic work values. We used data from the Youth Development Study, which started with 1010 9th grade US students in 1988 and followed them via annual or biannual surveys until 2011. The current analyses use data from 1988- 2011 to predict affective health in 2011. The sample had 525 employed young adults at age 37-38 in the final wave. The youth were asked about their intrinsic and extrinsic work values and major stressors in their current job, including "I have too much work to do everything well." This item indicates a goal-blocking stressor at work. Moreover, youth were asked about depressive symptoms, emotional problems that interfere with life activities, and other indicators of wellbeing. Findings show that young adults who reported that they had too much work to do everything well were more at risk for depressive symptoms and for emotional problems if they held high intrinsic work values.

4I PAPER SESSION: HEALTH IN OLD AGE

Race, Death of a Child, and Dementia Risk in the United States
Presenter: Debra Umberson, University of Texas at Austin, USA
Co-authors: Matthew Farina, Minle Xu, Michael Garcia, University of Texas at Austin, USA

Dementia prevalence is two to three times greater for black than for white Americans, and dementia emerges at substantially younger ages for blacks compared to whites. A number of biopsychosocial and behavioral mechanisms have been associated with increased risk for dementia, but specific life course events that activate these pathways are largely unidentified. Growing evidence points to the role of stress in contributing to dementia risk and one of the most stressful life events one can experience is the death of a child. Recent work documents that blacks are more likely than whites to experience the death of a child; by the age of 60, blacks are two times more likely than whites to lose a child, and this racial disparity increases with advancing age. We consider how the death of a child prior to mid-life is associated with dementia risk in mid to later life, as well as race differences in risk of loss and dementia, and possible mechanisms to explain such linkages. We analyze Health and Retirement Study (HRS) data with an analytic sample that includes 16,756 non-Hispanic white respondents and 4,188 non-Hispanic black respondents in 2000, followed through 2014. The death of a child prior to mid-life is associated with increased risk for dementia for both black and white respondents. However, greater disadvantage is apparent for black respondents in that they are more likely than whites to lose a child and are at increased risk for dementia compared to whites whether or not they have lost a child. The death of a child is associated with increased levels of depression, heavy drinking, and smoking. These variables contribute to dementia risk in the HRS sample, but the death of a child prior to midlife is associated with increased dementia risk even after we take these variables into account.

Acute Healthcare Utilization Trends in the Last Two Years of Life Among the Elderly: A Longitudinal Cohort Study on a Large Population in the North-East of Italy
Presenter: Claudio Barbiellini Amidei, University of Padua, Italy
Co-authors: Andrea Bardin, Cristina Canova, Francesca Gessoni, Silvia Macciò, Federica Turatto, Lorenzo Simonato, University of Padua, Italy

Introduction: Various studies have shown an increased use of emergency department visits and hospitalizations towards the end of life. However, the precise time frame and the specific factors influencing the increase, have not been investigated extensively. This study aims at quantifying the monthly trends of acute healthcare service utilization at the end of life by gender, age and main cause of death (cardiovascular, cancer and respiratory).

Methods: Using healthcare administrative databases, we followed-up the entire population over age 65 (142.834 subjects) of an Italian region (Friuli-Venezia-Giulia) dead between 2002 to 2014. We measured the proportion of subjects with at least one emergency department visit or hospital admission by age at death, gender and main cause of death in each of the 24 months preceding death.

Results: In accordance with previous findings in the literature, we found that acute healthcare service utilization increases considerably in the last months prior to death, and especially in the last one. Our preliminary results showed no significant difference in the utilization of acute healthcare between men and women. The proportion of subjects with at least one hospital admission was higher among those dying at a younger age throughout the follow-up period (69% age 65-74 vs 47.2% age 95+ in the last month before death). Analyzing the influence of the main cause of death, this proportion was higher among those dying from cancer until the second to last month before death. In the last month before death it was higher among those dying from respiratory causes. The observed trends were consistent across the whole study period. We found similar results analyzing emergency department visits, with smaller differences between groups.

Conclusions: This study shows the importance of considering cause of death and age at death when assessing acute healthcare utilization patterns at the end of life.

Early-Life Predictors of Retirement Decisions and Post-Retirement Health
Presenter: Matthew Iveson, University of Edinburgh, UK
Co-author: Ian J. Deary, University of Edinburgh, UK
It remains unclear whether retirement circumstances are associated with better or worse post-retirement health. This is partly due to confounding between measures of retirement circumstances and a tendency to account only for covariates around retirement age. The present study examined the contributions of both retirement age and retirement type, independently, to post-retirement health around age 77 years. It also examined whether these contributions remain once earlier life-course factors – social class, cognitive ability and education – were accounted for. Our analytical sample was 742 Scottish people who took part in the Scottish Mental Survey 1947. In a path model including life-course predictors, we observed that retirement type (reason), but not age, significantly predicted post-retirement health, with ill-health retirement associated with poorer physical and mental health, and redundancy retirement associated with poorer physical health only. Of the life-course predictors, more education was associated with increased odds of voluntary retirement and lower odds of redundancy retirement, but no indirect contribution to health (mediated by retirement circumstances) was significant. At the same time, higher childhood cognitive ability significantly predicted better post-retirement mental health but was not associated with retirement circumstances. This study demonstrates the importance of considering retirement circumstances beyond age, and of accounting for confounding between retirement circumstances and earlier life-course factors.

Changes in Secondary Healthcare Use Over Retirement Transition: Examining Social Differences with Swedish Register Data
Presenter: Martin Wetzel, University of Cologne, Germany
Co-authors: Stefanie König, Gothenburg University, Sweden; Susanne Kelfve, Linköping University, Sweden
Background: Little attempt has been made to examine changes in healthcare use with retirement despite its high relevance from a macro-economic perspective on retirement related healthcare costs and its implications for research on public health. This study examines whether retirement is associated with intensified healthcare use overall and whether there are subgroup specific changes as for gender and educational group.

Methods: Based on Swedish register data, the study examines a cohort of all individuals living in Sweden who retired in the year 2010 from paid work. Two indicators of secondary healthcare namely specialist contacts and nights spent in hospital were analysed from three years prior to five years after retirement using logistic generalized equation models.

Results: Findings showed that specialist contacts increase marginally with retirement which mainly depends on an increase for higher educated men. Number of hospital days do not increase with retirement. Gender and education predict different levels in healthcare use but no independent changes at retirement.

Conclusions: We conclude that retirement does not affect specialized healthcare on the mean level or for most subgroups in Sweden. However, small increases in specialist contacts for higher educated men can be observed.

The Factors Associated with Entry to Formal Care for the Elderly in Scotland: A Longitudinal Analysis
Presenter: Dorothy H. Corby, University of Edinburgh, UK
Co-authors: Dawn Everington, John M. Starr, Ian J. Deary, Chris Dibben, University of Edinburgh, UK
Losing independence is a concern for older people, and sadly a reality for many. In Scotland there is an ageing population and unlike the rest of the UK, a policy to provide free personal and nursing care for those in need of assistance; this makes loss of independence high on the agenda of government, local authorities, care providers, older people and their families alike. Findings from a Scottish Longitudinal Study project (sls.lscs.ac.uk/) indicate the factors associated with formal care home entry for those aged 65 and over in the Scottish population are similar to those in other Western countries – age, sex, marital status, long-term illness, housing tenure and urban/rural classification. However, exploring several lesser studied or novel factors, house type, recent employment and population density, revealed further associations with entry to formal care homes in this population. Notably, whilst living in rural areas had a protective association with formal care home entry (OR 0.35 [95% CI 0.29,0.43]), paradoxically, living in areas with a low population density was associated with greatly increased odds (OR 9.05 [95% CI 7.34, 11.19]). Possible explanations and justifications will be discussed, as will the other patterns of formal care home entry observed in the Scottish population.

PARALLEL SESSION 5

5A   SYMPOSIUM

Criminal Behaviour Across the Life-Course
Convenor and Chair: Meintje van Dijk, Netherlands Institute for the Study of Crime and Law Enforcement (NSCR), Netherlands
During this symposium, four studies on the development of criminal behaviour across the life-course will be discussed. All of these studies make use of quantitative longitudinal and/or multigenerational datasets from the Netherlands. First, the criminal career characteristics of members of outlaw motorcycle gangs will be discussed. Second, an intergenerational research design is used to study the criminal behaviour of children of organized crime offenders. In the third paper, the intergenerational transmission of crime across five consecutive generations of high-risk families is examined. And finally, the involvement in criminal behaviour among adolescents who grew up in single-parent families will be discussed.

Effects of Gang Membership on the Criminal Life Course of Gang Members
Presenter: Sjoukje van Deuren, NSCR
Co-authors: Arjan Blokland, NSCR; Edward Kleemans, Vrije Universiteit Amsterdam, Netherlands
The focus of the presentation will be on the effects of gang membership on offending. Gang membership is considered to increase criminal propensities of gang members. Compared to non-gang members, gang members show higher prevalence rates of violence, owning and carrying guns, property crimes, and drug-related crimes. However, most prior gang studies examined effects of gang membership on juveniles, for relatively minor offenses, and for a short period of time. The current study aims to fill this gap, and seeks to clarify the role of gang membership on serious, and organized crimes over the life course of adult gang members. I use a unique sample of police identified gang members (N = 1,121) to examine criminal career characteristics of gang members, namely Dutch outlaw motorcycle gangs (OMGs). During the presentation, I will discuss whether gang membership is associated with adult criminal behavior, whether effects of gang membership apply to various forms of crime, whether these effects hold for different ages of gang members and whether they apply to different gang characteristics.

Intergenerational Continuity of Crime Among Children of Organized Crime Offenders in the Netherlands
Presenter: Meintje van Dijk, NSCR
Co-Authors: Steve van de Weijer, Veroni Eichelsheim, NSCR; Edward Kleemans, Vrije University, Netherlands; Melvin Soudijn, Dutch National Police, Netherlands
In the presentation I will talk about the findings of my research on the intergenerational continuity of crime among children of (male and female) organized crime offenders in the Netherlands. Pilot research on 25 organized crime offenders and their children in Amsterdam showed that these children were at much greater risk of following in their parents' footsteps, as compared to children of 'petty crime' offenders: about 90 percent of the sons and 48 percent of the daughters had a criminal record themselves. In the current research, I check the generalizability of these findings by examining the extent of intergenerational continuity on a national level. To study this, I make use of a unique and unprecedented dataset on all (478) organized crime offenders (in the period 2008-2014) and their children in the Netherlands, and a control group of 478 people and their children. In the presentation I will discuss the extent of continuity of crime in general, gender differences, the effect of age, whether timing and frequency of parental crime are related to the intergenerational continuity of crime and whether certain subtypes of crimes have a higher risk of continuity in this particular group of children of serious offenders.

The Transfive Study: Five Generations of Crime?
Presenter: Steve van de Weijer, NSCR
Intergenerational transmission of criminal behaviour can be expected based on several criminological theories. During the past couple of decades, several longitudinal and multigenerational studies were initiated to study this topic, such as the Dutch Transfive Study. Data collection of the Transfive Study started with 198 boys who were born around 1900 and were placed in a reform school between 1911 and 1914, because their parents could not take care of them or because they showed problem behaviour. The parents (born on average in 1870), children (1932), grandchildren (1960), and great-grandchildren (1986) of these high-risk boys were traced in Dutch genealogical and municipal records, resulting in a multigenerational dataset with more than 4,500 family members (and their marital partners) from five consecutive generations. Offending data on these family members, retrieved from the Dutch Criminal Records Documentation Service, was recently updated resulting in complete criminal records from age 12 until December 2017. This study will discuss the clustering of criminal behaviour within families by estimating the degree of intergenerational transmission (from parent to child) across five generations, studying similarity between siblings, and examining assortative mating. Moreover, negative outcomes for children of criminal and imprisoned parents in other life domains (e.g., teenage parenthood, mortality) will be discussed as well.

Growing Up in (Different Types of) Single-Parent Families and Criminal Involvement of Adolescents
Presenter: Jan Rouwendal, Vrije Universiteit Amsterdam, Netherlands
Co-authors: Janique Kroese, Wim Bernasco, NSCR; Aart C. Liefbroer, University of Groningen, Netherlands
Many studies have investigated the relation between growing up in single-parent families and crime, generally showing that being raised in a single-parent family is related to a higher level of committed crime during adolescence. However, this relation has not been assessed in the Netherlands yet. Moreover, these studies did not check whether the effects depend on how single-parent families were constituted. Therefore, we conducted a study by means of data from Statistics Netherlands, and we 1) assessed the difference between children in the Netherlands raised in a two-parent family and in a single-parent family with regards to their criminal behavior, and 2) assessed whether there is a difference between three types of single-parent families (caused by parental divorce or separation, by parental decease, or by being born to a single parent) regarding their level of crime. I will discuss the outcomes of this study, and will also check whether other variables (such as the age of the child when the two-parent family became a single-parent family and the socio-economic status of the family) influence the results.

5B SYMPOSIUM

Theoretical and Practical Considerations When Working with Social and Biological Data
Convenor and Chair: Tony Robertson, University of Stirling, UK
Biosocial research, where research questions explore the links between social and biological factors, is an emerging interdisciplinary field. Often researchers are social scientists with an interest in understanding how social, economic and cultural factors 'get under the skin' to impact on health and wellbeing. However, with any emerging and/or interdisciplinary field there can be gaps in the knowledge base around why and how to best make use of combining social and biological data. This symposium will feature four presentations from recent studies on the theoretical and practical considerations involved with biosocial research. Paper 1 will set the scene by exploring the ways in which different disciplines have made use of biomarkers in biosocial research, and the potential issues when combining such data. Paper 2 will discuss the development of a biomarker glossary that summarises biological concepts and measures for social scientists. Paper 3 highlights the realities of working across datasets in producing harmonised biological measures, such as allostatic load. Paper 4 will conclude the presentations discussing missing data in biosocial datasets and how these can be handled before and during analyses. The symposium will conclude with a group discussion on the gaps, opportunities and next steps in biosocial research.

The Value of Biomarker Data in Social Sciences
Presenter: Michaela Benzeval, University of Essex, UK
Co-authors: Tony Robertson, University of Stirling, UK; Meena Kumari, University of Essex, UK
Understanding the interaction between social and economic circumstances and health over the life course is important to develop policies to improve not only people's health but also their social and economic capacities. Whilst much research has been produced across different disciplines to examine these issues, they are often limited by their disciplinary base: Social science research often treats health as a unitary concept, whilst biomedical studies generally control for a single measure of socioeconomic status/position. However, what is needed are studies that bring together the richness of social science and health data, analysed by researchers with expertise across biomedical and social disciplines, to understand the complex social and biological processes that link different aspects of people's lives and health at different life stages. Including biomarkers in established high-quality social science longitudinal surveys is one way to do this. They can be used to identify risk factors over the life course and as objective measures of health that avoid contamination by reporting bias. Secondly, biomarkers allow researchers to investigate biological factors that contribute to and interact with health, education and social conditions. When

combined with the longitudinal data, biomarkers can shed light on the complex interplay between biology, behaviour and environment over the life course for both health and other outcomes. Such evidence will help to inform policies about how and when to intervene to improve population health and reduce health inequalities. This presentation will set the scene for the symposium by outlining the ways in which different disciplines have made use of biomarkers in biosocial research, and highlighting key issues when combining social and biological data.

How We Do Biosocial Research: Developing a Biomarker Glossary
Presenter: Tony Robertson, University of Stirling, UK
Co-authors: Michaela Benzeval, Cara Booker, University of Essex, UK; Martin Betzer, Ethan Narimatsu, University of Stirling, UK
Background: If we are to build capacity and improve on the types and quality of research using combined social and biological data, social scientists need to feel confident in using biological data (and vice versa with biological scientists). As part of this capacity building we have identified the need to develop a biomarker glossary. The glossary focuses on summarising biological concepts and measures that might be relevant to social scientists, social epidemiologists and those wanting to work with such data.

Methods: The project team started by generating a list of relevant terms to include in such a glossary, with further iterations as the below searches highlighted missing terms. Searches were carried out on MEDLINE (via PubMed), the Social Science Research Network, Google Scholar and the ASSIA: Applied Social Sciences Index and Abstracts using these terms and other relevant search terms (e.g. to help identify other examples of such glossaries). Texts were excluded it they were not in English, focused on non-human species or if the full texts were not available for free or including in institutional subscriptions. Experts in the field were also contacted to identify other relevant texts.

Results: The literature search identified only one existing biomarker glossary, although this was focused on one specific dataset and the biomarkers available within that dataset. From an initial list of 60 terms, approximately a further 60 terms were added to the database. Terms were then grouped into 15 categories, such as 'epigenetics', 'biological ageing', 'cardiovascular' etc. We focused on the theoretical basis (where relevant), measurement, strengths and limitations of each biomarker/concept.

Conclusions: This biomarker glossary provides an accessible resource for those wanting to work with, or who are actively involved with, biosocial research. Next steps should focus on a social science glossary for biologists and building capacity for more interdisciplinary biosocial research.

Biosocial Research Across Datasets: The Example of Allostatic Load, and its Composition by Age, Across Seven Datasets
Presenter: Meena Kumari, University of Essex, UK
Co-authors: Cara Booker, Milagros Ruiz, University of Essex, UK
Allostatic load (AL) is used as a proxy measure of the effects of dealing with exposure to chronic stress on the body. Difficulties in comparing allostatic load across studies include 1) numerous biomarkers used to create AL and 2) focus on older age groups. This project examines how AL biomarkers cluster into factors and whether mean factors scores differ by age. We use biomarker data collected from seven studies: Avon Longitudinal study of Parents and Children, English Longitudinal Study of Ageing (ELSA), Hertfordshire Cohort Study, MRC National Survey of Health and Development, National Child Development Study, Understanding Society: The UK Household Longitudinal Study and Whitehall II (WHII). Within each study, participants were grouped into ten-year age bands. Number of factors was determined through exploratory factor analysis. Best fitting models determined through multi-group confirmatory factor analysis. Mean factor scores were extracted and tested for age group differences. Patterns of mean factor scores were examined across studies. Across all studies biomarkers grouped into a combination of eight factors: metabolic, lipid, blood pressure, neuroendocrine, inflammatory, glucose metabolism, kidney function and iron storage. Examination of mean factor scores showed that factors differed across age groups. The patterning of mean factor scores across age groups was similar across studies, with few exceptions. We examined longitudinal changes in the WHII and ELSA. The findings show that biomarkers used to calculate AL can be grouped to represent specific physiological systems and factor scores differ across age groups. The implications of these differences remain to be determined.

Missing Data in Biosocial Research
Presenter: Tarani Chandola, University of Manchester, UK
Background: Missing biomarker data in surveys is a key methodological issue that needs to be addressed in any analysis of biological and social data. This is especially true when we are trying to make inference from the sample (with biological and social data) back to the population. Some analyses use survey weights to compensate for missing biomarker data, while other analyses use multiple imputation methods. Very few compare different approaches for compensating for missing biological data and how these approaches could result in different inferences. Our substantive research question was whether flexible work was associated with allostatic load and we compared estimates from complete case, survey weighted and multiple imputation analyses

Methods: Out of 16,771 employees from wave 2 of the UK Household Longitudinal Study, there were 6,025 with complete data on allostatic load biomarkers and covariates. The UKHLS team derived the longitudinal blood survey weights to make the analyses with blood based biomarkers representative of the UK adult population. Two types of multiple imputation analyses were run, one without incorporating the survey weights, and one with the survey weights.

Results: All of the models show that male and female employees who were able to make use of reduced hours flexible working arrangements had significantly lower levels of allostatic load compared to those for whom such flexible working arrangements were not available. The estimates derived from the survey weighted analyses and the multiple imputation with survey weights were considerably larger (in absolute size) than those derived from the complete case or multiple imputation without survey weights; however, the 95% confidence intervals for these estimates derived from the different approaches overlapped with each other.

Conclusions: This analysis of different approaches to handling missing biomarker data suggests that complete case estimates that ignore the pattern of missingness may be biased.

5C SYMPOSIUM

Harmonising Analysis Using Child Cohort Data from Across the Globe
Convenor and Chair: Paul Bradshaw, ScotCen, Scotland
Collaborative work developed through the 'Growing Up Healthy in Families Across the Globe' project (GUH) has produced new insights into the ability to conduct harmonised analysis across several child cohort studies. GUH is an international collaboration examining the potential for harmonised analysis using five longitudinal studies (from New Zealand, Ireland and Scotland). All five studies follow the lives of children, are interested in the dynamics of family change and work to inform policy to potentially improve population wellbeing across the life-course. New analysis from harmonised longitudinal studies could provide a unique view where change over time would be emphasised to determine how and why environments change, which environments are supportive and which are not. However, the process of cross-nation ex-post harmonisation is not straightforward, and divergent factors (such as methodological differences) need to be considered. Ex-ante harmonisation would be preferable, however although further work on definitions relating to measures is necessary the value of ex-post analysis has been illustrated through the GUH project. The symposium will provide detail of GUH project elaborating on the strengths and barriers to conducting comparative analysis. Findings from comparative analysis from across five longitudinal studies will be
discussed.

Growing Up Healthy in Families Across the Globe: The Vision and the Reality of Harmonising Analysis Across Five Longitudinal Studies
Presenter: Chris Cunningham, Massey University, New Zealand
The 'Growing Up Healthy in Families Across the Globe' (GUH) project is an international collaboration established to bring together five of the most important studies (in terms of child development) with relevance to Aotearoa/NZ. The Pacific Islands Family Study, Te Hoe Nuku Roa (Maori Families Longitudinal Study) and the triad of Growing Up studies (NZ, Ireland and Scotland) provide a detailed combined data resource with high analytical potential for Maori, Pasifika and NZ European, but also with strong European comparators from very similar countries (Ireland/Scotland). One of the aims of the GUH project was to increase understanding of longitudinal child cohort data from New Zealand by comparing the studies to the Irish and Scottish counterparts. Comparative study of early years across nations provides the ability to potentially identify trends in child development that are consistent across cohorts. Through the identification of common patterns in child development across studies and nations, important insight into the environmental factors impacting on wellbeing and inequalities could be gained. Conducting comparative harmonised analysis is ambitious and not without challenges; this paper discusses some of the challenges faced through the GUH project. Although there have been many child cohort studies conducted, data access and data comparability have been identified as primary challenges when conducting comparative analysis.

Further challenges arise when examining the various sampling methods, study designs, measurement tools, response rates and attrition – these need to be identified and addressed before comparative study can be conducted. However, increasingly studies are being designed with cross-nation comparison in mind and international collaborations allow for common research priorities to be studied, as has been demonstrated by the GUH project.

Post Hoc Harmonised Analysis: Methods Applied to Identifying and Harmonising Measures of Child Developments and Associated Risks
Presenter: Patty Doran, University of Manchester, UK
This paper discusses the methodological process followed in order to harmonise analysis across the five cohort studies that are part of the 'Growing Up Healthy in Families Across the Globe' (GUH) project. Initially the theoretical approach, sampling strategy and data collection methods applied in the five studies were compared to test for shared purpose and approach. Next overlapping time points of data collection were identified by aligning the age of children when data was collected, who the data was collected from and the frequency of data collection. Available survey documentation was explored to identify measures and domains for which data was collected across the studies at the identified time points. Potential key measures and questions were identified, tabulated and clustered by domain topics (health, socio-economic status, childcare provision, family dynamics, child development, personal demographics). Summary data was produced and it was identified whether potential variables of interest were similar across the five studies by attributing either a strong, moderate, or weak match (based on standardised criteria). Five common risk factors were identified: maternal relationship status, maternal education, smoking in pregnancy, maternal self-reported health and maternal long-standing illness. Finally, a cumulative risk model was created to illustrate the relationship between the five risk-factors at time point one and child development at time-point two. Coordinated analysis was carried out independently by each study, following an agreed methodological approach. The stages applied to identify and harmonise measures across cohorts are detailed and will be of interest to others looking to harmonise analysis across cohort studies.

Cross-Cohort Comparisons of Socio-Emotional Well-Being Using Data from Ireland and Scotland
Presenter: Paul Bradshaw, ScotCen, Scotland
Co-author: Emer Smyth, Economic and Social Research Institute, Ireland
Numerous factors have been linked to children's socio-emotional and behavioural well-being including maternal health and depression, family structure, behavioural characteristics of the family and parents and characteristics of the children themselves. Research in this area is extremely valuable in advancing our understanding of risk and protective factors and the development of interventions to improve the emotional wellbeing of children. This presentation provides an initial comparative analysis of variations in five-year-old's socioemotional outcomes with some key indicators of vulnerability. Analysis is based on the 'Growing Up in Ireland' and 'Growing Up in Scotland' longitudinal child cohort studies. Bivariate analysis and logistic regression was carried out to explore and compare the relationship between multiple risk factors and the child's socio-emotional wellbeing – measured using the Strengths and Difficulties Questionnaire. We demonstrated a higher risk of emotional problems in Ireland and Scotland among: boys, one-parent families, children with lower levels of parental education, children whose main caregiver (mostly mother) has physical health issues and children who have poorer health. In conclusion, multiple common vulnerabilities clearly matter in both Ireland and Scotland and there is a substantially higher chance of poor socio-emotional wellbeing with the accumulation of risks.

The Well-Being of Children Exposed to Risk: Comparative Analysis of Longitudinal Data from Ireland, Scotland and New Zealand
Presenter: Susan Morton, University of Auckland, New Zealand
Co-authors: Dan Tautolo, Auckland University of Technology, New Zealand; Paul Bradshaw, ScotCen, Scotland; Emer Smyth, Economic and Social Research Institute, Ireland; Patty Doran, University of Manchester, UK; Chris Cunningham, Massey University, New Zealand
The latest research from the 'Growing Up Healthy in Families Across the Globe' (GUH) project brings together data from New Zealand, Ireland and Scotland in closely aligned harmonised analysis. Through access to primary data from the three countries comparable variables have been created to describe the environments where children are growing up. Socio-economic and demographic variables are consistently modelled against child's well-being. Regression models are used to compare the similarities and differences across the countries. Child development and well-being is the key outcome variable. As well as comparing factors that are known to have comparable relationships to child well-being across nations (for example self-rated health and long-term conditions of primary care giver) differences are also key to the harmonised analysis. Therefore, the relationship between factors that vary across nations (for example ethnicity) and child well-being is also examined. New findings will be shared

highlighting which environments are supportive and which are not. The production of harmonised analysis using child cohort data from New Zealand, Ireland and Scotland is a key output from the GUH project. Of particular interest is what can be learnt by the individual countries through cross-national comparison, these lessons will be shared.

5D SYMPOSIUM

The Importance and Determinants of Wealth Accumulation Over the Life Course
Convenor and Chair: Bilal Nasim, University College London, UK

Recent decades have seen a research focus on growing inequalities in household earnings and income. Much less consideration has been afforded to wealth, perhaps because of the relative paucity of wealth data historically available to researchers. This is now changing, and there is a growing literature highlighting widening disparities in household wealth and the importance and distinctiveness of wealth in the social stratification process. The aim of this symposium is to promote a life course perspective to the study of wealth. We bring together papers that investigate both the wealth accumulation process and the influence of wealth at different stages in the life cycle. To that end, we present five papers, one conceptual and four empirical. The conceptual paper highlights current blind spots in wealth research which could be fruitfully addressed by employing a life course perspective. Papers 2 through 5 use different longitudinal datasets from the UK and focus on different stages of the life-course. Papers 2 and 3 consider the role of parental wealth in determining child outcomes in childhood and adulthood. Papers 4 and 5 examine the patterns and determinants of wealth accumulation and the role of socio-economic status and childhood development in explaining wealth inequalities.

Wealth and Child Development Through the Lens of Life Course Theory
Presenter: Ludovica Gambaro, University College London, UK
Co-author: Mary Clare Lennon, City University of New York, USA

In recent decades, wealth inequality has increased in many countries, even beyond levels of income inequality. Wealth disparities have far reaching repercussions for individuals and societies. This paper focuses on consequences for the life chances of children and young adults. Drawing on studies from different disciplines, from sociology, epidemiology, economics, and human geography, it reports evidence how wealth may shape trajectories of education, well-being and housing. On the basis of this review, we suggest adopting the life course framework to capture the distinctive features of wealth and to map out the channels through which wealth can influence human development. In particular, we make three points. First, wealth is a cumulative stock – the outcome of circumstances and decisions over many years or decades. Its investigation requires a long-term perspective, able to link early childhood to older age, and to account for intergenerational support and obligations. Second, wealth can serve as protection against risks. By attenuating the negative consequences of uncertainty, wealth increases control and enables individuals to plan for their future (and the future of their children) in more deliberative ways. Third, individual processes of wealth accumulation and their consequences are highly dependent on contextual welfare policies. We illustrate this point with reference to cross-country differences in education and housing policies. We close with the example of early childhood, deriving from the above framework hypotheses as to how parental wealth – either actual or expected – can influence early child development. By testing these hypotheses, future research can advance our understanding of the role of wealth and strategically contribute to life course research.

Parental Wealth and Children's Cognitive Ability, Mental and Physical Health
Presenter: Vanessa Moulton, University College London, UK
Co-authors: Ludovica Gambaro, Bilal Nasim, George B. Ploubidis, Alissa Goodman, University College London, UK

This paper investigates the influence of wealth, a frequently neglected aspect of the economic circumstances of families, and its association with children's outcomes. Drawing on recent wealth scholarship and child development frameworks, we posit that family wealth can have a distinct influence on children's outcomes. Through its purchasing function, wealth can supplement income and is especially relevant for large investments, such as housing or post-secondary education. Wealth's insurance function, on the other hand, can help ease negative parenting abilities exacerbated by financial stress, and support parental time investment and warmth, particularly when children are young. Using the UK Millennium Cohort Study, we explore whether parental wealth influences children's cognitive ability, mental, and physical health at age 11 (n=8,074), over and above parental socio-economic status. We carefully define wealth, distinguishing between net total worth, net housing wealth, net financial wealth and house value and take great care in assessing and addressing, where possible, measurement issues. We find net total wealth was associated with fewer emotional and behavioural problems, independent of the full set of controls, including permanent income. This result was influenced by housing wealth in particular. Children's verbal cognition was more weakly related to wealth, while general health was more strongly associated with permanent income, than with parental wealth or any of its components, once socio-economic factors were included.

The Effect of Parental Wealth on Children's Outcomes in Early Adulthood
Presenter: Eleni Karagiannaki, London School of Economics, UK
This paper uses a linked sample of parents and their adult children from the British Household Panel Survey (BHPS) to investigate the relationship between parental wealth during adolescence and three children's outcomes in early adulthood (at age 25): degree-level educational attainment, employment and earnings. Parental wealth is found to have a very strong positive correlation with children's degree-level qualification attainment at age 25. This correlation is stronger at below-the-median wealth levels than above-the-median wealth levels. The estimated effects are found to operate over and above the influence of parental income and parental education and remain strong even when controlling for local school quality and number of books in the childhood home. This suggests that the educational disadvantage associated with low levels of wealth does not reflect the impact of other correlated measures of parental disadvantage. Results from models which include separate controls for two major wealth components show that housing wealth has a far stronger correlation with higher educational attainment than financial wealth. Despite small in magnitude the statistically significant effect of financial wealth is again an indirect indication that credit constraints may play some role in the higher educational decisions of low wealth households. The evidence presented in the paper also indicates that there is a positive correlation between parental wealth and children's employment and earnings. However, for both labour market outcomes the parental wealth gradient is rather weak and for the employment outcome the effect is largely mediated by children's education.

Wealth Accumulation Patterns Among Britain's Younger Generation
Presenter: Ellie Suh, London School of Economics, UK
This study examines how Britain's younger generation accumulates wealth by establishing a typology of savers. It proposes a Balance Sheet approach, which enables reorganising wealth data into more nuanced categories of wealth-building vehicles. Latent Class Analysis is performed to establish the saver types, based on the reorganised individual balance sheet data using the Wealth and Assets Survey. Transitions between saver types are studied using Latent Transition Analysis. Four distinctive saver types are established: undersavers, property saver-dissavers, traditional savers and investor savers. These saver types provide insight into perceptions and utilisation of wealth accumulation channels. While the transition probabilities are mostly stable, the patterns of upwards and downwards transitions vary by parental homeownership. Higher individual and parental socio-economic status increase chances of being allocated to wealthier saver types. The findings of this study have important long-term policy implications for the younger generation's future economic well-being.

Estimating and Decomposing the Intergenerational Socioeconomic Gradient in Adult Wealth Accumulation
Presenter: Bilal Nasim, University College London, UK
Co-author: Vanessa Moulton, University College London, UK
There is a growing acceptance both in the UK and internationally of the importance of wealth in determining individual well-being and life chances. Wealth represents a crucial indicator for material well-being, and is distributed very unevenly in the UK, significantly more so than income. In this study we examine the social origins of these inequalities by estimating and decomposing the intergenerational socio-economic status (SES)-gradient in adult wealth. Using the British Cohort Study (BCS70), we first estimate the correlation between parental SES experienced by the child during childhood and the subsequent adult wealth of the child. We find that this association is significantly stronger for adult-child wealth than for either adult-child family income or earnings, reflecting greater intergenerational inequalities in adult wealth. We then decompose the SES-gradient in adult wealth using a mediation model to examine the explanatory roles of child capabilities (cognitive, non-cognitive and mental/physical health), child education and adult-child income. We find that around two thirds of the SES-gradient are indirect, with child capabilities explaining two thirds of this indirect effect, education explaining a fifth and adult income explaining one tenth. We conclude that there are strong intergenerational SES inequalities in adult wealth accumulation and that the majority of this transmission is via the development of child cognitive and non-cognitive capabilities. These child capabilities therefore present a potentially productive area of investment in attempting to reduce long-term inequalities in adult wealth accumulation.

Education and Physical Health Trajectories in Later Life: A Comparative Study
Presenter: Liliya Leopold, University of Amsterdam, Netherlands
The cumulative (dis)advantage hypothesis states that health disparities between education groups increase with age. The present study examined this hypothesis in a comparative analysis of the United States, the United Kingdom, the Netherlands, and Sweden. These countries offer sharp contrasts in the social conditions that may intensify or inhibit processes of cumulative (dis)advantage. Using harmonized panel data from the HRS, ELSA, and SHARE, the study applied Poisson multilevel regression models to trace changes in the number of chronic conditions and functional limitations of people aged 50–76 (N = 16,887 individuals; 71,154 observations). The four countries showed a clear gradient in levels of physical health and in the extent to which health trajectories were shaped by education. Across all ages and cohorts, health problems were most prevalent in the United States, less prevalent in the United Kingdom and the Netherlands, and least prevalent in Sweden. A similar cross-national gradient was found for the size of health gaps between education groups and for the extent to which these gaps widened with age. Gaps were largest in the United States, smaller in the United Kingdom and in the Netherlands, and smallest in Sweden.

Lifecourse Social Capital and Biomarkers in Middle Life: Evidence from the 1958 British Birth Cohort
Presenter: Stergiani Tsoli, UCL Institute of Education, UK
Co-authors: Alice Sullivan, George B. Ploubidis, UCL Institute of Education, UK
Objective: This paper sets out to examine the association between trajectories of indicators of social capital over the lifecourse and health indicators in midlife.

Methods: We will use data from the 1958 National Child Development Study (NCDS), a birth cohort study that includes all people born in Britain during 1 week in March 1958. We will use data from 4 sweeps of the study 1981 (n = 12 537), 1991 (n = 11 469), 2000 (n = 11 419), and 2002–2004 (n = 9377), when study members were aged 23, 33, 42, and 44 to 46 years, respectively. As indicators of social capital, we will use information on civic engagement and social participation for ages 23, 33 and 42 and emotional social support for ages 33 and 42, if suitable. As outcomes of interest, we will use haemostatic and inflammatory markers from the biomedical sweep at ages 44 and 46: c-reactive protein, fibrinogen, HbA1C, blood pressure, FEV1, HDL and LDL cholesterol and Body Mass Index (BMI). We will control for potential confounders. We will use latent class analysis to derive a longitudinal typology of social capital and will explore the association of trajectories of social capital and biomarkers in midlife. Also, we will address missingness with the most suitable technique.

Results/Discussion: To our knowledge, this is the first study that will explore the association of lifecourse social capital and objective measures of health in the UK using a nationally representative prospective cohort study. Potential implications for public health policy and future interventions will be explored.

Aging in Different Welfare Contexts: A Comparative Perspective on Later-Life Employment and Health
Presenter: Ignacio Madero-Cabib, Catholic University of Chile, Chile
Co-authors: Laurie Corna, King's College London, UK; Isabel Bauman, Zurich University of Applied Sciences, Switzerland
Objective: We adopt a cross-national comparative perspective to assess the labor market experiences of older adults in the years leading up to and beyond the full pension age (FPA) and their association with health in diverse welfare state contexts.

Method: We work with a harmonized pooled-country dataset of 12 nations to model individuals' employment trajectories during the 1-year surrounding gender- and country-specific FPAs over the same chronological period (2004 to 2014/2015) using sequence analysis. We then analyze these trajectories' relationships with self-rated health and chronic conditions across different welfare state contexts.

Results: We find five types of later-life employment trajectories: early retirement, conventional retirement, predominantly part-time, not in the labor market, and partial retirement. Among other findings, our analyses indicate that early retirement is associated with positive health outcomes in social-democratic and corporatist countries but not in liberal and liberal-corporatist countries. For people in the not in the labor market trajectory, poor self-rated health is more frequent in liberal and southern, and less frequent in corporatist countries.

Discussion: The research findings illustrate the importance of both generous public benefits in old age and later-life employment trajectories for older individuals' health.

5F   PAPER SESSION: FAMILY TRANSITIONS

Separation, Child-support and Well-Being in Uruguay

Presenter: Andrea Vigorito, Universidad de la Republica, Uruguay
Co-author: Marisa Bucheli, Universidad de la Republica, Uruguay

Despite the significant transformations that household formation patterns have experienced in developing countries, there is scarce quantitative research on the effects of union dissolution. This article provides evidence for Uruguay on the impact of family breakdown and child support on a wide set of family outcomes, based on three waves of a longitudinal study, Estudio Longitudinal del Binestar en Uruguay, that follows up on children that were first graders at public primary schools in 2004. We find that separation entails a significant per capita household income loss and increases deprivation in terms of income poverty and access to durable goods, for custodial mothers and children. The income loss is mitigated but not completely offset by public and private transfers and behavioural responses among mothers, whose labour earnings increase significantly after separation. Union dissolution seems to worsen child educational outcomes, in particular grade repetition. Sensitivity analyses show that these results are robust.

Mental Health Dynamics around Marital Separation. Moderating Effects of Parenthood and Children's Age

Presenter: Katharina Loter, Martin Luther University Halle-Wittenberg, Germany
Co-authors: Oliver Arránz Becker, Martin Luther University Halle-Wittenberg, Germany; Małgorzata Mikucka, Mannheim Centre for European Social Research, Germany; Christof Wolf, GESIS Leibniz-Institute for the Social Sciences, Germany

Although there is a growing body of research on the impact of marital dissolution on health in general, our study is the first that aims at estimating the intra-individual causal effect of marital separation on parental health conditional on the age of the youngest biological child. Considering potential buffering effects, child's age (distinct categories: childless, parents of pre-school, primary school, adolescent and adult children) is supposed to play a moderating role in the separation health nexus. We restrict our sample to women and men who were first married when entering the SOEP panel and count for them respectively 816 and 552 transitions to separation between 2002 and 2016. Our dependent variable is mental health-related quality of life (SF-12). We estimate distributed fixed-effects (dummy impact functions), covering the time span of up to three years before to four (and more) years after marital separation. This kind of modelling enables us to carefully examine patterns of temporal dynamics prior to the event (anticipation), in the year of the event and shortly afterwards (immediate effect) and following the event (adaptation), while taking into account person-related time-constant unobserved heterogeneity. Our results show that childless men are mentally affected by marital separation, at least within the first year after the event, and childless women are not. Further, we observe both significant anticipation and adaptation effects for mothers of preschool children and also adult children, however the nature of the patterns is different. Whereas mental health of mothers with preschool children starts to deteriorate already one to two years before marital separation and continues to decline afterwards, mothers of adult children seem to experience rather a short-term decline around marital separation. In contrast, parents of adolescent children seem to be negatively affected by marital separation immediately after the event but recover mentally within the first two years.

Linking Family Transitions and Later-Life Depression: Does Life-Course Socio-Economic Standing Matter?

Presenter: Claudia Recksiedler, German Youth Institute, Germany
Co-authors: Boris Cheval, Stefan Sieber, Stéphane Cullati, University of Geneva, Switzerland; Robert S. Stawski, Oregon State University, USA

Research has documented the impact of marital transitions—particularly marital loss—on depression in old age, yet its severity depends multiple factors. Individuals' capability to cope with transitions varies as a function of available resources and previous exposure to stressors, such as early-life adversity, which buffers or aggravates the impact of marital transitions on later-life depression. Although studies documented the pivotal link between early-life adversity and negative health trajectories, our study is the first attempt to examine whether early-life adversity influences the relationship between later-life marital transitions and depression. We drew data from SHARE, which samples individuals aged 50+ across Europe (N = 13,258; 2004-2015). Our outcome was the Euro-D depression scale. Our main predictors were prospectively tracked marital transitions (single, partnered, and widowed), early-life, and adulthood SES. Using multilevel linear models, we found that depression generally increased with age. Women who became widowed had higher levels of depression compared to coupled women, but experienced lower increases in depression over time. Single women had similar levels of depression compared to coupled women and experienced lower increases over time. After adjusting for early-life and adulthood SES, losing a partner remained significantly associated with depression. Life-course SES was associated with levels of depression, yet interactions between marital transitions and SES were not, with some exceptions: single women who reported some difficulties in their ability to make ends meet experience higher increases of depression over time. Overall, results were similar for men. Interactions between family transitions and SES were again not significant, with a few exceptions for single men:

those born in advantaged and the most advantaged households, and those with high education, had lower levels of depression. We interpret and discuss our findings through the lens of life-course and stress-resiliency perspectives and in light of changing family dynamics for this age group.

How Family Environment Transitions Affect Health and Wellbeing in Old Age
Presenter: Lisbeth Loft, Columbia University, Institute for Social and Economic Research and Policy (ISERP), USA
Research has established that close family ties are positively associated with physical and mental wellbeing in later life, still, less is known about how family environment transitions affect health and wellbeing in old age. With point of departure in documented changes in family demographic structures. I examine how patterns of marriage and childbearing, the experiences of divorce and re-partnering, and the growing diversity in families and children's living arrangements contribute to physical and mental wellbeing in later life. Employing an interdisciplinary approach using tools from demography, sociology, and public health, I use survey and register data to map prevalent sequential patterns of family relations over time, and investigate the heterogeneity in these sequential patterns' prospective impact on physical and mental wellbeing among the elderly population. The results from this study are important because they enable early identification of vulnerable groups among the elderly population.

5G PAPER SESSION: PRECARIOUS YOUTH TRANSITIONS

Intergenerational Transmission of Unemployment: Do Fathers and Mothers Matter, and Why?
Presenter: Brigitte Schels, Friedrich-Alexander-University of Erlangen-Nuremberg, Germany
Co-author: Silke Anger, Kerstin Ostermann, Institute for Employment Research, Germany
This study investigates patterns and mechanisms in the intergenerational transmission of unemployment. Previous research has shown that paternal unemployment in youth correlates with a higher risk of unemployment in young adulthood. The consequences of maternal unemployment have seldom been studied so far, although, in times of increasing female labour market participation, maternal (un)employment is a relevant familial status factor. We ask whether the unemployment risk in young adulthood depends on paternal and maternal unemployment. We assume that the impact of maternal unemployment is weaker compared to paternal unemployment as, in most households, the father is still the main breadwinner. Thus, paternal unemployment may hit families harder. Furthermore, we aim to identify mechanisms that allow to explain the impact of paternal and maternal unemployment on children's unemployment risk. Parental unemployment may mean that families have to cut down investments for education and social participation; youth may suffer from familial stress. Furthermore, unemployed parents have poorer networks and information on the labour market available that are important resources of support. Finally, growing up with unemployed parents may lead to low work aspirations when youth do not have working role models. Most of these mechanisms may start to work when the main breadwinner has lost his job. We expect that these factors have more weight in explaining the effects of paternal unemployment than of maternal unemployment. Our study uses the longitudinal data and youth questionnaire of the German Socio-Economic Panel. Regression analyses aim to identify first, the overall effects of paternal and maternal unemployment at ages 10 to 15 on unemployment at ages 17 to 24, and second, potential mechanisms. Decomposition analysis are used to verify the influence of different explanatory factors.

A Dynamic View of Youth Employment Precarity: Labour Market Trajectories and Conditional Effects
Presenter: Anna Kiersztyn, University of Warsaw, Poland
The aim of this presentation is to illustrate how life-course data from national panel surveys can contribute to the study of precarious work. Employment precarity is conceptualized as a specific career pattern, observed over many years, involving spells of recurrent non-standard employment separated by periods of joblessness, coupled with low and/or unstable income. Such a conceptualization overcomes the limitations of previous research, which attempt to capture precarity by analyzing either the type of employment contract observed at one moment in time, or indicators of subjective job / labor market insecurity. Non-standard contracts do not always entail employment precarity due to their possible stepping-stone effects, while subjective indicators are affected by psychological coping mechanisms and perceptions of reference group status. I present the results of a quantitative study of the careers of labor market entrants in Poland, based on data from the Polish Panel Survey POLPAN. This is the longest-running panel study in East Central Europe, covering the period 1988-2018. Data are collected every five years using face-to-face interviews with a national sample of adults aged 21 and older (for the youngest cohort, renewal samples are used). The POLPAN database includes detailed longitudinal information on each job held by the respondents since the start of their careers, their full educational histories, income and household composition, and health/well-being indicators. The present study is focused on conditional effects determining the dynamics of employment precarity and its life-course outcomes, exploring ways in which individual and family resources affect labor market trajectories or mitigate the negative outcomes of early career instability. To place the results in a cross-national context, I also discuss issues of comparability of career data from POLPAN with data from other long-standing panel surveys: the German SOEP, British Household Longitudinal Survey, and the U.S. NLSY79 Young Adults survey.

The Scarring Effect of Youth Unemployment on Mental Health: Does Entering the Labour Market During a Recession Make a Difference?
Presenter: Liam Wright, University College London, UK
Co-authors: Jenny Head, Stephen Jivraj, University College London, UK
Several studies show that youth unemployment is associated with worse mental health in later life. Few have looked at whether this association is limited to certain groups or is pervasive across the population. Our study aims to assess which factors moderate the effect of youth unemployment on mental health measured in the mid-twenties. We use data from Next Steps, a cohort of secondary school children recruited at age 14 and followed up to age 25. We measure youth unemployment as six or more months workless-ness between ages 18-20 (2008-2010), a period which includes the high youth unemployment rates following the global financial crisis, and use the 12-Item General Health Questionnaire (GHQ) Likert score collected at age 25 as our measure of mental health. Using OLS regression, we assess whether the association between youth workless-ness and GHQ scores differs by: gender, locus of control (measured at age 15), parental socioeconomic class (age 14), preferences regarding unemployment vis---vis work (age 14), and adolescent neighbourhood characteristics. Preliminary results show youth workless-ness is associated with worse GHQ scores at age 25, an association which remains significant adjusting for GHQ scores at age 15. Comparing across groups, however, the association is only found to be significant amongst males and individuals from low socio-economic class backgrounds. Associations are also smaller amongst those who disagree with the statement "any job is preferable to unemployment", though effects are imprecisely estimated. Locus of control does not appear to moderate the association. These results suggest the scarring effects of youth unemployment may be confined to certain groups. Future research should examine why youth unemployment may signal future difficulties amongst some individuals and not others. Policymakers looking to improve the long-term outcomes of unemployed young people may consider focusing on particular groups.

5H   PAPER SESSION: INTERGENERATIONAL SOLIDARITY

Embedded Love: The Interdependence of Intimate Relationships, Previous Relationship Experiences, Social Values and Environmental Factors
Presenter: Andrea Umhauer, University of Innsbruck, Austria
Co-authors: Fred Berger, University of Innsbruck, Austria; Helmut Fend, University of Zurich, Switzerland
In modern societies intimate relationships have a great impact. Especially the relationship between romantic partners is considered particularly important to make life complete and is thus accepted as a developmental goal. In this paper, we analyze how the quality of romantic relationships between partners depends on the societal discourse of love (social values), on the actual life situation of a couple and on previous individual relationship experiences during adolescence and young adulthood. Focusing on personal relationship experiences we take the parent-child relationships, peer-relationships, first romantic experiences and the witnessing of the parental relationship into account. These three developmental contexts are expected to interact with respect to social values and the current life situation and predict the quality of romantic relationships in later life. The data for this paper come from the German LifE Study (Pathways to Young Adulthood), which is a seven wave longitudinal study. About 2.000 adolescents were surveyed between 1979 and 1983. In 2002 and in 2012 this youth study was resumed with two follow-up studies. For this paper we use a sample of about 900 adults who were in a serious romantic relationship at the date of the last questioning and apply hierarchical regression analyses and structural equation modelling to analyse the data. We presume that the dependency of relationship quality in advanced adulthood from relationships in adolescence will get weaker with the increasing age of the subjects but still remains significant. While the predictive strength of experiences in adolescence may get weaker, the influence of the current life situation of a couple is expected to play a weightier role. There will be differences in regard to gender concerning especially the actual life situation. Furthermore, we suppose that the way people imagined romantic relationships during adolescence influence their adult relationship arrangement and their perception of it.

Predicting Intergenerational Solidarity in Adulthood: Results from a German Longitudinal Study
Presenter: Fred Berger, University of Innsbruck, Austria
Co-author: Helmut Fend, University of Zurich, Switzerland
Parents and children represent important social and emotional resources for each other and form a unique part of their respective lives. In most cases, their relationship is marked by emotional stability. Yet, intergenerational relations need to be able to cope with different role transitions and critical life events of both parties to the relationship over time if they are to survive and remain significant to the individual family members. In this paper, a causal model of pathways from family life in adolescence to dimensions of mother-child solidarity in adulthood is proposed and tested empirically. The analysis aims at predicting intergenerational relationships over the life course. The data come from a German prospective longitudinal study that covers over 20 years of family development (Fend et al. 2012). It contains information on more than 1,100 mother-child relationships. Analyses were performed for different dimensions of intergenerational solidarity and separately for mother-daughter and mother-son dyads

(Bengtson et al. 2002). The results support the notion that there is stability in the mother-child relationship from adolescence to adulthood. However, consistent with previous findings, the effects of earlier patterns of family interactions on the relationship later in life turn out to be rather moderate. Further, the study shows how life course transitions, critical life events, and the opportunity structures of both generations manage to alter mother-child relationships in adulthood. Concerning these characteristics, differences between mother-daughter and mother-son dyads are quite pronounced. All in all, for most participants of this study, the mother-child relationship was found to be very close and supportive and to represent a long-lasting latent support network that is activated in times of need. Fears that rapid social and demographic changes and the increasing individualization in modern society could be creating alienation and a lack of solidarity between familial generations do not seem justified.

Facets of Parent-Child Relations in Adulthood and Their Role in Transmitting Economic Deprivation Across Generations

Presenter: Marion Fischer-Neumann, University of Hamburg, Germany
Co-author: Petra Böhnke, University of Hamburg, Germany

The paper explores how intergenerational relations can lead to poverty in adulthood and explain transfers of economic deprivation to the next generation. It adds to previous scholarly work that has shown that family social capital during childhood relates to the social reproduction but extents it by studying the influence of multilocal (i.e. non-co residing) relations between aging parents and children. Relying on the concept of intergenerational solidarity, we differentiate 6 aspects of intergenerational relations: structural (i.e. geographical distance), associative (i.e. contact), emotional, conflictual, normative (i.e. norm of support) and functional (i.e. financial/instrumental support) facets. Referring to social capital theory, intergenerational relations can be suggested to influence individual socio-economic life chances. At the same time, the relations are dependent on sociostructural characteristics. Thus, an economically deprived family background may relate to lower levels of functional and emotional international relations. Hence, intergenerational relations may perpetuate intergenerational poverty. Our panel regression results on the anchor data from 4 waves of the German Family Panel pairfam evince that economic deprivation at age 10 is associated with income poverty in adulthood (i.e. household income below 60% of the median, ages 18-47). This association is partly accounted by levels of parent's education. Further spatial distance, conflict as well as normative solidarity increase income poverty, while emotional and associative solidarity decrease it. There is no multivariate confirmation that intergenerational solidarity perpetuates intergenerational social disadvantage but we find that higher spatial distance as well as lower norms of intergenerational solidarity decrease the association between economic deprivation and income poverty.

Intergenerational Relationships and Leaving and Returning to the Parental Home

Presenter: Brian Gillespie, University of Groningen, Netherlands

Leaving the parental home is commonly understood to be a major milestone in the transition to adulthood. This major life course transition signals the onset of young adults' social and financial independence and, in many cases, frames their housing careers and other important life course trajectories. Lately, researchers have also been interested in the "reversibility" of these transitions, namely by examining returns to the parental home (i.e., "boomeranging" back into the parental home). Few have examined the way parent-child relationships in adolescent impact these life course transitions. Drawing on the life course perspective and theoretical models of intergenerational solidarity, this study explores how associational (i.e., parent-child closeness) and behavioral (i.e., parenting style, parental monitoring, and family routines) intergenerational solidarity impact young adults' transition to adulthood. In particular, we use data spanning nearly two decades from the National Longitudinal Survey of Youth 1997 to assess how these adolescent intergenerational dynamics impact young adults' risk of leaving (n = 3,738) and/or returning to (n = 3,225) the parental home. Net of other important factors linked to leaving and returning, the results indicate that mother-child closeness and mother's degree of parental monitoring are both significantly and positively associated with leaving the parental home. Mother's emotional support is positively associated with returning to the parental home. The results suggest that close mother-child relationships might enhance children's autonomy with regard to leaving but also serve as a safety net for returning to the parental home.

Where are Lives Linked? A Bibliometrical Analysis of the Linked Lives Principle in the Social Sciences Literature

Presenter: Diana Carvalho, CIES-IUL /ISCTE-University Institute of Lisbon, Portugal
Co-authors: Magda Nico, Helena Carvalho, CIES-IUL /ISCTE-University Institute of Lisbon, Portugal

Linked Lives is one of the most appraised but underexplored life course principles. In a nutshell, it argues that "each generation is bound to fateful decisions and events in the other's life course". It gives centrality to social relations and networks, including kin, and so it concerns, particularly, the complexity of the objective and subjective relationships within families and households by referring how the lives of their members are linked through events (turning, critical, demographic), trajectories (in the various spheres of life) or discrete or time-varying social characteristics (education, occupation, class, etc.). This concept has reached the status of theoretical principle

(particularly true in the scope of the Life Course Literature – interdisciplinary by nature) or of a scientific self-evident premise (implicit, for instance, in statistical models that try to tackle the effects of events and statuses in the life course). It is thus used as a general premise but not as a research hypothesis. We take a step back, by providing a big picture on how the links of lives within families have been studied in social research. For that purpose, the team of the Project "Linked Lives: a mixed multilevel longitudinal approach to family life course" carried out a bibliometric analysis. An effort towards the census of the Publications concerning "linked lives" was made through various bibliographical sources. These were carefully coded (by type of publication, author's institutional nationality, geographic scope, type of events, generational direction of the link, spheres of life, methodology, etc.) and organized in statistical software, where univariate, bivariate and multivariate analyses were performed to identify and characterize the stages and variations of this concept in the sociological and life course literature. We additionally reflect on how this literature and concept has been contributing to understanding family and intergenerational relations and interdependence.

5I   PAPER SESSION: SUBSTANCE USE

Lifecourse Poverty and Adolescent Smoking: Dependency of Effects on Timing and Background

Presenter: Michael Green, University of Glasgow, UK

Lifecourse analyses aimed at determining the optimal timing of intervention can be problematic because exposure effects may vary not just with the timing of exposure, but with background exposure and confounder histories. It can be useful to compare average population effects of exposure (APE) at different time points with average effects among those who actually experience the exposure (AEE). Where these estimates diverge this indicates exposure effects depend on a person's background propensity to experience the exposure at a particular time. Data from 7,177 adolescents in the UK Millennium Cohort Study are used to demonstrate how poverty (<60% of the median household income) at 9 months and 3, 5, 7 and 11 years of age is related to having tried smoking at age 14. Both APE and AEE estimates were weighted to balance confounders, namely: ethnicity, maternal education, smoking in pregnancy, UK country, maternal age at birth, and all prior measures of poverty, maternal smoking and maternal mental health. APEs weight exposed and unexposed groups to resemble the average population, while AEEs weight the unexposed group to resemble those who actually experience poverty at that age. APE and AEE estimates were similar at 9 months (respectively OR: 1.75; 95% CI: 1.39-2.26 vs OR: 1.50; 95% CI: 1.15-1.94). Estimates at later ages were attenuated and similar, but at age 11 they diverged with the APE OR raising to 2.13 (1.44-3.15) while the AEE estimate remained low at 1.19 (0.78-1.81). In terms of reducing adolescent smoking, both estimates indicated potential benefits from intervening to reduce poverty at 9 months. At age 11 though, while the APE indicates risk for smoking could rise if poverty became more widely prevalent, effects were weak among those who actually experienced poverty and intervening to reduce poverty here may have little impact over a disadvantaged background.

Linking Adolescent Substance Use Trajectories to Outcomes in Early Adulthood: Implications for Life-Course Development Among Indigenous North Americans

Presenter: Kelley Sittner, Oklahoma State University, USA
Co-authors: Melissa L. Walls, Dane Hautala, University of Minnesota Medical School, USA

The twenties typically represent a key transitional period in which young adults take on new roles and responsibilities. Substance use in adolescence may alter the timing and/or the success of those transitions. Studies with North American samples have found consistent associations between adolescent substance use and adult outcomes, including employment, educational attainment, family formation, and physical and mental health. Although there are documented associations between early adolescent substance use and later adolescent outcomes for North American Indigenous people, little is known about its impact on the early adult years among this population. This is a salient issue for Indigenous people given that they experience disparately high rates of substance use problems as well as lower socioeconomic status (SES) and greater prevalence of certain physical and mental health problems than other North American groups. It is critical to identify how adolescent substance use patterns impact Indigenous early adult outcomes, particularly whether and to what extent adolescent substance use contributes to emerging SES and health disparities. Data come from a prospective, longitudinal, community-based participatory research project with 8 Indigenous communities from a single cultural group. Adolescents were interviewed annually for eight years beginning in 2002 (baseline n=735, mean age=11.1 years), and again in 2017-2018. We used group-based trajectory modeling to link substance use trajectories in adolescence to key adult outcomes in wave 9 of the study (mean age = 26.3 years). We found three groups characterized by varying ages of onset and numbers of substances used, and differentially associated with adult outcomes. Compared to the late-onset group, the early onset group had significantly lower income, lower probabilities of being employed full-time and finishing high school, and poorer mental health in Wave 9. Surprisingly trajectory group did not differentiate substance use disorder prevalence in adulthood. Implications for intervention and the life-course are discussed.

Cumulative Prevalence of Early Life Course Psychiatric Disorders: Results from Community-Based Participatory Research with Indigenous North Americans
Presenter: Melissa Walls, University of Minnesota, USA
Co-authors: Dane Hautala, University of Minnesota, USA; Kelley Sittner, Oklahoma State University, USA
Prospective data spanning critical transitional periods of the life course (e.g., the shift from adolescence to adulthood) is lacking for North Americans in general and for American Indian and First Nations (hereafter, Indigenous) people specifically. This represents a problematic gap in knowledge given evidence that individual patterns of disorder are highly variable across time. Furthermore, research with diverse Indigenous groups demonstrates early onset, high frequency substance use with substantial co-occurring mental disorders during adolescence. We document cumulative prevalence, comorbidity, and impairment of select psychiatric disorders across the early life course using a prospective sample of Indigenous young adults. Data are from a community-based participatory research project with 8 Indigenous communities representing a single cultural group (baseline N = 735 adolescents). DSM (IV and 5)-derived diagnostic assessments were completed at Waves 1 (2002), 4, 6, and 8 when participants where on average 11.1, 14.3, 16.2, and 18.3 years of age. We couple these data with new responses collected from participants between 2017-2018 (mean age = 26.3 years).
Results reveal high rates of cumulative lifetime disorder over the early life course. At wave 9, 70.4% of participants met lifetime criteria and 27.3% past year criteria for any mental disorder. Lifetime comorbidity reached 44.4%. Highest rates of past year disorder risk appeared around wave 4 when participants were approximately 14 years of age. The exception to this trend is found in wave 9 estimates of disorder for "other substances" (beyond alcohol/marijuana), likely due to recent increases in opioid use. Highest prevalence rates overall were observed for substance use disorders (alcohol followed by marijuana). Rates of internalizing disorders were generally low, with 5.1% of the wave 9 sample meeting criteria for mood disorders. Cumulative estimates of disorders are generally higher for females than males.

KEYNOTE PRESENTATION
Transition to Adulthood in East Asia: Illustrations from the Taiwan Youth Project
Presenter: Chin-Chun Yi, Academia Sinica, Taiwan
ABSTRACT COMING SOON

PARALLEL SESSION 6

6A   SYMPOSIUM

Risky Behaviours in Childhood and Adolescence: Development and Gender Differences
Convenor and Chair: Diana Warren, Australian Institute of Family Studies, Australia
For many, the adolescent years are a time of experimentation during which they may engage in acts that go against societal norms, some of which may be illegal. While most grow out of this 'delinquent' behaviour, for others it may reflect a more serious, entrenched pattern of behavioural difficulties, often originating in childhood. A better understanding of the factors that support or hinder involvement in delinquent behaviour is needed to guide intervention initiatives targeting this behaviour, before it becomes ingrained and continues into adulthood. In this symposium, data from four longitudinal studies - the Millennium Cohort Study (MCS), Growing up in Scotland (GUS), Growing Up in Ireland (GUI), and Growing Up in Australia (GUIA) - will be used to explore gender differences the predictors of risky behaviours among adolescents.

Adolescent Delinquent Behaviour: Are Predictors Different for Girls and Boys?
Presenter: Suzanne Vassallo, Australian Institute of Family Studies, Australia
Co-author: Diana Warren, AIFS, Australia
In this presentation, data from the Longitudinal Study of Australian Children (LSAC) will be used to examine the prevalence, stability and risk factors associated with adolescent delinquent behaviour such as violent or drug-related acts, property offences (e.g., property damage) and authority issues (e.g., suspension or expulsion from school). As previous research on delinquent and criminal behaviour has primarily focused on males, sex differences in the prevalence and risk factors associated with these behaviours are also explored. Our results indicate that, for males and females, peer relationships and previous conduct problems were strong predictors of adolescent delinquent behaviour, even after controlling for a range of other characteristics of the study child, their family and their community. Aspects of maternal and paternal parenting style, including levels of parental monitoring were also important factors associated with the risk of delinquent behaviour. While males and females shared some common risk factors for delinquent behaviour, numerous sex-specific predictors were observed. These findings suggest that intervention initiatives may need to be tailored somewhat differently for males and females, so that they better meet the needs of adolescents and their families. Growing Up in Australia: The Longitudinal Study of Australian

Children (LSAC) is conducted in partnership between the Department of Social Services, the Australian Institute of Family Studies and the Australian Bureau of Statistics. Study website: www.growingupinaustralia.gov.au

Instability of Family Structure Across Childhood and Adolescent Antisocial Behaviour

Presenter: Emla Fitzsimons, University College London, UK
Co-author: Aase Villadsen, University College London, UK

Adolescence is a developmental stage characterised by noticeable behavioural changes that for some young people include increases in antisocial behaviours. Multiple factors across the child's "social ecology" have been shown to be associated with adolescent delinquency, including family environment, socio-economic and relationship factors extending beyond the family, and individual innate characteristics. Family structure is an especially well-documented aspect and research has shown that growing up in a single-headed household is a risk factor for adolescent delinquency. However, much previous research in the area has treated family structure as a static measure, rather than considering the potential fluidity of family structure during childhood and its impacts on the developing child. Using longitudinal data from the Millennium Cohort Study, this paper examines family structure from birth to adolescence, with a specific focus on change and instability of family structures and how this is associated with adolescents' self-reported antisocial behaviour at age 14. In addition, some potential mechanisms linking childhood family stability and adolescent antisocial behaviour are explored; specifically, parental monitoring and closeness of parent-child relationship. The paper also examines gender differences in effects of childhood family instability on risks of antisocial behaviour and on mechanisms linking family instability to such risks. The Millennium Cohort Study (MCS), known as 'Child of the New Century' to cohort members and their families, is following the lives of around 19,000 young people born across England, Scotland, Wales and Northern Ireland in 2000-01. Study website: cls.ucl.ac.uk/clsstudies/millennium-cohort-study/

Anti-Social Behaviour Among Irish Youth: Is Early or Late Adolescence More 'Risky'?

Presenter: Aisling Murray, Economic and Social Research Institute, Ireland
Co-authors: Emer Smyth, Dorothy Watson, Economic and Social Research Institute, Ireland

This analysis uses two waves of the Growing Up in Ireland (GUI) Child Cohort data to look at trends in anti-social behaviour (ASB) at the beginning and end of adolescence. It considers trends between these two stages of the life-course and compares rates to findings from other countries. In GUI, at 13 years, and again at age 17/18 years, youth self-reported their engagement in ASB using a list of 14 actions that varied in severity from 'not paid the correct fare on a bus or train' to deliberately set fire [to property]'. At age 13 years, nearly a quarter of boys and 10% of girls reported that they had intentionally hit, kicked or punched someone to hurt them at least once in the last year. The next most commonly reported ASB was not paying the correct fare (14%). Collectively, 39% of 13-year-olds indicated that they had engaged in at least one ASB in the past year (46% boys and 31% girls). By age 17/18 years, when the same youth were re-interviewed, this figure had risen to 50% [albeit with an additional two categories of ASB listed at the later wave]. However, the 'not paying correct fare' item appeared to drive a lot of that increase: increasing from 14% to 33% over time – possibly due to individuals continuing to pay the 'child' rather than 'adult' fare. Aside from this, many of the self-reported rates for other actions were similar between 13 and 17/18 years. The greater tendency for boys than girls to report ASB was evident at both time-points. Furthermore, individuals who had higher rates of ASB at 13 years were much more likely to be in the high 'offending' group again four years later. Growing Up in Ireland is the national longitudinal study of children and young people in Ireland. The study is nationally representative with over 20,000 cohort members. It is funded by the Government of Ireland through the department of Children and Youth Affairs. Study website: www.esri.ie/growing-up-in-ireland

Comparing Adolescent Risky Behaviour in Scotland and Australia: Preliminary Findings from Harmonised Analysis of Two 'Growing Up' Studies

Presenter: Paul Bradshaw, Scottish Centre for Social Research, Scotland
Co-authors: Diana Warren, Galina Daraganova, Australian Institute for Family Studies, Australia

This international collaborative paper builds on a novel and successful harmonisation of data and analysis from multiple international cohort studies as part of the Growing Up Healthy Across the Globe project. It will present findings from preliminary comparative analysis of adolescent risky behaviour in Scotland and Australia using data from two cohort studies who are each part of the 'Growing Up' family: Growing Up in Scotland and Growing Up in Australia. Cohort members' self-reported involvement in risky behaviour has been measured in each study at age 12-13. Both studies also contain a range of comparable data on potential risk factors for involvement in risky behaviour including child, parent and household characteristics. Bivariate analysis will be used to explore differences in risky behaviours in early adolescence in Scotland and Australia in terms of prevalence, the types of behaviour engaged in and by gender and socio-economic characteristics. In addition, the paper will also use multivariate analysis to explore whether predictors of risky behaviour differ between the two countries. Specifically, through regression analysis, the paper will explore variations in the strength of association between early conduct problems (measured via SDQ at age 4-5) and later risky behaviour alongside a small number of other independent

variables/risk factors common to the two studies. The paper will reflect both on the harmonisation process and on the local social, cultural and policy contexts which may explain similarities and differences in adolescent outcomes between the two countries. Growing Up in Scotland is a longitudinal birth cohort study funded by the Scottish Government and undertaken by ScotCen Social Research. Study website: growingupinscotland.org.uk Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC) is conducted in partnership between the Department of Social Services, the Australian Institute of Family Studies and the Australian Bureau of Statistics. Study website: www.growingupinaustralia.gov.au

6B SYMPOSIUM

Positive Psychosocial Functioning Across Contexts and Populations
Convenors and Chairs: Steven Hope, UCL GOS Institute of Child Health, UK and Meredith O'Connor, Murdoch Children's Research Institute and Australian National University, Australia
Understanding the causes and treatment of mental health difficulties has been a significant focus of psychological and epidemiological investigation, contributing to significant advances in the field. Complementary to this, positive psychosocial functioning (and overlapping constructs such as positive mental health, wellbeing, or mental health competence) is a rapidly expanding area of inquiry. Positive psychosocial functioning involves skills such as the capacity to regulate behaviour, interact well with others, and take up the role of being an active and contributing citizen. These skills are assets in meeting the demands of a rapidly changing labour market, and are essential for individuals to participate as citizens in democratic society and an increasingly globalised world. This symposium will examine the prevalence, predictors, and outcomes of positive psychosocial functioning across multiple periods of the life course: early childhood, adolescence, and adulthood. Across the presentations, the development of positive psychosocial functioning will be explored according to different contexts (Australia, UK), historical epochs (following individuals born in the post-war period and the turn of the millennium), population subgroups (such as gender, socioeconomic status), and according to different measurement approaches (e.g., as a multidimensional construct, and according to key dimensions, such as civic engagement).

Prevalence and Course of Mental Health Competence Over Childhood: Comparison of UK and Australian Cohorts
Presenter: Meredith O'Connor, Murdoch Children's Research Institute, Australia
Co-authors: Steven Hope, Russell Viner, UCL GOS Institute of Child Health, UK; Sharon Goldfeld, Murdoch Children's Research Institute, Australia
Background: The development of mental health competence is likely influenced by cultural context. This study examines the prevalence and longitudinal course of mental health competence over childhood and adolescence, and whether this differs across the UK and Australian settings.

Method: Analyses drew on data from two population-based cohorts: the Longitudinal Study of Australian Children (LSAC; K cohort N=4,983) recruited in 2004, and the Millennium Cohort Study (MCS), a nationally-representative cohort of children born in the UK between September 2000 and January 2002 (N=18,296). In both cohorts, a consistent measure of mental health competence was derived from parent-reported items on the Strengths and Difficulties Questionnaire (SDQ) at 4-5, 6-7, 10-11, and 14-15 years. Responses were summed and scores >23 categorised as high mental health competence.

Results: In both the LSAC and MCS, the prevalence of high mental health competence steadily increased from 4-5 to 10-11 years, before declining at 14-15 years. Prevalence was higher for females than males at all time points. Distinct trajectories of mental health competence were identified, reflecting groups of children with similar patterns of mental health competence over time. Trajectory groups showed high levels of rank order stability over childhood and adolescence.

Conclusions: Prevalence of mental health competence varies during childhood and early adolescence, with similar patterns observed across cohorts from Australia and the UK. Understanding the patterning of mental health competence over time and across contexts provides a foundation for future investigations of mental health competence and its potential as an intervention target.

Development and Predictors of Subjective Wellbeing in Early and Mid-Adolescence: Findings from the Millennium Cohort Study

Presenter: Praveetha Patalay, University College London, UK
Co-author: Emla Fitzsimons, University College London, UK

Background: There is longstanding debate about whether mental wellbeing is the absence of mental illness or a distinct construct. Research increasingly indicates support for the latter with only low-moderate associations between the two constructs in population-based data and the identification of unique correlates for each. In this presentation we present associations between mental wellbeing and mental ill-health at ages 11 and 14 years in the Millennium Cohort Study and describe the correlates and development of wellbeing at these ages.

Method: Data from 9553 participants in the Millennium Cohort Study, with both mental ill-health and wellbeing outcomes of the cohort members measured at ages 11 and 14. We investigate the stability in wellbeing from age 11 to 14 years and a range of childhood sociodemographic, human capital, family and wider environment risk and protective factors.

Results: Wellbeing has low stability between ages 11 and 14 (in contrast mental ill-health has moderate stability between these ages). Large sex differences emerge, with girls experiencing lower wellbeing and greater mental ill-health at age 14. Various risk and protective factors are associated with wellbeing and the variables included in this study explain 25% of the variation in wellbeing. Factors related to peer relationships and wider school and neighbourhood environments were particularly associated with wellbeing outcomes.

Conclusions: Wellbeing in early to mid-adolescence can fluctuate over time, presenting a potential sensitive period for intervention and support. Some factors associated with wellbeing are also associated with mental ill-health but others are not, supporting the need to specifically understand factors that can promote wellbeing in young people.

Health and Voting Across the Life-Course: Evidence from the National Child Development Study

Presenter: Thierry Gagné, University College London, UK
Co-authors: Ingrid Schoon, UCL Institute of Education, UK; Amanda Sacker, University College London, UK

Background: Participating as an active and engaged citizen in the community is a core dimension of positive psychosocial functioning in adulthood. However social structures can limit the participation of marginalized social groups in civic activities like voting, which in turn impacts their representation and the capacity of public institutions to address their needs. One critical question relates to the role of health as a mechanism reinforcing these inequalities. This study examines the role of key health indicators on voter turnout between the ages of 23 and 50 in a cohort representative of the British population.

Method: We used data from 6,691 participants who reported whether they voted in the last election at the ages of 23, 32, 42, and 50 in the 1958 National Child Development Study. We used six health indicators: self-reported health, psychological distress, smoking, drinking, physical activity (PA), and body mass index. We examined associations using random- (RE) and fixed- (FE) effects models, adjusting for non-response, attrition, missingness, intent to vote in the next election, and other time-varying covariates associated with health- and voting-related characteristics.

Results: In adjusted models, three health-related factors predicted voting behavior: 1) reporting good health (ORRE = 1.24, 95%CI 1.04- 1.49; ORFE = 1.16, 95%CI 1.00-1.35); 2) smoking 20 or more cigarettes per day (compared with non-smoking: ORRE = 0.67, 95%CI 0.54-0.83; ORFE = 0.80, 95%CI 0.65-0.99), and; 3) doing PA at least weekly (compared with never doing PA: ORRE = 1.30, 95%CI 1.13-1.49; ORFE = 1.22, 95%CI 1.08-1.36).

Conclusions: Findings offer robust evidence supporting the role of health and its behavioral determinants in voting, a key dimension of social participation. Future studies need to assess the size of its contribution to social inequalities in voter turnout and whether this mechanism also extends to influence the representation of socio-political values and political affiliations.

Mental Health Competence in Early Adolescence and its Association with Risk-Taking Health Behaviours in Mid-Adolescence: Findings from the UK Millennium Cohort Study

Presenter: Steven Hope, UCL GOS Institute of Child Health, UK
Co-authors: Emeline Rougeaux, Russell Viner, UCL GOS Institute of Child Health, UK; Andy Ross, University College London, UK; Anna Pearce, University of Glasgow, UK

Background: Risk-taking health behaviours initiated during adolescence can track into adulthood and influence lifelong health and social outcomes. Promoting positive mental health may help prevent the development of risk-taking behaviours and thus support future health. We investigated the relationship between a multidimensional measure of mental health competence in early adolescence and later risk-taking health behaviours.

Method: We used data from 10,142 participants in the Millennium Cohort Study. A four-class latent measure of mental health competence summarised learning skills and prosocial behaviours at age 11 years (maternal report): High (36%), High-Moderate (36%), Moderate (19%) and Low (9%). We tested associations between mental health competence and a number of risk-taking behaviours at age 14 years (smoking, drinking, illegal drug-taking, sexual behaviour, and antisocial behaviour).

Results: Compared to participants with High mental health competence, those with Low, Moderate, or High-Moderate levels were more likely to report risk-taking behaviours. After adjustment for potential confounding, elevated risks remained for Low mental health competence in relation to binge drinking (Relative Risk Ratio: 1.6 [95% Confidence Interval [CI]: 1.1-2.4]), having tried smoking cigarettes (Odds Ratio [OR]: 2.2 [1.6-3.1]), e-cigarettes (OR: 1.4 [1.0-2.0], illegal drugs (OR: 2.0 [1.3-3.1]), and anti-social behaviour (OR: 1.9 [1.3-2.7]) but not sexual contact (OR: 1.1 [0.7-1.7]).

Conclusions: Mental health competence in early adolescence was associated with risk-taking behaviours in mid-adolescence in a representative UK cohort. Further analyses, focusing on trajectories of mental health competence during childhood and subsequent risk-taking behaviours, will also be presented. Interventions that improve mental health competence skills may help reduce risk-taking behaviours at this crucial stage in the life course, improving wellbeing in adolescence and into adulthood.

6C   SYMPOSIUM

Congruence Over Time and Populations: Exploring the Use of Retrospectively Harmonised Mental Health and Cognition Variables in the British Birth Cohorts
Convenor and Chair: Vanessa Moulton, University College London, UK
Given the depth and breadth of information collected in the British birth cohort studies, they represent an excellent resource for studying the aetiology, development and outcomes associated with cognition and mental health across the life course. Furthermore, as they encompass multiple generations, they are also uniquely positioned to explore societal-level changes in these phenomena over time; however, this remains an underutilised feature of the cohorts. One potential reason for this may be the heterogeneity in the measures that have been administered both within and across these studies. A recent CLOSER (Cohort and Longitudinal Studies Enhancement Resources) initiative aimed to facilitate cross-cohort comparisons by retrospectively harmonising a wide range of measures in the British birth cohorts. This symposium serves to showcase the type of work that can be done with harmonised measures of cognition and mental health, whilst also highlighting common issues faced when dealing with retrospectively harmonised variables.

Harmonisation of the Age 10 Cognitive Measures in British Birth Cohorts
Presenter: Vanessa Moulton, University College London, UK
Co-authors: Eoin McElroy, Gabriela Conti, Emla Fitzsimons, George B. Ploubidis, Marcus Richards, Alice Sullivan, University College London, UK
In the British birth cohorts there is an array of cognitive measures in childhood. These measures have been used to investigate outcomes across disciplinary boundaries, for example educational attainment, mental health and physical health. Nevertheless, cross-cohort work has been limited by the multiplicity of cognitive tests between cohorts. However, a recent project has assessed the cognitive measures in five British cohorts and identified possible cognitive measures as candidates for harmonisation. Analysts have approached the cognitive measures in diverse ways. A common approach is to use principal components analysis (PCA) and more recently a latent variable modelling framework to construct an overall 'g', others have transformed ability scores into distributions such as deciles or z scores. Using data from NSHD, NCDS, BCS70 and MCS, this paper focuses on the cognitive measures administered when the cohort members were aged 10/11. There are a number of interesting features of the cognitive measures administered at this life-stage. For example, in the BCS there is a large number of cognitive measures (eight), covering specific scales such as reading and mathematics, and individual British Ability Scales (BAS) which overlap conceptually with some of the other eight tests. Tests on reading and mathematics appear in earlier cohorts, as well as a measure of general ability in the 1958 cohort. The work will use a number of approaches to construct retrospective harmonised cognitive measures, to understand if and how different approaches influence relations between cognition and where possible a range of outcomes: subsequent cognitive scores; educational attainment; social class; income; and mental health.

Sociodemographic Predictors of Mid-Life Cognitive Ability: A Cross Cohort Analysis

Presenter: Eoin McElroy, University College London, UK

Co-authors: Vanessa Moulton, Gabriela Conti, Emla Fitzsimons, George B. Ploubidis, Marcus Richards, Alice Sullivan, University College London, UK

As life-expectancy continues to increase, studies of cognitive function and decline in adulthood are of greater importance. A substantial body of literature has evaluated the influence of sociodemographic factors on cognition in mid-life. Indeed, higher levels of lifetime socioeconomic position, educational qualifications and occupational status have all been robustly associated with higher levels of cognitive ability in midlife. However, relatively few studies have explored these associations in the context of societal changes (e.g. increased access to education, changing labour markets). The present study seeks to exploit recently developed retrospectively harmonised measures to explore the intergenerational associations between mid-life cognitive ability and sociodemographic factors in three British birth cohort studies. This study utilises data from i) The National Survey of Health and Development (1946 birth cohort), ii) The National Child Development Study (1958 birth cohort); and iii) The British Cohort Study (1970 birth cohort). Similar measures of cognitive ability (executive function, immediate and delayed recall, processing speed) were administered during mid-life (ages 46-53) in each of the cohorts, and these measures were retrospectively harmonised using a latent variable approach in order to derive a comparable measure of cognitive ability. Regression analyses will be used to explore the associations between this general cognitive ability factor and the following harmonised predictors; early-life socioeconomic status (assessed at approximately age 11), educational attainment (assessed in young adulthood), occupational status (assessed in young adulthood), while controlling for early-life cognitive ability.

Secular Trends in Childhood Emotional and Behavioural Problems: Evidence from the British Birth Cohorts

Presenter: Eoin McElroy, University College London, UK

Co-authors: Praveetha Patalay, Dawid Gondek, George Ploubidis, University College London, UK

Despite preliminary evidence suggesting that common mental health difficulties are increasing in young people, there remains a paucity of research that has examined developmental trends in mental health across different generations. Moreover, research has yet to explore whether these reported increases parallel the growth in socioeconomic inequalities observed in recent generations. Therefore, the present study seeks to use harmonised measures to compare secular trends in common emotional and behavioural problems across different birth cohorts, and examine their associations with socioeconomic status (SES). This study uses data from i) The National Survey of Health and Development (1946 birth cohort), ii) The National Child Development Study (1958 birth cohort); iii) The British Cohort Study (1970 birth cohort); iv) The Avon Longitudinal Study of Parents and Children (born 1991-92); and v) the Millennium Cohort Study (born 2000-01). Measures of common mental health symptoms (e.g. e.g. Rutter scales, Strength and Difficulties Questionnaire) were retrospectively harmonised at the item-level. Trajectories of symptoms across childhood will be explored using multilevel growth models and cohort differences in these trajectories will be assessed. The roles played by SES and sex will also be examined by entering two- and three-way interaction terms. This will be the most comprehensive examination of secular trends in child/adolescent mental health to date, and provide insights into whether developmental trends have changed across different generations and in response to increased socioeconomic inequality.

Parent and Teacher Reports of Child Mental Health as Predictors of Self-Reported Mental Health: Comparing Two British Birth Cohorts

Presenter: Aase Villadsen, University College London, UK

Co-authors: Eoin McElroy, George B. Ploubidis, University College London, UK

Child mental health is recognised as an important societal concern in its own right, and also in terms of its impact on various outcomes both in childhood and later in life. The British birth cohort studies contain rich data on mental health across the life course, however these data are often provided by different sources. Parents are mainly relied upon to report their children's mental health in early life, but on several occasions teacher reports have also been administered. As member's approach and enter adolescence, self-reports become the primary method of data collection. However, research indicates that there are often substantial levels of disagreement between parental, teacher and self-reports of child psychopathology, and the extent of this disagreement has not been explored extensively in the British birth cohorts. This paper uses data from the National Child Development Study (NCDS; 1958 cohort) and the Millennium Cohort Study (MCS; born in 2000-2001). These cohort studies include parent and teacher reports of child mental health at age 11, and self-reported mental health in early adolescence (MCS) and in early adulthood (NCDS). Given the heterogeneous nature of the measures administered (Strengths & Difficulties Questionnaire; Rutter Parent Questionnaire; Bristol Social Adjustment Guide), these measures were harmonised at the item-level across raters, sweeps and cohorts. The level of agreement between parent and teacher reports was assessed with multitrait – multimethod models and by exploring their associations (jointly and separately) with self-reported psychopathology in adolescence (MCS) and early adulthood (NCDS).

6D

Wealth Inequality and the Life Course
Convenor/Chair: Philipp Lersch, Humboldt University Berlin, Germany
By historical comparison, and compared to income inequality, wealth inequality is high in many (post) industrialized societies. In the United States, for instance, household wealth inequality (as measured with the Gini coefficient) was about .85 in 2010, compared to .80 in 1962 and to a Gini for income of about .55 in 2010. To understand the historical emergence of these inequalities at the macro level, we need to zoom in at the individual level. Here a long-term life course perspective is essential, because wealth is accumulated over extended periods across various life course stages and even across generations. Thus, similar to health outcomes, it is especially relevant to investigate wealth when concerned with the long reach of earlier experiences for later life. At the same time, wealth is a crucial resource over the life course which provides important benefits such as real and psychological safety nets that income does not provide to the same degree. Therefore, wealth likely influences how life courses unfold by, for instance, shaping educational decisions and family transitions. Against this background, the proposed symposium brings together a set of innovative research papers that study how the life course interacts with wealth as a cause and consequence of inequalities.

How Money Buys Skills: Testing the Mediators Between Parent's Wealth and Children's Competence Among Pre-Schoolers in Germany
Presenters: Jascha Dräger, Klaus Pforr, GESIS, Germany
Co-author: Nora Müller, GESIS, Germany
Existing research on social inequality in education in Germany has mostly ignored parental wealth, even though research in other countries has established it as a distinct predictor of educational performance and attainment. We contribute to existing research by first, analyzing if parental wealth has an effect on competencies already at the very beginning of the school career, second, how these potential competence differences by parental wealth develop throughout primary school; and third, if parental wealth also affects secondary school track choices. Using data of the German National Educational Panel Study (NEPS), we find that children in households with zero or low to medium levels of negative net worth score substantially worse in cognitive skills as compared to children living in households with positive net worth. However, there are few differences between children in households with different amounts of positive net worth. The initial differences in cognitive skills between children from different wealth backgrounds grow throughout primary school. Finally, parental wealth also positively predicts the probability to attend the highest track in secondary school. Our results indicate that excluding wealth as a component of parental background leads to an underestimation of social inequality in education also in Germany.

Work-Family Life Courses and Wealth Accumulation: Comparing Baby Boomers and Millennials
Presenter: Rob Gruijters, University of Cambridge, UK
Co-authors: Zachary Van Winkle, University of Oxford, UK; Anette Fasang, Humboldt University Berlin, Germany
There is a strong public perception that Millennials are economically worse off than their parents, not least because of an increase in precarious employment and more volatile family patterns. Using detailed panel data from the 1979 and 1997 National Longitudinal Surveys of Youth in the United States, we analyze the work and family life courses of Millennials and Babyboomers from age 18 to 35 and relate them to wealth outcomes at the end of this period. Results from sequence analysis and quantile regression show a more unequal distribution of wealth among Millennials compared to Baby Boomers: the poorest Millennials have less wealth than their Babyboomer counterparts at the same stage in their lives, but the wealthiest Millennials have more. Family and work trajectories are strongly associated with wealth accumulation, but the cohort differences we observed cannot be attributed to compositional shifts in life course trajectories: higher wealth inequality among Millennials cannot be explained by differences in work and family life courses between the two generations. We conclude that other factors, primarily differential inheritance from parents, is likely responsible for higher wealth inequality among Millennials.

Family Wealth and Educational Attainment: A Three Generational Study of Young Adults in Norway
Presenter: Marianne N. Hansen, University of Oslo, Norway
Co-author: Øyvind Wiborg, Oslo Metropolitan University, Norway
Many western countries have experienced growing inequalities in earnings and wealth. Scandinavian societies, such as Norway, are no exceptions to this trends. A growing body of literature indicates that parental wealth affects adult outcomes in important ways. We examine how educational attainment among young adults in Norway depend on grandparental wealth, in addition to parental wealth. More precisely, we estimate the total and direct effects of grandparents' wealth on the children's school performances in high school. We also assess these effects on educational choices net of their school performance and parental characteristics. This study contributes to the growing literature on wealth inequality by using a three-generational design to study mechanisms behind intergenerational transmission of advantage. By contrasting the processes of educational attainment and wealth

accumulation, and comparing the impact of both grandparents and parental wealth, we are able to provide new knowledge about the mechanisms behind the influence of family wealth on child attainments. Furthermore, with a handful of exemptions, earlier three generational studies build on survey data, likely to invoke both systematic and non-systematic attrition across generations. We avoid such possible forms of attrition in our study by using administrative register data consisting of the entire population with links to parents and grandparents. Among our main findings is that the impact of grandparent wealth is low for educational performance, but appears more substantial for educational choice.

Private Insurance Against Unemployment: How Wealth Reduces Wage Scars
Presenter: Fabian Pfeffer, University of Michigan, USA
Co-author: Martin Ehlert, WZB Berlin Social Science Center, Germany
Job loss has many detrimental and long-lasting effects on individuals, including a reduction of their post-unemployment wages. The size of the "wage scars" of job loss, however, depends on the extent to which individuals can rely on effective safety nets during unemployment. The prior literature has focused on the effectiveness of public safety nets, namely unemployment insurance, in reducing wage scarring. In this contribution, we additionally investigate the importance of private safety nets, namely those provided by family wealth. Since access to this form of insurance is more unequally distributed, vast differences in family wealth may reinforce the stratifying effects of unemployment experiences on later wage inequalities. Yet, public unemployment insurance presumably interacts with the effect of wealth: It is likely that individuals only tap wealth to smooth their consumption after UI runs out. One reason behind this is that wealth is often more difficult to liquefy. Furthermore, the unemployed may be reluctant to draw on their savings because this may also reduce their retirement income. To assess this, we use longitudinal data from the Panel Study of Income Dynamics (PSID) and difference-in-difference regression analyses with a matched control group. In line with our expectations, we find that men with little or no wealth have much larger losses due to long-term unemployment than those with more wealth. For short term unemployment, we do not find such a pattern suggesting that public and private insurance interact as hypothesized. However, women's losses due to unemployment seem to be unaffected by family wealth.

Wealth Mobility in the US: 2001-2015
Presenter: Nora Waitkus, University of Bremen, Germany
The United States is known for high levels of wealth inequality that have further increased over the Great Recession of 2007–2010. While we know that most households experienced wealth losses during this period, it is less clear how the crisis has affected relative mobility within the wealth distribution in the long run. This study investigates wealth mobility trajectories of US households over the Great Recession. Latent class growth analyses based on data from the Panel Study of Income Dynamics (PSID) detects five mobility trajectories. Controlling for socio-demographic characteristics as well as changes in in household composition, family status and class position, my results reveal that wealth trajectories depend on prior wealth levels, but also on the composition of the wealth portfolio before the crisis: At the bottom of the wealth distribution, households in disadvantaged positions further deteriorated during the crisis. The little housing assets and savings this group had was used up to buffer income losses due to unemployment. Those at the top of the wealth distribution, however, improved their advantageous position even further, since they outbalanced losses on the housing markets with investments into financial assets. As financial markets quickly recovered, the wealthy thus further distanced themselves from the rest of the wealth distribution. The most noticeable developments occurred in the middle of the wealth distribution: Households with diversified asset portfolios could buffer small losses in housing equity with further investments into financial assets. Other households in the middle were not as fortunate: Having stored their wealth almost exclusively in housing equity, they faced long-term downward mobility toward the bottom of the wealth distribution. In contrast, those middle groups who had most of their wealth stored in finance and small business enterprises rather than housing assets improved their relative position. However, this occurred at the cost of households relying mostly on housing equity.

6E   SYMPOSIUM   DEBATE SESSION
Economic and Social Research Council (ESRC) Data Strategy
Presenter/Chair: Anna Vignoles, University of Cambridge, UK
ABSTRACT COMING SOON

Alternative Ways to Higher Education: A Reconstruction of Gender Effects

Presenter: Magdalena Pratter, University of Bamberg, Germany

Within the German educational system girls are no longer seen as a disadvantaged group. They graduate from secondary school as often or even more than boys do (Bildungsbericht 2018; Blossfeld et al. 2015) and attain more bachelor or master degrees (DiPrete & Buchmann 2006; 2013; Mann & DiPrete 2013). So far one question is still not taken into research account: are there any differences between young women and men on alternative ways to higher education entrance qualifications? Or do we find no gender inequalities on alternative paths as on traditional ways through the system? Using the SC 6 (Blossfeld et al. 2011; doi:10.5157/NEPS:SC6:8.0.0) the analyses take a closer look at potential gender inequalities at that later stage of the educational career: Regarding the lifecourse perspective I expect young women less than young men correct their former educational decisions and upgrade their initial level of education. Further classical Rational Choice theories would argue: young women tend to underdetermine their academic performance and expectations of educational returns, while overestimating the costs of educational alternatives. On the other hand, it is even more important for young women to further invest in their education, because of gendered decisions with regard to field of study and vocational training as well as labor market returns (Bobbit-Zeher 2007). The results of the multivariate analysis show that girls do not strengthen their advantage via alternative paths. They rather gain their higher education entrance qualification through the traditional path and they do not correct educational decisions and upgrade their initial level of education.

References:

Autorengruppe Bildungsberichterstattung (2018): Bildung in Deutschland. Ein indikatorgestützter Bericht mit einer Analyse zu Wirkungen und Erträgen von Bildung. Berlin.

Blossfeld, Hans-Peter, Roßbach, Hans-Günther and von Maurice, Jutte (2011): Education as a lifelong process: the German National Educational Panel Study (NEPS). Zeitschrift für Erziehungswissenschaft, 14, 19–34. Blossfeld, Pia; Blossfeld, Gwendolin; Blossfeld, Hans Peter (2015): Educational Expansion and Inequalities in Educational Opportunity: Long-Term Changes for East and West Germany: European Sociological Review 31:144-160

Bobbit-Zeher, Donna (2007): The gender income gap and the role of education. Sociology of Education, 80: 1-22.

DiPrete, Thomas A., Buchmann, Claudia (2006): GENDER-SPECIFIC TRENDS IN THE VALUE OF EDUCATION AND THE EMERGING GENDER GAP IN COLLEGE COMPLETION. Demography. 43: 1-24

DiPrete Buchmann 2013: The Rise of Women: The Growing Gender Gap in Education and What It Means for American Schools. New York: Russell Sage Foundation.

Leemann; Regula Julia; Imdorf, Christian (2011): Zum Zusammenhang von Geschlechterungleichheiten in Bildung, Beruf und Karriere: Ein Ausblick. In: Hadjar, A. (Hrsg.): Geschlechtsspezfische Ungleichheiten. 417-440.

Lojewski, Johanna (2011): Geschlecht und Studienfachwahl – fachspezifischer Habitus oder geschlechtsspezifische Fachkultur? In: Bornkessel, P.; Asdonk, J. (Hrsg.): Der Übergang Schule- Hochschule. 279-347.

Mann DiPrete 2013 Trends in gender segregation in the choice of science and engineering majors. Social Science Research. 42: 1519-1541.

Exploring the Paths of Young Mothers in Australia: A Sequence Analysis of Labour Market and Educational Trajectories Pre- and Post-Parenthood

Presenter: Janeen Baxter, University of Queensland, Australia

Co-authors: Sara Kalucza, Jack Lam, University of Queensland, Australia

Young motherhood is often framed as detrimental to the life chances of women, with research showing poorer labour market and educational outcomes compared to other women and men. At the same time, qualitative research reports motherhood is a transformative experience, where the birth of a child provides motivation for a fresh start, moving young women away from disadvantaged pathways. These findings are not necessarily contradictory. It is possible that the psychological and social benefits of becoming a parent for young women outweigh the negative effects of an early break in education and labour market trajectories associated with young parenthood by providing a strong source of love, purpose and authority. The question is whether such benefits are translated into other kinds of positive outcomes such as educational achievements, employment or financial security, post parenthood. We investigate the experiences of young mothers by undertaking sequence analysis combined with multinomial regression on a sample of young mothers, aged 18-24 at first birth, using data from the Household Income and Labour Dynamics in Australia (HILDA) study. Our aim is to explore the labour market trajectories of young mothers pre- and post- childbirth, to investigate whether young mothers continue on a path set out pre-childbirth, or whether parenthood constitutes a break with the previous trajectory. We also examine whether post-parenthood trajectories for education and employment tend to be more positive, negative or unchanged compared to pre-birth.

Changing Employment Patterns of Women in Later Life: A Cohort Analysis Using Danish Register Data
Presenter: Agnete Aslaug Kjær, The Danish Center for Social Science Research (VIVE), Denmark
Retaining older workers in the labor market is becoming an increasingly important policy goal. While many OECD countries have experienced growth in the labor market participation of their older populations, the Scandinavian countries stand out because of their particularly high rate of female participation in later life. This study examines the late-life employment trajectories of Danish women from age 50 to 65, asking how and why female participation has increased across cohorts. Specifically, we compare patterns of late-life employment across five birth cohorts (born in 1930, 1935, 1940, 1945, and 1950) in the Danish Longitudinal Study of Aging (n ≈ 3,500), utilizing 35 years of linked register data (1980 to 2015). An explorative sequence analysis reveals major developments in older women's employment patterns. In total, six distinct clusters are identified. Clusters characterized by full-time employment with planned exit have become more prevalent across cohorts, whereas clusters characterized by part-time employment with early exit, or by non-employment throughout, have become less prevalent over time. A decomposition analysis reveals that the cohort-effect in older women's employment is largely attributable to changes in compositional factors that are determined prior to the retirement trajectory, such as the improvement in women's educational attainment across cohorts and the increase in women's accumulated work-experience. Our results for a Scandinavian dual-worker economy showcase the massive societal potential associated with women's employment throughout the life course. Countries attempting to increase female participation in later life may find inspiration in the Scandinavian experience.

Lone Parents and Maternal Access to Education/Training in Ireland and Scotland
Presenter: Delma Byrne, Maynooth University, Ireland
Co-author: Morag Treanor, University of Stirling, UK
This paper draws on two large-scale longitudinal studies in Ireland and Scotland to examine changes in the education levels of parents of young children between two time-points – infancy, when children are aged 9/10 months, and early childhood when children are age 5. Specifically, we are interested in the extent to which lone parents successfully negotiate access to education/training relative to those who have a partner. In both contexts, there is a concern with low education levels among lone parents coupled with high poverty risks. While there is substantial variation across European countries in the educational attainment levels of lone parents Ireland emerges as a country where the share of lone parents with lower secondary education or below is high alongside Belgium, Luxembourg, Estonia and Malta. Key Research Questions:
1. At what rate does educational acquisition occur among mothers of young children?
2. Are there differences according to family structure?
3. What are the characteristics of mothers who experience an increase in education levels over time?
4. What are the key policies that contribute to the results?
Data from birth cohorts of the Growing up in Ireland, and Growing up in Scotland are used. Both data sources can be used to measure educational acquisition over time by grouping mothers into three categories at T1 (when children are infants). At this stage, parents are classified as either 'early leavers' or 'school completors' or 'degree holders'. The early leaver group represents those who left school with less than upper secondary education, while 'school completors' represents those who reporting having at least an upper secondary education. 'Degree holders' represent those with HE degree. Educational acquisition can then be captured for each group over time.

6G   PAPER SESSION: VULNERABLE YOUTH

Is 'First in the Family' a Good Indicator for Widening University Participation?
Presenter: Morag Henderson, UCL Institute of Education, UK
Co-authors: Nikki Shure, Anna Adamecz-Volgyi, UCL Institute of Education, UK
This paper asks whether using 'first in the family' (FiF) to attend university is a good marker of disadvantage in the context of the Widening Participation (WP) agenda in the UK. Currently, 15 of the 24 Russell Group universities use FiF as an indicator for widening participation, but very little is known about this indicator's properties and how it overlaps with other indicators of disadvantage. We use Next Steps (formerly the Longitudinal study of Young People in England, LSYPE) linked to the National Pupils Database (NPD) to provide the first comprehensive analysis of the FiF measure and whether or not it captures additional disadvantage over and above other markers of socioeconomic disadvantage. We employ school- and individual level non-linear probability models to look at the relative predictive power of being FiF compared to the commonly used WP measures to estimate the probability of university participation and graduation. Our empirical strategy directly controls for between-school differences in university success and thus looks at within-school effects. We evaluate the FiF measure in two steps. First, we look at the predictive power of WP indicators, captured by the area under the ROC curve (AUC), comparing them to each other one-b-one. In the second step, we look at whether adding the FiF measure on top of an empirically optimal combination of WP indicators increases the predictive power of our models. Our preliminary results show school-level factors are extremely important in predicting university entry, but not so much in predicting the probability of

graduation for university students. Once school-level factors are controlled for, most traditional WP measures as well as the FiF measure add surprisingly little to the predictive capacity of our models. We support our results using several robustness tests and procedures, including controlling for item-nonresponse and attrition.

Special Educational Needs and Disability: A Lifetime of Disadvantage in the Labour Market?
Presenter: Samantha Parsons, UCL Institute of Education, UK
Co-author: Lucinda Platt, London School of Economics, UK
Disabled adults face substantial labour market disadvantage. There is, however, variation in employment and earnings by age and educational level. Since much disability occurs in later life, and labour market disadvantage can lead to disability as well as vice versa, we currently have limited understanding of how far disabled people's current disadvantage represents the cumulative impact of disability. We also lack insight into how far policy changes have managed to reduce the gap for younger cohorts. These are the contributions of this paper. Using data from two British longitudinal studies we investigate economic outcomes in their mid-20s for those who were identified with a Special Education Need or disability (SEN(D)) when at secondary school in either the 1970s or 2000s. We find that by age 25, adults identified with SEN(D) while at school faced substantial employment disadvantage. The 'gaps' by SEN status were however smaller amongst the younger cohort. For the older cohort, and younger women, only part of the gap could be explained by differences in educational attainment and social background. We extended this picture to mid-life for the older cohort to illustrate the cumulative impacts of early identification with SEN(D). We discuss the implications of our findings.

Growing Up Lonely? Social Outcomes for Three Generations of UK Teenagers Identified with Special Education Needs or Disabilities: Evidence of Disadvantage Over the Life-Course
Presenter: Samantha Parsons, UCL Institute of Education, UK
Co-author: Lucinda Platt, London School of Economics, UK
Social isolation and loneliness currently have high prominence on the political agenda in the UK. It can affect anyone at all stages across the life-course, but some people are more vulnerable to it than others. Here we draw on data from three British longitudinal studies to look at the relationship between identification of special education needs or disabilities among three different generations of teenagers and a range of social outcomes across the life-course. By looking across generations and comparing outcomes for different age groups in the early part of the 21st century we can clearly see that despite years of successive governments agreeing that those with disabilities and additional needs deserve a better, fairer deal out of life, not only are today's teenagers still experiencing a sense of social isolation, but that this isolation and exclusion remains for those who are now adults in their mid-20s and has become deeply entrenched for those in their 50s. We discuss the implications of our findings.

What Mattered to Them: Life Course Perspectives of Romanian Born Care Leavers and Adoptees
Presenter: Mariela Neagu, University of Oxford, UK
Thirty years ago, shortly after the adoption of the Convention on the Rights of the Child and after the collapse of the communist regimes in Eastern Europe, 'Romania's orphans' became subjects of mainstream international media and of several scientific studies due to the conditions in the institutions they were living in. This humanitarian crisis was followed by international aid, by an exponential increase in the number of children adopted internationally and eventually the reform of the country's child protection system.

This study draws on 40 life history interviews with young people who were born in Romania around 1990 and who grew up in different types of placement: residential care (large institutions or small group homes), foster care, domestic adoption or were adopted internationally from Romania. Their lives and care experiences were affected by the country's political context and they started their transition to adulthood when Romania became a member of the EU (2007). Snowballing, purposive and opportunity sampling strategies were used in recruiting the research participants. The semi-structured interviews were conducted in Romanian in 2015-2017 or in the language of the country in which they were adopted in the case of international adoptees. Employing a conceptual framework based on the UN Convention on the Rights of the Child and the Capabilities Approach (Nussbaum, 2011), this study explores what contributed to their development with a focus on their agency, social identities (Côté, 2002; Jenkins, 2008) and turning points (Gilligan, 2009) that contributed to their current life. By taking a life course approach, this study makes a unique contribution by bringing together the voices of a hard to reach population: residential and foster care leavers, domestic and international adoptees, providing useful insights for policy and practice.

6H   PAPER SESSION: INCOME AND WEALTH

Marital Dissolution and Personal Wealth: Examining Gendered Trends across the Dissolution Process
Presenter: Nicole Kapelle, Humboldt-University of Berlin, Germany
Co-author: Janeen Baxter, University of Queensland, Australia

Historically high divorce rates have prompted ample research on the economic consequences of marital dissolution particularly for income measures. While some researchers have attempted to examine consequences for wealth as a complementary measure of economic wellbeing, the lack of personal level wealth data has been limiting. Leveraging novel personal wealth panel data from the German Socio-Economic-Panel Study (2002, 2007, 2012 and 2017), the current paper therefore examines consequences of marital dissolution for men's and women's personal wealth. Going beyond previous research, we thereby argue that marital dissolution should be considered as a process that commences prior to separation and lasts until post-legal divorce. Using this process approach allows us to generate a more systematic understanding of potentially dynamic personal wealth changes of men and women as they live through a marital dissolution. To test our expectations, we run fixed-effects regression models with cluster robust standard errors. Preliminary results indicate that personal wealth predominantly drops during separation while we find no further immediate decline at divorce. However, we also find persistently lower personal wealth levels in the years following divorce compared to married highlighting potential long-term consequences. Surprisingly, these effects do not differ between men and women. Exploring these results further, we find that particularly personal housing wealth drops during separation for both men and women. This may indicate that couples are forced to liquidise assets in preparation for the division of property at divorce. This however does not lead to an increase in liquid assets highlighting the high costs particularly of separation. In summary, this study provides new evidence on the economic consequences of marital dissolution for men and women. Compared to income studies that have persistently highlighted greater disadvantages for women, the present study cannot confirm such gendered consequences for personal wealth.

Diversity in Family Life Course Patterns and Intra-Cohort Personal Wealth Disparities at Late Working Age
Presenter: Nicole Kapelle, Humboldt-University of Berlin, Germany
Co-author: Sergi Vidal, University of Barcelona, Spain

This paper examines the importance of family life courses for personal wealth inequalities in later life. We extend prior research on the antecedents of economic wellbeing in older ages in two relevant ways. First, we use comprehensive accounts of the entire family live to identify relevant family trajectories. Second, we examine personal wealth instead of household wealth, as the former is increasingly considered a better measure for personal economic wellbeing than the latter. Along these lines, we propose the following research question: *How does the divergence to "traditional family trajectory" patterns impact wealth at older age?* Empirically, we examine sequences of partnership and fertility episodes that span from early adulthood to pre-retirement age using multichannel sequence analysis and cluster analysis. This enables the identification of major family patterns, which we use to assess family paths that are linked to unequal wealth levels at age 51 to 59. The empirical analyses are based on longitudinal data from the German Socio-Economic Panel Study. Preliminary results indicate that a family pathway featuring a continuous, stable marriage with two children –the theoretical and empirical standard pattern– associates with the highest levels of overall personal net and housing wealth at age 50 to 59. We also find that an increasing deviation from the standard trajectory leads to higher personal wealth penalties at older age. Larger penalties are observed in eastern Germany than in western Germany, particularly in housing wealth.

Personal Growth After Grey Divorce: A Longitudinal View on the Dissolution of Long-Term Marriages
Presenter: Claudia Recksiedler, German Youth Institute, Germany
Co-authors: Katharina E. Loter, Oliver Arránz Becker, University of Halle-Wittenberg, Germany; Pasqualina Perrig-Chiello, University of Bern, Switzerland

Going through a divorce is known to be one of the most stressful life events across the life course with far-reaching ripple effects for individuals' physical, mental, and often financial well-being. For some individuals, however, coping with marital dissolution and adapting to new social roles may lead to considerable gains in their reorientation in life and stimulate of their personal development. This has been captured in the concept of personal growth (and related constructs like benefit finding or posttraumatic growth), which has been studied primarily in the context of interpersonal loss through death or serious illnesses, and mostly through a cross-sectional lens. In our study, we track trajectories of personal growth after ending a long-term marriage of at least 15 years. We focus on divorce among adults in their second half of life because rates of grey divorce have been on the rise since the 1980s in the U.S. and Europe, yet longitudinal research on personal growth after marital dissolution remains sparse. We further examine whether trajectories of personal growth vary by gender, socio-economic status, reasons of divorce (e.g., sexual infidelity, fell in love with another person, or drifted apart), and social support. Data were derived from a Swiss panel on intimate relationships and marital dissolution among long-term married individuals conducted in 2012, 2014, and 2016 (N = 530 divorcees; mean age (SD) = 56 (8.25); 56.6% female). Random-effects group-specific growth curve models with years after divorce as process time yielded similar—and slightly decreasing—trajectories

of personal growth for divorced women and men over time. However, highly significant gender differences indicated that women showed higher levels of personal growth over the whole observation period. Because gender differences seemed to be fuelled by social capital rather than economic assets, we discuss these results through the lens of a linked-lives perspective.

Explaining Wage Differences Between Individuals with Different Types of Higher Education: A Lifecourse Perspective

Presenter: Fabian Sander, Swiss Federal Institute for Vocational Education and Training, Switzerland
Co-author: Irene Kriesi, Swiss Federal Institute for Vocational Education and Training, Switzerland

Current research shows an increasing demand for workers with higher education (Buera & Kaboski 2012) and an expansion of the tertiary sector of the educational system (Arum, Gamoran & Shavit 2007). At the same time, earning a degree in higher education has become more important for labour market success – a tendency which can also be observed in Switzerland (Gomensoro 2017). As a result of its expansion, higher education has also become more differentiated and heterogeneous over the last decades. However, research analysing differences between different types of higher education are not particularly abundant and are almost entirely lacking for Switzerland, where tertiary education is divided into two segments: Universities (ISCED 5A) and Professional Education (ISCED 5B). Whereas access to the academically oriented universities is contingent on a baccalaureate degree, vocationally oriented Professional Education is predominantly entered by people with basic vocational education and training and some work experience. Against this background, our paper firstly compares the income development of individuals with University and Professional Education degrees over the life course. Second, we investigate the determinants of wage differences between the two groups. Our theoretical arguments are based on a combination of human capital theory (Becker 1962), organization theory (Baron & Bielby 1980) and the task-based approach by Autor et al. (2003). Analyses are based on the Swiss Labor Force Survey from 1991-2016. In order to explain wage differences between tertiary-A and B graduates over their working life, we use the Oaxaca blinder method for cross sectional and trend decompositions. Preliminary results show a wage gap in favor of tertiary-A diploma holders, which increases until the age of 45 and remains constant thereafter. We are able to explain about 30% of the increasing gap by differences in formal authority, company size, the share of women within the occupation and work tasks.

Child Poverty and its Consequences in Development: Evidence from a Chilean Longitudinal Study 2010-2017

Presenter: Alejandra Abufhele Milad, Pontificia Universidad Catolica de Chile, Chile
Co-author: Amanda Telias, Pontificia Universidad Catolica de Chile, Chile

Studies have shown that socioeconomic gaps in children's cognitive and socio-emotional development appear very early in the life cycle. Moreover, empirical evidence shows sharp differences in cognitive development by socioeconomic status in early childhood for different contexts, including Latin American countries (Schady et al. 2015). On the other hand, the Chilean context in terms of poverty is distinctive. Chile has shown a considerable decrease in poverty during the last two decades; however still a considerable proportion of the population do not have enough income to satisfy basic needs. More important, historically the incidence of poverty among children has been higher than for the rest of the age groups and also among older persons. This study combines these two facts – the well-known socioeconomic gaps in children development and the remaining children poverty levels in Chile – to better understand the association between poverty and child development, but also to provide evidence on the pathways driving this relationship. This paper aims to shed light on the association between poverty and cognitive and socio-emotional developmental outcomes disentangling relevant aspects of this relationship. First, we examine the effects of timing, depth, and duration of child poverty on children's outcomes. We explore the hypothesis that children living in poverty for longer periods suffer the worst outcomes. The same hypothesis is suggested with children who experience poverty during their early childhood and those who live in extreme or deeper poverty. Second, given the richness of the dataset we explore the association of experiencing poverty during childhood and its effect on future child development, including important pathways through which poverty operates. We define at least five potential pathways: health and nutrition; parental interaction with children; maternal mental health; home environment and; provision of learning experiences outside the home.

Similarities and Differences in Social Class Inequalities in School Outcomes

Presenter: Vernon Gayle, University of Edinburgh, UK

Co-authors: Roxanne Connelly, University of York, UK; Chris Playford, University of Exeter, UK

Despite changes in education and a raft of policies directed towards combating inequality, in many countries there is clear evident of a negative relationship between parent's social class and their children's educational outcomes. On average children from families in less advantaged social classes have less favourable educational outcomes, and this negative relationship has persisted for several decades. Inequalities in outcomes at school are important because they have long term consequences later in an individual's lifecourse. Most notably poor outcomes at school influence further participation in education, training, employment and occupations, but also influence less obvious areas such as health. In this paper we provide a case study of the UK and investigate the relationship between parental social class and children's school level educational outcomes through a detailed analysis of Understanding Society (the UK Household Longitudinal Study). The analyses are original because we use the new administrative data on school General Certificate of Secondary Education (GCSE) outcomes which has been linked to Understanding Society. Within the social sciences there are now a plethora of measures of social class. Occupation based measures are most frequently used, although more recently the propriety of such approaches have begun to be questioned. There is an emerging school of thought that advocates the use of more culturally based measures as appropriate indicators of an individual's social class position. The empirical work presented in this paper is an innovative attempt to compare and contrast occupational class measures with measures that reflect cultures and resources to investigate what insights can be gained to better understand school-level educational outcomes.

Matthew Effects in Cognitive Development During Childhood: Gaps in Children's Language Skills from Age 5 to 9 in Germany

Presenter: Thorsten Schneider, University of Leipzig, Germany

Co-author: Tobias Linberg, State Institute for School Quality and Education Research, Germany

There is ample evidence on early differences in educational performance and cognitive skills by social origin, especially by parental education. Less is known about the stability of these differences at an early age. Based on DiPrete and Eirich's (2006) distinction between cumulative advantage in its "strict form" and "by status," this contribution examines how SES gaps in language skills, indicated by children's receptive vocabulary, change and from age 5 ("Kindergarten") to 7 (first grade) and 9 (third grade in elementary school). In addition, we discuss cultural capital theory and previous findings, to explain what factors drive these early changes. Using longitudinal data with three measurement points from the German National Educational Panel Study (NEPS), we estimated growth curve models with age at measurement point as the key time-varying covariate, a random intercept for skill differences at age 5, and a random slope for child-specific differences in skill gains. The vocabulary test administered is based on a German research version of the Peabody Picture Vocabulary Test (PPVT). The key SES indicator is mother's education. In addition, different indicators on cultural capital and activities at home plus some control variables are taken into account. At age 5, skill differences between children with low and high-educated mothers amount one year of development. As this gap increases over time, there is clear evidence on Matthew effects by status. In addition, those with initially higher skills show gains in skills above average, indicating Matthew effects in its "strict form" at the same time. In line with theory, home possessions (books, artwork etc.), literacy activities at home and joint looking at books significantly correlate with child's skills at age 5, but only home possessions seem to foster growth of skill.

Designing Longitudinal Surveys for Early Years and Middle Childhood: Children's School Lives

Presenter: Abbie Cahoon, University College Dublin, Ireland

Co-author: Jennifer Symonds, University College Dublin, Ireland

As a child's development occurs in the midst of a complex environment (Ayoola et al., 2017) a full-day workshop was created that aimed to generate a holistic view of the relationship between multiple factors that encapsulate Children's School Lives. The methods behind how this longitudinal, classroom-based workshop was created to allow for large scale data generation will be discussed. The cohort under investigation is a national representation of Ireland, in the Children's School Lives longitudinal study. Data collection from the classroom-based workshop starts with children aged 8 to 9-years old. The full-day workshop was split into four domains: the school climate, a child's perception of learning, a child's social relationships, and a child's cognitive, emotional and personal functioning. The workshop was combined with a systematic observation of children's learning. The systematic review and selection of psychometric measures, adaptation into interactive classroom friendly activities and graphic design of the children's workbook will be discussed, with samples from the child workbook provided. Issues regarding fieldworker training, complications with ensuring variability in responses longitudinally, the rigorous methods used to ensure domain-general skills are measured in a controlled group-level environment, and the adaptation of the classroom workshop to individual semi-structured interviews with a 4 to 5-year old cohort will be discussed.

Mind the Gap – Unequal from the Start: Addressing Inequalities Utilising Evidence from Growing Up in New Zealand

Presenter: Susan Morton, University of Auckland, New Zealand
Co-authors: Caroline Walker, University of Auckland, New Zealand; Polly Atatoa Carr, University of Waikato, New Zealand

New Zealand has unacceptably high rates of poor child health and wellbeing compared to other developed countries. Overall population wellbeing statistics hide wide inequalities in outcomes for Maori and Pasifika children. These groups experience a disproportionate burden of poor social, educational, health and economic outcomes throughout their life course. Understanding why we see these persistent gaps in wellbeing, and what context relevant strategies might be implemented to reduce the burden, has been an explicit objective of the contemporary longitudinal cohort study, Growing Up in New Zealand, since its inception on 2008. This presentation will explore the longitudinal evidence collected from the ethnically and socioeconomically diverse cohort of 6853 New Zealand children and their families from before birth to school entry (0 to 5 years) and assess its utility to date for informing context relevant strategies to reduce inequalities from early life. In particular this presentation will highlight differences by ethnicity in exposure to persistent poverty over the first 1000 days of life, as well as how this contributes to early gaps in serious childhood illnesses, abnormal child behaviour, obesity and readiness for school. Maori and Pasifika children experience the highest burden of socioeconomic disadvantage in their early years as well as an unequal burden of significant co-morbidities in terms of health and development throughout their life course. By the time they start school (at age 5 years) they are already falling behind their peers in terms of readiness to engage in learning. The findings from the Growing Up in New Zealand study have to date informed the co-design of a significant community based strategy to tackle inequalities in one of the most deprived communities in NZ, and it is particularly relevant to the NZ government's bold new cross-sectoral wellbeing strategy.

DAY 3 FRIDAY 27th SEPTEMBER 2019

PARALLEL SESSION 7

7A SYMPOSIUM

The Intergenerational Transmission of Education and Family Values and Behaviour: New Aspects in a Comparative Perspective

Convenor/Chair: Wolfgang Lauterbach, University of Potsdam, Germany

Human lives are typically embedded in social relationships with kin and friends across the life span and family life takes place in the context of intertwined social relationships. Individuals never act as single persons – they are always members in a generational succession and therefore transmission processes are fundamental in family life. Therefore, transmission from the older to the younger generation is one key aspect of family life. And the extent of variability in the transmission process either stands for continuity or generational change. Research highlights, that two areas in the life course of young generations are of special interest: the educational and the partnership area. Concerning educational attainment, we want to investigate the question, how do aspirations vary in a three generation context from grandparents to parents and (grand-)children. Concerning partnership and family life, we want to know, whether partnership patterns over the life course of the children are affected by parents. Whether the succession of partnerships is affected by parental divorce independent of the family status of the children. We would focus the mentioned two areas in an international comparison. The issue draws on data from Germany, Canada, Great Britain and the USA.

Intergenerational Transmission of Educational Aspiration and Educational Status Over Three Generations: How Does the Educational Expansion Effect Three Family Generations?

Presenter: Wolfgang Lauterbach, University of Potsdam, Germany
Co-authors: Werner Georg, University of Konstanz, Germany; Helmut Fend, University of Zürich, Switzerland

Educational aspirations of parents for their children are in general considered to be a relevant factor for student's educational success. That's in general the case for school diplomas and for tertiary education degrees, in Germany especially also for vocational diplomas. Scholars argue at present that aspirations for higher education or vocational diplomas are nowadays more relevant for young adults' success than aspirations for school attainment. According to this argumentation, we must realize, that vocational or higher education aspirations of parents are not only determined by their own strata. They might also be influenced by their educational qualification compared to the qualification of their parents. In the context of three generations the experience of the middle generation, whether experiencing an up- or downward mobility, is likely to be an important predictor of aspirations for their children. So we argue, that the higher education or vocational aspirations of the middle generation differ according to their own educational mobility compared to their parents. Thus we analyse the aspirations in a three generational perspective and we want to know, whether the educational mobility between grandparents and parents influence parental aspirations for their children. Thus, this paper contributes to better understand the relationship between higher education or vocational aspirations in two ways: (1) Is there a causal relationship between the mobility experiences of parents and their educational aspirations towards their children; (2) how do the aspirations vary according to experienced up- or downward mobility? We use data of the LifE study for Germany. A 33-year panel study which was first collected in the years 1979 to 1984 and then recollected in 2002 and 2012. The children were in 2012 between 12 and 17-year old and we estimate the higher education and vocational aspirations and expectations for these students.

Should I Work or Should I Study? The Role of Parents in Shaping Educational Aspirations and Attainment of Their Children in Times of Social Change

Presenter: Ingrid Schoon, UCL Institute of Education, UK

Student's educational aspirations have a significant influence on their educational and occupational attainment. Students with high educational aspirations are more likely than students with low educational aspirations to: do well in school, attain higher education degrees, and are more likely to get into high status occupations. Since the 1990s there had been a general increase in ambitions for higher education observed among young people and their parents. Is the role of educational aspirations still relevant in shaping later attainment, or has the emerging norm of 'college for all' undermined the importance of educational aspirations as a predictor of later achievements? Moreover, what happens to those who do not want to go to higher education, and who seek to enter paid employment as soon as possible after compulsory schooling? Is the intention to follow the traditional work-related pathways necessarily associated with entry into precarious, low skilled employment, or are there viable options available for those on a work-focused track? And what is the role of parents in steering the transition from school-

to-work of their offspring? In this paper we use data collected for the 1970 British Birth Cohort Study (BCS70) and Next Steps (formerly known as the Longitudinal Study of Young People in England), a cohort of young people born in 1989/90. The aim is to examine 1) changes in educational aspirations of young people and their parents before and after 1990, taking into account variations by gender and socio-economic status; 2) the match between young people's education aspirations and those of their parents; and 3) the influence of (mis)matched intergenerational aspirations on later outcomes regarding educational and occupational attainment. The study contributes to current debates regarding the causes and correlates of discrepancies between educational aspirations and attainment.

How Do Grandparents' and Parents' Educational Attainments Influence Parents' Educational Expectations for Children?

Presenter: Jeylan Mortimer, University of Minnesota, USA
Co-author: Mark Lee, University of Minnesota, USA

For decades, U.S. status attainment studies have demonstrated the importance of parental education for the educational attainment of children. While attainment research is generally confined to two generations (parents and children), some interest has been directed to the role of grandparents, with mixed findings. Higher education has expanded greatly over the past several decades in the United States, and this is reflected in the higher attainments of YDS parents when compared to grandparents. Confirming prior studies, parental education is a strong predictor of parental educational expectations (controlling race and children's mean age). But college educated parents are a diverse group; some are upholding a long-standing family tradition of college attendance; others are first-generation college students. In fact, when we divide parents into four categories based on their educational mobility only the inter-generationally stable college group has higher expectations for their children than the "neither college" category. Surprisingly, the upwardly mobile first-generation college attenders did not have higher expectations for their children than non-college parents whose own parents did not attend college. We also find that grandparental expectations for the G2 adolescent child has a significant positive effect on G2 parental expectations for their G3 children, suggesting direct intergenerational transmission of educational expectations. Given the prominence of parental expectations in the educational attainment process, these data indicate that educational attainment is in fact a multi-generation phenomenon. We focus on parental educational expectations for their children, drawing on data collected from 476 grandparent-parent pairs by the Youth Development Study (YDS) over a 24-year period. Grandparents' educational attainment and their educational expectations for their children in 1988. The same variables were obtained from their adult children (age 37-38) in 2011, who had become parents (children of any age, mean age 10).

Intergenerational Transmission of Parental Divorce On Partnership Patterns

Presenter: Jana Gläßer, University of Potsdam, Germany
Co-authors: Wolfgang Lauterbach, University of Potsdam, Germany; Fred Berger, University of Innsbruck, Austria; Helmut Fend, University of Zürich, Switzerland

It is well known, that parents influence through socialization processes, interaction and communication the family life of their children. The best investigated family event is that of the parental divorce: Children of divorced parents have a much higher risk of divorce than couples who never experienced the divorce of their parents (Amato 1996, Diekmann und Engelhardt 1995). Theoretically, it can be argued that the parental relationship works as a role model which is internalized and reproduced by the children in their own romantic relationships (Bandura, 1976). The divorce of the parents thus, can either be seen as a mechanism to solve own problems, or otherwise these young adults have low competences to hold a relationship stable for a long time in their own life. Building on this discussion we want to invest in the question whether (1) a divorce of the parents or (2) a burdensome family life influence the partnership trajectories of young adults. We analyse the partnership patterns from age 16 to age 45, thus over a 30-year period. Analyses will be done for men and women separately. We use discrepancy analysis of state sequences (Studer et al. 2011) to analyse how the individual partnership trajectories are shaped by the divorce in the family of origin. Using this framework, we can measure the strength of association between diversity of trajectories and covariates.

Education, Homogamy, Reproduction, and Inequality: A Twenty-eight Year Intergenerational Perspective of Canadian Families

Presenter: Lesley Andres, University of British Columbia, Canada

In this paper I will employ 28 years of longitudinal data from the British Columbia, Canada Paths on Life's Way project to provide a detailed account of (1) changes in educational homogamy between Paths respondents and their parents and (2) whether the forms of cultural, social, and symbolic capital (e.g., enrichment classes, involvement in language classes, music lessons) transmitted to Paths respondents' children differ in relation to the homogamous nature of the family. Through quantitative analyses of questionnaire data, I will provide a detailed account of the relationship between homogamy and levels of family inequality. The findings of this paper add a new twist to the value of a post-secondary education in relation to marriage strategies and the reproduction of inequalities.

Cross Cohort Mental Health Research: New Insights and Analyses from Five Birth Cohort Studies
Convenor and Chair: Praveetha Patalay, University College London, UK
In this symposium, we present four papers that each investigate two or more cohort studies to answer questions about mental health, with a cross-cohort aspect to the investigation. The first paper related to changes in adolescent mental health and other health related behaviours and after presenting changes between two recent cohorts (MCS and ALSPAC) and goes on to investigate how the associations between these different health outcomes might be changing over time. The second and third papers focus on the adult consequences of adolescent mental health problems using NCDS and BCS cohorts. These investigations also provide an insight into the possible longer term implications of the changing mental health prevalence observed in the first paper. The last paper compares three adult cohorts (NSHD, NCDS and BCS) to investigate the mental health consequences of age at child bearing. The studies, all being multi-cohort, also illustrate methods and approaches to data-harmonisation and cross-cohort controlling for confounders and use multiple imputation with almost full cohort samples to minimise bias arising from differential attrition across the cohort studies under investigation.

Changes in Millennial Mental Health and Health-Related Behaviours Over Ten Years: A Cohort Comparison Study
Presenter: Praveetha Patalay, University College London
Co-author: Suzanne H. Gage, University of Liverpool, UK
Background: There is evidence that mental health problems are increasing and substance use behaviours are decreasing. This paper first aimed to investigate recent trends in mental ill-health and health-related behaviours in two cohorts of UK adolescents in 2005 and 2015 and then compare the associations between mental health and health-related behaviours over time.

Method: Trends in harmonised mental ill-health (depressive symptoms, self-harm, anti-social behaviours, parent reported difficulties) and health related behaviours (substance use, weight, weight perception, sleep, sexual intercourse) were examined at age 14 in two UK birth cohorts; Avon Longitudinal Study of Parents and Children (ALSPAC, N=5627, born 1991-92) and Millennium Cohort Study (MCS, N=11318, born 2000-02). Prevalences and associations estimates are presented unadjusted and using propensity score matching and entropy balancing.

Results: Depressive symptoms (9% to ~15%) and self-harm (11.8% to ~14.5%) increased over the 10 years. Parent-reported emotional difficulties, conduct problems, hyperactivity and peer problems were higher in 2015 compared to 2005 (5.7-9% to 9-18%). Conversely, substance use (tried smoking 9% to 3%; tried alcohol 52% to ~43%, cannabis 4.6% to ~4%), sexual activity (2% to ~1%) and anti-social behaviours (6.2-40.1% to 1.6-28%) were less common or no different. Adolescents in 2015 were spending less time sleeping, had higher BMIs and a greater proportion perceived themselves as overweight. Associations between these variables in each cohort will also be presented.

Discussion: Given health-related behaviours are often cited as risk-factors for poor mental health, our findings suggest relationships between these factors might be more complex and dynamic in nature than currently understood.

The Adult Consequences of Adolescent Mental Health Difficulties: A Cohort Comparison Study
Presenter: Ellen Thompson, University College London, UK
Co-authors: George B. Ploubidis, Alissa Goodman, Marcus Richards, Peter Fonagy, Praveetha Patalay, University College London, UK
Background: It has been recently observed that the prevalence of mental ill-health is changing across generations. This study aimed to conduct cross cohort comparison using the 1958 National Child Development Study (NCDS) and the 1970 British Cohort Study (BCS) in order to investigate whether the associations between psychopathology at age 16 and social, emotional and health outcomes at age 42 are changing across two generations.

Methods: Data from 17,416 NCDS and 16,569 BCS survey members were used. Adolescent mental health was measured using the Rutter Child Scale A questionnaire. Measurement models were applied to items for both cohorts improve the precision of measurement. Outcome measures at age 42 included mental health, general health, life satisfaction, living with spouse or partner, general election voting behaviour, higher degree attainment and income. Regression analysis were conducted with age 16 mental health predicting the outcomes at age 42, while controlling for a range of harmonised early childhood characteristics. Cohort x mental health interactions were estimated to examine cohort differences in the associations of age 16 mental health with age 42 outcomes.

Results: Adolescent psychopathology was significantly associated with an increase in risk of all outcomes at age 42 in both NCDS and BCS, however, no significant cohort interaction was found indicating that for most outcomes the extent of the negative consequences of adolescent mental health problems have not changed. There was no significant sex by cohort interactions predicting the outcomes.

Conclusions: Psychopathology at age 16 is significantly associated with an increase in risk of social, emotional and health outcomes at age 42. However, the strength and direction of associations does not differ between those born in 1958 and 1970.

Association Between Early Life Mental Health and Alcohol Problems in Adulthood and Mediation Role of Education: Evidence from Two British Birth Cohorts
Presenter: Ke Ning, University College London, UK
Co-authors: Praveetha Patalay, George B. Ploubidis, University College London, UK; Jennifer Maggs, Pennsylvania State University, USA
Background: Evidence for the association of early life externalising problems (EXT) and internalizing problems (INT) and adulthood alcohol problems. Thus, we aim to ascertain the association between EXT/INT and alcohol problems in adulthood using data from two British birth cohorts and subsequently explore the potential role of education as a mediator.

Method: Data came from 1958 National Child Development Study (NCDS) and 1970 British Cohort Study (BCS). EXT and INT were measured using Rutter Behaviour Questionnaires at age 16. Education attainment was indicated by whether participants had a college degree. Alcohol problems were measured using CAGE/AUDIT scale at several ages across adulthood. Logistic regression was used to explore association between EXT/INT and alcohol problems and mediation analysis under counterfactual framework to examine size of direct and indirect effects. A series of potential confounders and previous mental health problems were controlled and missing data were dealt with multiple imputation.

Results: No significant association was observed between EXT/INT and alcohol problems among females. Among males, EXT were positively associated with alcohol problems in adulthood while the association was negative for internalising problems (INT). Expected Results for mediation analysis (based on preliminary analysis): for males, positive associations between EXT and alcohol problems are partially explained by education attainment (relative size); Indirect effect between INT and alcohol problems is positive while direct effect between INT and alcohol problems is negative.

Conclusion: EXT and INT was associated with later alcohol problems in contrasting directions in males. Education is a potential mediator of the relationship between adolescent mental health and later alcohol problems.

Postponement of Childbearing and Mental Health Outcomes: Evidence from three British Birth Cohorts
Presenter: Maria Sironi, University College London, UK
Co-author: George B. Ploubidis, University College London, UK
Current literature on the link between fertility and health shows an inverted U-shape relationship between age at first birth and several physical and mental health measures. In particular, very early and very late childbearing are associated with worse outcomes, such as a higher prevalence of chronic diseases, worse self-rated health, and higher risk of depression. However, the pattern of age at childbearing has changed substantially over time in developed countries, with a consistent postponement of parenthood since the 1970s. In the UK, the average age at first birth has increased from 24.2 to 28.7 among women and from 29.5 to 33.3 among men between 1975 and 2015. Moreover, recent evidence suggests that psychological distress in midlife has increased over time, and understanding its determinants is necessary. Existing studies fail to investigate how postponement of childbearing and the changes in the distribution of age at first birth over time are associated with mental health outcomes in mid-life. Using data from three British Cohort Studies (1946 National Survey of Health and Development, 1958 National Child Development Study, 1970 British Cohort Study), we examine the relationship between age at childbearing and measures of psychological distress among men and women in their mid-40s, born in 1946, 1958 and 1970, respectively. The mechanisms that link age at first birth and mental health seem to suggest that people who postpone their parenthood tend to have later and better first marriages, higher educational level, lower risk of economic strain, and better physical health. However, the implications for mental health of the general shift in the distribution of age at first birth (to later ages) are not clear and need to be addressed.

Short-Term U.S. Paths Toward Retirement: Similarities and Differences Compared Across Age/Gender/Class Intersections

Presenter: Phyllis Moen, University of Minnesota, USA
Co-authors: Sarah Flood, Janet Wang, University of Minnesota, USA

The timing of defining oneself as retired has enormous consequences for individuals and families, as well as for governments confronting population aging in terms of rising costs of social security and health care. A seemingly obvious policy solution is to encourage Boomers and those following in their wake to work longer, postponing retirement from the labor market. What is troubling is that these policy discussions are taking place without evidence or, at best, in the context of possibly obsolete evidence. What we know about retirement transitions comes from studies of earlier cohorts living through very different demographic, technological, social and economic environments, very different private sector and public policy regimes. Contemporary Boomers' experiences also differ in that age 65 is no longer "old." Boomers are more educated, healthier, and more engaged in paid work than their parents or grandparents at the same ages. We term the 50s, 60s, and 70s as the encore years, arguing an evolving life stage is opening up in the space between conventional family and career obligations, on the one hand, and the frailties associated with old age, on the other (Moen 2016; Moen and Flood 2013; Flood and Moen 2015; Genadek et al 2017; Moen and Lam 2015; Mortimer and Moen 2016). What is key to understand is: How are diverse members of the large U.S. Boomer cohort (in their 50s, 60s, and 70s) navigating leaving the labor force? More specifically, what are U.S. Boomers' patterned yet heterogeneous short-term workforce pathways, in terms of the timing, sequencing, and voluntariness of working hours, work participation, and exits, including subjective retirement? This study uses linked Current Population Survey (CPS) monthly panel data (over 16 months) to capture the contemporary complexity, heterogeneity, and inequities in even short-term work/retirement dynamics across intersections of age, gender, and class.

Pervasive Life Course Inequalities in Incident Depression Among Ageing Adults in China and England: A Prospective Cohort Study

Presenter: Milagros Ruiz, University College London, UK
Co-authors: Martin Bobak, University College London, UK; Yaoyue Hu, Pekka Martikainen, Max Planck Institute for Demographic Research, Germany

Background: Despite the growing prevalence of depression in the Chinese elderly; there is conflicting evidence on life course socioeconomic position (SEP) and depression onset in China, and whether this association is akin to that observed in Western societies. We compared incident risk of mid-late life depression by childhood and adulthood SEP in China and England, a country where mental health inequality is firmly established.

Methods: Depression-free participants from the China Health and Retirement Longitudinal Study (N=8,508) and the English Longitudinal Study of Ageing (N=6,184) were studied over four years. Depressive symptoms were classified as incident cases using the Center for Epidemiological Depression Scale criteria. Associations between SEP (education, wealth, residence ownership, and childhood/adolescence deprivation) and depression symptom onset were assessed using Cox proportional hazards models. In China, we also investigated children's government employment status as a SEP marker.

Results: Higher education and wealth predicted lower depression incidence in both countries. The association with non-ownership of residence appeared stronger in England (hazard ratio [HR] 1.61, 95% CI 1.41–1.86 versus 1.11, 0.95–1.29 in China); while that with childhood/adolescence deprivation was stronger in China (1.43, 1.29–1.60 versus 1.33, 0.92–1.92 in England). Chinese adults, whose children were employed in high status government jobs, had lower rates of depression onset.

Conclusions: Consistent findings from China and England demonstrate that SEP is a pervasive determinant of mid-late life depression in very diverse social contexts. Together with conventional measures of SEP, the SEP of children also affects the mental health of older Chinese.

Intrinsically Rewarding Work and Generative Feelings in Midlife
Presenter: Harvey Krahn, University of Alberta, Canada
Co-authors: Matthew Johnson, Nancy Galambos, University of Alberta, Canada
Erik Erikson defined generativity as a person's desire to leave a legacy through establishing and guiding the next generation and by engaging in creative and productive work that improves quality of life for others. Previous research has focused primarily on family life and community involvement as pathways to midlife generativity. This paper hypothesizes that intrinsically rewarding paid work can also lead to a heightened sense of generativity in midlife. Such work may involve training less experienced workers to complete complex work tasks, inventing and building new products, organizational structures, or social programs that could benefit others, or providing useful services to appreciative customers and clients. In a previous paper (Chen et al., 2019) analyzing 7th wave data (2010, age 43, n = 369) from the Edmonton Transitions Study (ETS) which has tracked a cohort of Canadians for 32 years, our cross-sectional analysis revealed a substantial correlation between intrinsically rewarding work and feelings of generativity, controlling on civic engagement, family life satisfaction, and other variables. In this paper, we analyze both 7th wave and 8th wave (2017, age 50) ETS data (n = 368 employed individuals) to determine whether intra-individual change in intrinsically rewarding work is associated with change in feelings of generativity, controlling on civic engagement, satisfaction with relationships with children, and other control variables. Latent change score modeling is used to examine within-person associations between changes in intrinsic work rewards and generativity between ages 43 and 50 and how initial (age 43) between-person differences are implicated in the within-person change process. Chen, J., H.J. Krahn, N.L. Galambos, and M.D. Johnson. 2019 "Wanting to be remembered: Intrinsically rewarding work and generativity in early midlife." Canadian Review of Sociology (published on line January 27 2019).

Are There No Atheists in Foxholes? Religiosity When Approaching the End of Life
Presenter: Merril Silverstein, Syracuse University, USA
Co-authors: Rebecca Wang, Dongmei Zuo, Vern Bengtson, University of Southern California, USA
Studies of religious change with aging have generally found mixed results. While attendance at religious services tends to decline at advanced ages due to health difficulties, other studies have shown inconsistent findings, which have led scholars to assume that age differences in religiosity are fully explained as cohort effects. We suggest that in later life, the threat of mortality infuses religion with different meanings. Consequently, proximity to death may provide an alternative representation of temporality in the study of religious change. To examine this question, we employ data from about 600 individuals participating in the Longitudinal Study of Generations between 1971-2006. Respondents who were aged 35 and older at baseline, were matched to the National Death Index to identify dates and causes of death. We used time-to-death and age as time metrics to examine how behavioral and cognitive dimensions of religiosity change from midlife to the end of life. The model specification examined age in years, years to death, historical decade, and self-rated health as time varying factors predicting religiosity. Our treatment of time-to-death derives from the "countdown model" in which decedents receive a value for each observation period that is the positive distance from known date of death. About 15% of cases survived to the end of the observation period (censored) and whose ages at death were imputed from observed variables, and constrained to be after the last year of observation and 110. Growth curves reveal that chronological aging strengthened both types of religiosity, but approaching death weakened them. In addition, historical and health effects were observed. We conclude that the direction of change in religiosity is sensitive to whether dynamic assessments are made over the age-span, the health-span, and the death-span. There may indeed be atheists in foxholes.

Generation Specific Volunteer Behavior in Retirement in Germany: A Longitudinal Analysis
Presenter: Luise Burkhardt, DIW Berlin, Germany
The generation of the German Babyboomers (born between 1955 and 1969) is about to successively reach the age of retirement within the next few years and withdraw from the labor market. Those individuals are of interest for civil society as the newly retired form a numerically large group that could fill won leisure time during retirement with volunteer work. Aiming to draw conclusions for the future volunteer behavior of the Babyboomers, this paper investigates the regular volunteer behaviour of this generation throughout their life-course. The study compares this group to six other generations currently living in Germany. Applying Karl Mannheim's Theory of Generations (1928) and Theories of Socialization, this research focusses on the question whether there exists a generation specific volunteer behavior due to differences in the socialization during the formative phase. Furthermore, I investigate whether those generation effects function as moderator of the age effect on volunteer behavior throughout the life-cycle and particularly in retirement. The analysis is conducted separately for East and West Germany considering the different political and economic circumstances and diverse opportunity structures for volunteer work in the two countries before and after the reunification. As database serves the German Socio-economic Panel Study (SOEP 1990-2017). Its longitudinal design enables the following up of different generations throughout their lifecourse. Hence potential aging effects, generation effects and period effects regarding volunteer behaviour can be identified. Controlling for age, first results of a Random Effects Model indicate that especially the

West German Babyboomers differ significantly from the other generations, showing a higher regular volunteer behavior. This result, combined with the large size of the Babyboomer generation and the age effect, points to an increasing rate of elderly volunteers within the next decades in West Germany and a boost for civil society.

7D   SESSION WITHDRAWN

7E   PAPER SESSION: HEALTH SHOCKS

Work Resumption After Temporary Disability Pension: Changes Over Time
Presenter: Mikko Laaksonen, Finnish Centre for Pensions, Finland
Co-author: Heidi Nyman, Finnish Centre for Pensions, Finland
Background: In Finland the incidence of disability pensions has sharply decreased over the last 10 years while the proportion temporary pensions has increased to cover more than half of all new awards. A disability pension is granted as temporary when it can be expected that the applicant's work ability may be restored through treatment or rehabilitation. The aim of this study was to examine the efficiency of temporary disability pensions under these changing circumstances. We examined in different cohorts and age groups how often the pensions are transferred to continue until further notice and how often do they lead to work resumption?

Methods: Pension registers were used extract all temporary disability pensions starting in 2006 (n=7,985) or 2015 (n=7,930) which were then followed-up for two years since the award (when the pension should normally be transferred as permanent if one's work ability has not been resumed).

Results: 42 percent of temporary disability pensions starting in 2006 were transferred as permanent within the next two years. In 2015 the corresponding figure was 25 percent. It was increasingly common that the pension ended altogether or continued for more than two years. Decrease in the proportion of permanent pension was particularly strong in older age groups while in the younger age groups another temporary disability pension more commonly followed.

Discussion: Decreasing proportion of temporary disability pensions were transferred to permanent pensions. This may reflect the increasing tendency of extending working careers to combat the pressures population aging brings on long-term sustainability of the social security systems. Data on employment contracts is available and will be linked to the data shortly. These data will show whether actual work resumption has become more common or has the development led to increasing use of other social benefits.

The Impact of HIV and Hepatitis B on Sub-Saharan Immigrants' Lives in Paris Greater Area: Results from a Life Event History Survey
Presenter: Anne Gosselin, French Collaborative Institute on Migration, France
Co-authors: Annabel Desgrées du Loû, Andrainolo Ravalihasy, IRD, Ceped, France; Eva Lelièvre, INED, France
Background: Migrants are particularly affected by HIV as they account for 35% of diagnoses in the European Union. Little is known about the impact of such a lifelong infection diagnosis on lives already disrupted by migration. We assess the impact of HIV diagnosis on activity, union, well-being among African migrants in France. We compare it with the impact of the diagnosis of Hepatitis B, another infection affecting African migrants.

Methods: We use the PARCOURS retrospective life-event survey led in 2012- 2013 in 74 health structures in Paris area which collected 926 life histories of Sub-Saharan migrants living with HIV and 779 with Hepatitis B. Each dimension of interest was documented year by year thanks to a paper life grid. We modelled the probability year by year to lose one's activity, to experience a conjugal break up and degradation of well-being and we estimated the impact of migration and of HIV and Hepatitis B diagnoses on these probabilities thanks to discrete-time logistic regressions.

Results: Migration entailed loss of activity and conjugal break up, though HIV diagnosis after migration did not statistically impact on these outcomes. Yet HIV diagnosis had a massive negative impact on wellbeing (aOR = 11.31 [4.64±27.56] for men and 5.75 [2.79±11.86] for women). The recent period was also associated with more loss of activity, showing how the economic crisis may have impacted Sub-Saharan immigrants' life trajectories.

Conclusion: The retrospective design of the study allows us to recruit significant groups of immigrants affected by two diseases and to reconstitute the precise sequence of events around migration and diagnosis. Migration appears as a major turning point as it is associated with loss of activity, break up of union and deterioration of well-being. HIV diagnosis is associated with loss of well-being, suggesting that social support is needed when people learn about infection.

Marital Shocks and Mortality in France: Recent Evidence from Panel Tax Data

Presenter: Anne Solaz, Ined, France
Co-authors: Carole Bonnet, Giulia Ferrari, Laurent Toulemon, Ined, France

The literature emphasized the differential mortality by marital status. Beyond the selection effects of being in a union, marriage can play a protective role on health by offering better living conditions and leading to less risky behaviours. On the contrary, divorce and widowhood can deteriorate health, through the loss of these couple's advantages or through the shocks itself (economic or emotional). Furthermore, marital histories of baby-boomers are much more diverse than they used to be. These cohorts experience an increase in divorces and separations, even at older ages ("grey divorces"), unmarried partnerships and remarriage chances over last decades. This high diversification of marital trajectories over time may impact health and mortality risks among older population in the future. In addition, a huge socio-economic gradient in mortality risks is still observed with possible smoothing of possible negative effects for wealthier individuals. This paper combines the literature on differential mortality by marital status and that on the socio-economic gradient in mortality to analyse the association between marital status and income on mortality risk for seniors over 50 in France. The objective is to focus on both current marital status and recent events (divorce, widowhood, eventually marriage). Does the duration since the event play a role? May income attenuate marital shocks? Using two huge sample-size databases (Fideli, an exhaustive administrative fiscal data, and the EDP, a subsample of the census associated to other sources), first results show that being married (or « Pacsed, » the civil partnership) is still, and even more, protective than it used to be, with mixed effects for recent marriages occurring at old or very old ages however. Income is a clearly moderator of marital status, especially for men, and at younger ages (50-65). Widowhood seems detrimental, particularly at younger ages, while divorce has limited effect on mortality risk.

Eating Behaviours and Attitudes of Australian Children

Presenter: Diana Warren, Australian Institute of Family Studies, Australia
Co-author: Galina Daraganova, Australian Institute of Family Studies, Australia

Poor eating behaviours and attitudes are likely to be distressing to the individual, affect their daily lives and might lead to non-communicable disease in future. Using data from the Longitudinal Study of Australian Children (LSAC), this research examines how young people are faring in relation to eating problems at 14–15 years of age and the factors that are likely to shift outcomes for this high risk group. Already at the age of 14-15 years, 3.4% girls and 1.4% boys met diagnostic criteria for anorexia nervosa and bulimia nervosa. Among this age group, negative feelings about weight, and taking actions to try to control weight, were of course far more common than these eating disorders, especially for girls. For example, 54% of girls and 19% of boys reported being afraid of gaining weight in the last four weeks. Diet and exercise were much more common than drastic actions such as taking diet pills or vomiting after meals. Almost a quarter of girls and 12% of boys reported consciously restricting their food intake. Among those who did engage in some type of dieting, a high proportion (63% of girls and 47% of boys) were in the average weight range according to their BMI. For some 14-15 year olds who were dieting, their desire to lose weight traces back to early adolescence (10-11 years old). The presentation finishes with a discussion of characteristics of those who engage in dieting at age 14–15 years and of those who are most at risk of developing eating problems. Such characteristics include socio-demographic circumstances, and the adolescents' emotional, school and social functioning. Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC) is conducted in partnership between the Department of Social Services, the Australian Institute of Family Studies and the Australian Bureau of Statistics. Study website: www.growingupinaustralia.gov.au

7F PAPER SESSION: WELLBEING OF CHILDREN

The Role of Economic Hardship and Parental Distress in Children's Socioemotional Development

Presenter: Sandra Bohmann, DIW Berlin, Germany

This paper uses longitudinal data from the German Socio-Economic Panel Study (SOEP) which allow following children and their families from before their birth into early adolescence to investigate the mechanisms through which material deprivation in the household affects children's socio-emotional development as measured by externalizing and internalizing problem behavior. It uses structural equation modelling to test to what extent the effect is mediated via increased parental distress and lower investments into children, thereby providing a joint test of the family investment model and the family stress model. In contrast to prior research the two models are not probed against each other but rather integrated into a single model where parental stress predicts reductions in different kinds of investments in children. The panel structure of the data further allows testing whether the strength of the effect varies depending on the age of the child at which the economic deprivation set in and the duration of it, hence testing sensitive periods according to Heckman's theory of skills formation. The results indicate that material deprivation affects children's socioemotional development negatively through mother's psychological distress but not through father's and that earlier onset and longer exposure to material deprivation exacerbate the

situation. Moreover, boys appear to react by increased externalizing behavior while girls tend more towards internalizing problem behavior.

Trajectories of Student Well-being Throughout Secondary Education in Germany and Differences by Social Background
Presenter: Max Herke, Martin-Luther-University Halle-Wittenberg, Germany
Co-authors: Katharina Rathmann, Hochschule Fulda, Germany; Matthias Richter, Martin-Luther-University Halle-Wittenberg, Germany
Background: Subjective well-being (SWB) is an important indicator of quality of life, but prior research mostly analysed adolescents' SWB in cross-sectional studies. There is a lack of studies examining changes in SWB throughout adolescence using longitudinal panel data. This study examined trajectories of SWB of adolescents in Germany throughout secondary education, describing annual changes from 5th to 12th grade and differences by socioeconomic position, gender, and family structure.

Methods: We used the German National Educational Panel Study (NEPS) and combined data from annual survey waves of two of its cohorts. These were first surveyed in 2010 and cover 5th to 10th and 9th to 12th grade level. Using growth curve modeling based on multilevel models, differences in levels and trajectories of SWB overall and differentiated by school type, parental education, household income, gender, and family structure were identified. The analyses included 34,504 observations of 12,564 students.

Results: SWB decreased from 5th to 12th grade. Students attending lower track schools showed lower SWB, but also a lesser decrease over time. Students living in low-income households or in single-parent or step-families showed lower SWB. Female students showed higher SWB than males in 5th grade, but also a higher decrease over time, leading to lower SWB than males by 12th grade.

Conclusion: This study provides a comprehensive picture of SWB throughout secondary education. Adolescents' SWB is linked to social factors regarding family and living conditions as well as school
features. Overall, disadvantaged adolescents experience longer periods of lower SWB, thus accumulating the effects of worse psychosocial health opportunities over time.

The Effects of Childhood Language Ability on Mental Health in Adolescence and Adulthood: Analyses of 1970 British Cohort Study and Millennium Cohort Study Data
Presenter: Emma Thornton, University of Liverpool, UK
Co-authors: Colin Bannard, University of Liverpool, UK; Praveetha Patalay, UCL Institute of Education, UK; Danielle Matthews, University of Sheffield, UK
Background: Developmental Language Disorder in childhood is known to be predictive of poor mental health later in life. However, it is unknown whether this indicates a more general relationship between language ability and mental health. If there is a continuous relationship across a range of language abilities, this would suggest a need to promote child language generally, rather than just in clinical populations. This study investigated associations between age 5 language and adolescent/adulthood mental health in a large sample.

Method: Study 1. Data from 6,941 cohort members from the 1970 British Cohort Study (BCS70) were used to investigate the relationship between age 5 vocabulary and age 34 mental health, controlling for socioeconomic status and other covariates. Study 2. Data from the Millennium Cohort Study (MCS) and the BCS70 are currently being used to investigate the relationship between age 5 vocabulary and
adolescent mental health (age 14 MCS; age 16 BCS70).

Results: Study 1: Multivariate logistic regression modelling confirmed that poor language (vocabulary score > 1 SD below the mean) at age 5 was significantly associated with poor mental health at age 34 even when several control variables were considered. Furthermore, age 5 vocabulary (standardised continuous variable for the whole population) was significantly negatively associated with age 34 mental health (standardised continuous measure) albeit with a small effect (R^2= .0336). Study 2: Analysis is currently underway.

Conclusions: Language delay in childhood is associated with poor mental health in adulthood. However, in the general population, the effect size is small. A threshold in language ability may exist, above which other factors are more important for mental health in adulthood. New findings from analyses of MCS and BCS70 data will give insight into the relationship between child language and adolescent mental health in two separate cohorts.

The Social Determinants of Young People's Bed and Rest Routines: Findings from the WISERD Education Multi-Cohort Study

Presenter: Rhian Barrance, Cardiff University, UK
Co-author: Jennifer Hampton, Cardiff University, UK

There are increasing concerns that social pressures, such as family changes and social media, are 'invading' the sanctuary of the bedroom with the result that students arrive at school tired and stressed. This paper examines whether these concerns are justified and contribute to the growing research on the social dimensions of sleep through examining the rest and routines of five cohorts of secondary school students. The paper will use data from the WISERD Education study, a longitudinal multi-cohort study that has collected data from secondary school students in Wales every year over a seven-year period. Our analysis of data from young people aged 12-13 and 14-15 years old in 2013 indicates that, in general, most young people have 'reasonable' amounts of sleep and routines. However, a significant proportion does go to school tired, with apparent negative consequences for their wellbeing. The paper examines some of the within-cohort variations, in particular, the significance of volume of sleep, routines and engagement with social media and how these may reflect the material and cultural circumstances of the young people. Using the longitudinal nature of the study, data collected from pupils aged 11-12, 13-14 and 16-17 from the latest sweep of the research provide further evidence of how adolescents' sleep and routines vary by age. The paper concludes by arguing for more research on the complex social causes and consequences of sleep deprivation among today's youth.

The Impact of Health Shocks on Employment and Financial Well-Being: A Comparative Analysis of European Welfare States

Presenter: Jan Paul Heisig, WZB Berlin Social Science Center, Germany

Previous research documents marked cross-sectional associations between health, employment, and income. Comparative studies further indicate that the strength of these associations varies across countries, suggesting an important role for welfare state programs such as disability benefits as well as reintegration and rehabilitation measures. In addition to public support, recent studies underline the role of partners and other household members in coping with health problems, both as suppliers of informal unpaid care work or as additional earners who may even increase their labor supply to compensate for earnings losses. Crucially, public and familial responses to health shocks might be interrelated with public programs reducing the need for compensatory behavior by partners and spouses ('crowding out'). Against this background, the present study uses longitudinal data from the European Union Statistics of Income and Living Conditions (EUSILC) to investigate the short-term effects of health shocks on labor supply, earnings, and household income for both affected workers and their partners/spouses. Health shocks are defined as precipitous and persistent declines in health from one survey wave to the next. To better approximate the causal effect of health shocks, affected workers and their partners will be compared to matched comparison cases. The second step of the analysis relates country differences in the impact of health shocks to relevant policies, including disability benefits, other income support programs, early retirement options, and reintegration/activation policies. Attention will be paid to heterogeneity by gender and age at the time of the health shock. Both own and spousal labor supply responses may be gender-specific, for example, because of differences in labor market attachment or the propensity to care for one's spouse. Age in turn may be related to the chances of recovery from a health shock and further affects the availability of public support (e.g., early retirement programs).

The Socio-Economic Gradient in Young Children's Wellbeing at School

Presenter: Lisbeth Loft, Columbia University, Institute for Social and Economic Research and Policy (ISERP), USA
Co-author: Jane Waldfogel, Columbia University School of Social Work, USA

Research has established that children from higher educated and more wealthy families are likely to outperform children from less affluent backgrounds academically. Whereas socio-economic gradients in academic performance is a well-studied topic, less is known about children's wellbeing at school. We use current individual-level administrative survey and register data for the total population of three cohorts of Danish school children (grade1, 2, and 3) to study if a socio-economic gradient exists with regard to young children's wellbeing at school. These data are unique because a) the survey instrument was specifically designed to ask young children themselves about their wellbeing at school, b) they allow for separate analysis of three dimensions of wellbeing, namely school satisfaction, social, and psychological wellbeing, and c) the study was mandated to cover all schools and students at the national level. Results from our regression analyses demonstrate that, whereas no sizable socio-economic gradient exists with regard to school satisfaction, parental education and income were both associated with gradients in social and psychological wellbeing at school. As children spend a substantial part of their daily lives in school, it is important to understand the dynamics contributing to their social and psychological wellbeing in these, often primary, learning environments. This study is among the first to assess disparities in school wellbeing among young children, and doing so using complete cohort data specifically designed to give voice to the children themselves.

7G PAPER SESSION: PREMATURE MORTALITY

Migration to Scottish New Towns and the Impact on Premature Mortality in Glasgow: Longitudinal Analysis of Linked Scottish Mental Survey 1947 and NHS Central Register Data

Presenter: Lynne Forrest, University of Edinburgh, UK
Co-authors: Chris Dibben, Zhiqiang Feng, Ian Deary, University of Edinburgh, UK; Frank Popham, University of Glasgow, UK

Life expectancy in Glasgow is lower than other Scottish cities and comparable English cities. Whilst a large part of this is explained by the high levels of deprivation, it does not explain it all. A recent report that systematically examined the theories around excess mortality favoured an explanation that includes selective migration, specifically policy from the late 1940s period onwards to move younger, more skilled workers and their families from Glasgow to Scottish New Towns, leaving behind those who are more deprived and unhealthy. There are five Scottish New Towns, established between 1948 and 1966 and located in four health board areas. The Scottish Mental Survey 1947 encompasses a cohort born in 1936 that had cognitive ability assessed at age 11. As this cohort were of young working age at the time of New Towns policy, they represent an opportunity to study the impact of migration to New Towns on premature mortality in Glasgow, linking to NHS Central Register data in order to identify migration through GP records detailing health board area. A move to the appropriate health board area will be used as a proxy for New Town migration. When examining later life health we can put people "back" to their starting geography to see what impact this had on premature mortality in Glasgow and other areas. We will examine factors associated with geographical mobility, particularly looking at cognitive ability and mobility in and out of Glasgow. We will examine the net effect of in and out migration on early mortality (< age 65) in Glasgow. Logistic regression and cox regression models will be used to analyse the association between migration status and early mortality. We hypothesise that those who have migrated in and out of Glasgow will have lower likelihood of premature mortality than those who remain.

Childhood Status Hierarchies and the Risk of Premature Death: A 65-Year Prospective Study of a 1953 Birth Cohort

Presenter: Bitte Modin, Stockholm University, Sweden
Co-authors: Ylva B. Almquist, Viveca Östberg, Stockholm University, Sweden

Peer relationships constitute an important part of childhood experiences in everyday life. One particularly salient feature of peer relationships relates to issues of status. In any given peer context, a status hierarchy emerges over time, reflecting the degree of acceptance and likeability that children obtain among their peers. A recurrent finding in the literature is that children in lower peer status positions have increased risks of health problems across the life span, particularly in terms of poor mental well-being and psychiatric disorders. However, it is yet unclear to what extent peer status is also related to premature death. The aim of this study was to explore possible differences in subsequent mortality according to childhood peer status position. Drawing on a prospective study of 14,562 children born in 1953 and followed up until 2018, we applied Cox regression analysis to examine the association between peer status (age 13) and premature death (ages 14-65). The results demonstrated a clear peer status gradient in premature mortality: boys in the lowest status position were approximately 80 % more likely to die during the follow-up compared to those in the highest status position. The corresponding estimate for girls was around 60 %. Laplace regression analysis was furthermore used to obtain absolute estimates of differences in survival time, thereby facilitating a more direct interpretation of mortality risks. We found that, among boys, the difference in median survival time between the lowest and highest peer status position was nearly 10 years, while estimated at around 6.5 years for girls. Adjusting for family-related circumstances and cognitive ability reduced the estimates but the overall patterns remained largely the same. Based on these findings, we argue that peer status should be viewed as a key dimension of childhood experiences with profound and far-reaching implications for health development.

Adverse Childhood Experiences, Premature All-Cause and Cause-Specific Mortality: Findings from the Irish Longitudinal Study on Ageing

Presenter: Mark Ward, Economic Social Research Institute, Ireland
Co-authors: Anne Nolan, Economic Social Research Institute, Ireland; Rose Anne Kenny, Trinity College Dublin, Ireland

Adverse Childhood Experiences (ACEs) have been shown to have long-term adverse effects on a range of outcomes in adulthood including material wellbeing and disease risk, independent of other known risk factors. This study used novel linked data to examine whether ACEs are associated with differences in all-cause and cause-specific mortality among community-dwelling adults aged 50+. This is the first study in Ireland to use linked survey-health assessment-mortality data, combining rich individual-level data from the Irish Longitudinal Study on Ageing (TILDA) with official death certificate data. The sample included 586 decedents who had participated in the first round of TILDA (n=8500). Underlying and contributory causes of death were coded using the International Classification of Diseases, Injuries and Causes of Death (ICD-10). The ACEs included adverse experiences that occurred before the age of 18 – sexual

abuse, physical abuse, parent's substance misuse, and material disadvantage. Cox proportional hazards ratios were used to assess the association between ACEs and all-cause and cause-specific (neoplasms, circulatory, and respiratory disease) mortality while controlling for demographic, socio-economic, and health status and related behaviours. The average age of death was 78 years. 35.8% of deaths were due to neoplasms, 35.6% circulatory disease, 13.6% respiratory, and 14.9% other causes. After controlling for other factors, respondents who had experienced one (HR 1.39 95% CI: 1.07-1.79, p=0.01) or two ACEs (HR 1.72 95% CI: 1.02-2.89, p=0.04) had an increased all-cause mortality risk. Independent associations between ACEs and cause-specific mortality were largely explained by other factors including health insurance coverage and pre-existing conditions. These findings demonstrate the long lasting effect of ACEs and highlights the importance of ensuring children are afforded a positive childhood environment.

Socioeconomic Inequalities in Premature Mortality Across Adulthood from 1989 to 2016: Findings from Three British Birth Cohorts Born in 1946, 1958, and 1970
Presenter: Meg Fluharty, University College London, UK
Co-authors: Rebecca Hardy, George B. Ploubidis, David Bann, University College London, UK;
Will Johnson, Loughborough University, UK; Bennedetta Pongiglione, Bocconi University, Italy
Socioeconomic position (SEP) is associated with premature mortality, with some evidence suggesting SEP disparities in mortality are transmitted and cumulative across generations. However, there is uncertainty in how SEP inequalities change across time and whether associations differ by indicator of SEP. Data was used from three longitudinal, British birth cohorts born in 1946 (NSHD- National Study of Health and Development), 1958 (National Child and Development Study), and 1970 (British Cohort Study). Multiple SEP indicators in childhood (paternal social class and maternal education) and adulthood (educational attainment, own social class, and housing tenure) were used. Mortality was obtained via mortality records/survey notifications or via linkage. Cox proportional hazard models were used to estimate associations of SEP with mortality for three different age ranges to aid cross-cohort comparison: 18-43 (NSHD, NCDS, BCS), 18-58 (NSHD, NCDS), and 18- 70 (NSHD) years. To provide single quantifications of inequalities, measures of SEP were converted to ridit scores. Lower SEP was generally associated with higher mortality risk, despite declines in mortality rates in each subsequent cohort. The magnitude of associations differed by indicator. For example, lower paternal social class was associated with higher premature mortality risk by age 43 in each cohort, as was own social class and educational attainment e.g. hazard ratios (95% CI) for lowest paternal social class: 1946 (3.23 1.23—8.40), 1958 (1.59 1.06—2.38), and 1970 1.38 (0.68—2.79). However, housing tenure strongly predicted premature mortality across all cohorts, with those not owning homes at 23 having higher mortality rates: mortality by 43: 1946 (5.30: 1.30-21.70), 1958 (2.85 1.47, 5.53) and 1970 (3.67 1.42, 9.44). Socioeconomic inequalities in early and adult life have had persisting associations with premature mortality, despite declining absolute mortality rates. However, effects differed depending on the measure examined. Housing tenure was robustly associated with premature mortality across all generations.

Becoming Adult in Spain: Wellbeing and Networks of Support for the Social Inclusion of Unaccompanied Immigrant Youth
Presenter: Xavier Alarcón-Galindo, University of Girona, Spain
Co-author: Óscar Prieto-Flores, University of Girona, Spain
This paper pretends to shed some light about the situation of former unaccompanied minors who turned 18 this year and became legally adults in Spain. Figures show that, during the last years, the number of immigrant unaccompanied minors arriving to Europe has increased steadily. Some of them are unaccompanied refugee minors scaping from war and conflict in the Middle East but some others flee from African countries searching for better life expectations. Once in the new context of reception, if they are detected by the authorities, they usually get access to minor protection services. But when they turn 18, they start an inconsistent route with a lot of challenges to obtain a viable future because of the lack of institutional and social support. In this paper, we present the preliminary results of a longitudinal study aiming at identifying the main features that shape the transition into adulthood of these youth. This mixed-method inquiry, funded by the RECERCAIXA grant, consisted in interviewing fifty unaccompanied immigrant youth, mostly from African countries, who recently turned 18 in the Barcelona Metropolitan Area. We followed them up for seven months to see the challenges they face specially regarding with their psychological distress and wellbeing in this stage of their life. Our initial hypothesis was that the more support they have, the better for them in defining, readjusting and retaking their educational and occupational trajectories in the new country. Moreover, we also see how the absence or presence of formal and informal mentoring relationships could have an impact in this critical moment of their life course. These results have implications for the Administration, practitioners and immigrant organizations in identifying their needs and how to provide effective networks of support.

From Aspirations to Attainment: Class Background, Mental Health and the Labour Market Integration of Young Syrian Refugees in Germany
Presenter: Hans Dietrich, Institute for Employment Research (IAB), Germany
Young people from Syrian were one of the mayor groups of refugees, who arrived in Germany in 2015.A remarkable share of this young Syrian could not complete education in the home country before the migration to Germany started or have not acquired vocational training. Thus, most of the young Syrian refuges were less prepared for the German labour market. Even if the young refugees reported high aspiration regarding educational and labour market attainment when arriving in German, additionally education, training and language proficiency is required to enter the German labour market. Already in 2018, a majority of young Syrian could document high levels of German language proficiency and started to take up regular employment. We address the effect of social origin on individuals' labour market attainment in Germany. From a theoretical perspective, labour market attainment is affected both by direct and indirect effects (educational attainment) of social origin. Migration related factors such as mode of migration, duration of migration, temporary residence in a third country, or exposure to violence might work as possible moderator. Additionally, we consider health conditions (especially mental health and Post-Traumatic Stress) as moderator for labour market access. Data are delivered from a unique longitudinal survey, which follows the life course of young Syrian refugees. In 2016, we interviewed a representative sample of young Syrian refugees out of the age group of 18-24. Data from 2.732 interviews are available from the first wave. Around 70% of the initial respondents also participated at wave two and three. First results confirm both class related labour market aspirations and attainment. Further on the experience of migration counts. Financial obligations motivate respondents to accept easy accessible and low paid jobs, whilst respondents with mental health diagnosis or Post Traumatic Stress symptoms tend to delay labour market integration and favour educational options.

Patterns of Integration and Life Satisfaction Among Refugees in Vienna
Presenter: Raimund Haindorfer, University of Vienna, Austria
Co-authors: Bernd Liedl, Bernhard Kittel, University of Vienna, Austria
This presentation addresses the relation between patterns of integration and life satisfaction among newly-arrived refugees from Syria, Afghanistan, Iran and Iraq in the city of Vienna based on a standardized survey ("Integration Survey 2017"). We focus on refugees of working age with full labor market access in Austria (i.e., persons granted asylum or subsidiary protection). The central question is, how the life satisfaction of refugees varies by different integration patterns. For the operationalization of the central dimensions of integration, we use a theory-led approach transferring integration theory (Esser) into the context of recent refugee migration into European societies. We differentiate between the dimensions of structural, cultural, social and identificative integration and subsequently between the integration patterns of assimilated, segmented, marginalized and multiple integrated refugees. Using linear regression models, we demonstrate that life satisfaction among refugees is significantly affected by patterns of social integration. Socially marginalized and segmented refugees (i.e., refugees who have no frequent social contacts at all or just contacts to co-ethnics) show on average lower levels of life satisfaction than socially assimilated refugees (i.e., refugees who hold frequent social contacts to natives but rare contacts to co-ethnics). Against our expectations, different structural, cultural and identificative integration patterns do not remarkably influence the life satisfaction of refugees. Incidentally, we observe a strong correlation of the psychic health status with life satisfaction of refugees.

7I   PAPER SESSION: WAR AND HEALTH

"Such a Rash Act": Wartime Experiences and Veteran Suicides After the Great War
Presenter: Evan Roberts, University of Minnesota, USA
Co-authors: Kris Inwood, University of Guelph, Canada; Les Oxley, University of Waikato, New Zealand
World War I exposed sixty million soldiers worldwide to armed conflict and significant psychological trauma. Despite popular assumptions of significant long-term effects of the conflict on veterans, suicide among returned soldiers has received little attention. To address this lacuna, we carried out the first prospective cohort study of suicide risk in World War I veterans, following a cohort of New Zealand soldiers until death. Causes of death were ascertained by doctors and coroners. 32 of 1865 men (1.7%) committed suicide over 83,118 years of follow-up (Crude rate: 39/100,000 person years). Suicides were more likely to occur at early ages, accounting for 8% of deaths before 1939, and 11% of potential years of life lost before age 50. Suicide rates in this cohort were 1.5-2 times higher than among veterans of recent conflicts, and remained high throughout their lifetime, showing the significant long-term cost of the conflict on human health. Explanations of suicide by family and acquaintances revealed three key narrative themes: suicide as a "rash act" that family members did not accept; suicide as the culmination of a life course whose trajectory was altered by war; and finally suicide explained without reference to war at all. The majority of informants in the first 20 years after the war identified wartime experience as a contributing factor to suicide.

The Long-arm of a War-torn Childhood: The Pathways Through Which Childhood Exposure to Conflict Affects Self-Rated Health in Later life

Presenter: Daniel Ramirez, Pennsylvania State University, USA

Co-author: Steven A. Haas, Pennsylvania State University, USA

This paper examines the mechanisms through which childhood exposure to armed conflict affects self-rated health in later life. We test two theoretical approaches. The critical period perspective suggests exposure during early-life has a scarring effect on health that remains latent throughout the life course and surfaces in late life. Conversely, the cumulative risks perspective suggests early-life exposure puts the individual at an initial disadvantage that increases the risk of social and behavioral exposures that heighten the likelihood of poor health in later life. The results show childhood exposure to conflict did not operate through alterations of childhood health, socioeconomic processes, or health risk behaviors. Instead, the evidence suggests exposure to conflict had a scarring effect that surfaced in late life in the form of higher risk of functional limitations, depression, life satisfaction, and cardiovascular disease. These findings support the critical periods approach.

The Legacy of the Northern Ireland 'Troubles': Mental Health in a Post Conflict Older Population

Presenter: Sharon Cruise, Queen's University Belfast, UK

Co-authors: Hannah McKenna, Ian Young, Frank Kee, Dermot O'Reilly, Queen's University Belfast, UK

Background: Northern Ireland (NI) has poorer mental health than elsewhere in the United Kingdom (UK) or Ireland. This is often attributed to 29 years of civil and political unrest in NI between 1969-1998, known colloquially as 'the Troubles'. The present study aims to examine mental ill-health in an older population to establish if Troubles-related effects are still evident 20 years post-conflict.

Methods: The sample was 4571 adults aged ≥50 years who completed the computer-assisted personal interview and the self-completion questionnaire component of Wave 1 of the Northern Ireland Cohort of the Longitudinal study of Ageing (NICOLA). Psychological distress was assessed using the General Health Questionnaire-12, with a threshold of ≥3 to determine caseness, and exposure to the Troubles on the participant's life via a single-item question with a 5-item response scale. Analysis (binary logistic regression) was adjusted for sociodemographic, socioeconomic, and physical health factors.

Results: One fifth of participants said the Troubles had affected their lives 'quite a bit' or 'an extreme amount', with 27.8% (for 'quite a bit') and 40.2% (for 'an extreme amount') defined as cases. Adjusted models showed a dose-response relationship between exposure to the Troubles and likelihood of 'caseness', with more than 2-fold increased likelihood of psychological distress for participants reporting 'quite a bit' of impact (OR 2.26, 95% CI 1.70,3.01) and 3-fold increased likelihood of psychological distress amongst those reporting an 'extreme' amount of impact (OR 3.00, 95% CI 2.03,4.42). Only 15% reported 'no' impact from the Troubles on their lives, and of these, 13.4% was depressed.

Discussion: 50 years from the onset of the Troubles, and 20 year's post-conflict, it is evident that those exposed still feel the impact of the Troubles on their lives, and this is significantly associated with poorer mental health, even after adjustment for sociodemographic, socioeconomic, physical health factors.

Has the 30 Years of Civil Unrest in Northern Ireland (The Troubles) Affected Drinking Patterns of Older Adults?

Presenter: Hannah McKenna, Queen's University Belfast, Ireland

Co-authors: Dermot O'Reilly, Queen's University Belfast, UK; Sharon Cruise, Queen's University Belfast, UK

Background: The 30 years of civil unrest in Northern Ireland (NI) (the Troubles) has resulted in thousands dead, injured and displaced. Before officially finishing in 1998, it affected large swathes of the population and is known to have contributed to higher levels of poor mental health. It is not known if the higher levels of alcohol consumption in NI is another unregistered legacy. The study aims to determine if (i) exposure to the Troubles was associated with heavier drinking, and (ii) if this association was mediated through mental ill-health.

Data: Analysis is based on 4,956 participants aged 50 years and over who responded to the Self Completion Questionnaire component of Wave 1 of the Northern Ireland Cohort for the Longitudinal study of Ageing (NICOLA). Mental health was assessed using the 12-item version of the General Health Questionnaire (GHQ-12) and exposure to the Troubles was based on two self-report questions with 5-point response scales asking about impact of the Troubles on (i) 'your community' and (ii) 'your life'. Alcohol consumption (units/week) was derived from weekly quantity-frequency measures.

Results: Over one-third of participants said the Troubles had affected their community or lives 'quite a bit' or 'an extreme amount' and they were more likely to be a hazardous drinker (≥14 units/week) or a binge drinker than those not so affected (OR 1.45 (95%CI 1.21,1.73) and OR 1.78 (95%CI 1.21,2.63) respectively for effect on your life).

Although there was a dose-response relationship between Troubles exposure and GHQ-12 score, adjustment for mental health did not alter the relationship between the impact of the Troubles and alcohol consumption.

Conclusion: Heavier alcohol consumption appears to be a further consequence of exposure to the Troubles but one that is not mediated through mental ill-health. Other potential mechanisms for this relationship will be discussed.

KEYNOTE PRESENTATION
Life Courses and Social Inequality: Comparative Perspectives
Presenter: Karl Ulrich Mayer, Max Planck Institute for Human Development, Germany
Traditionally the topics of social inequality and the life course were brought together as inequalities between age groups, i.e. age stratification, or in regard to issues of social policy, such as old age poverty or the "pension burden". More recently life course theory and research was mobilized to better understand, describe and explain processes, mechanisms and outcomes of social stratification and mobility. Especially cross-national and historical comparisons have been utilized to show how temporal and dynamic aspects of the life course can help to describe and explain structures of social inequality – for instance, how do societies and political economies differ in how they generate exposure to risk and compensation to risk across the life course? The lecture will review the current state of comparative research on life courses and inequality, but also highlight still unrealized potentials of thus linkage.

PARALLEL SESSION 8

8A   SYMPOSIUM

Pathways, Decisions and Outcomes of Highly Skilled Workers
Convenor/Chair: *Kolja Briedis, German Centre for Higher Education and Science Studies (DZHW), Germany*
Highly skilled workers – especially PhD-holders – are an important factor for economic and societal innovation. For this reason, the demand for employees with a PhD is quite high – also in the non-academic labour market. As a consequence, a considerable number of doctoral candidates have the intention to leave the academic system. But still it is not clear, what influences the intention to leave the academic system. And there still is uncertainty of the outcomes of a PhD in the non-academic sector. Especially comparisons between PhD-holders and university graduates are rare. And since the variety of pathways during the PhD is broad (at least in Germany) and increasing, at present little is known about the different patterns during the PhD. This symposium will address the following questions: What patterns show up during the PhD? Who wants to stay in academia and why? To what extend do PhD-holders benefit from their PhD? Are there any correlations between the experiences during the time of PhD and the time afterwards? The symposium will give insight into recent (unpublished) research activities. The results are based on panel studies from Germany und the UK.

Exploring Trajectories of Doctoral Candidates in Germany
Presenter: Gesche Brandt, DZHW, Germany
Co-author: Susanne de Vogel, DZHW, Germany
In Germany, trajectories of doctoral candidates are diverse and often consist of different stations. For example, doctoral candidates start with their PhD within a graduate school or scholarship, but later change into gainful employment inside or outside academia. Subsequently, obtaining a doctorate can take from a few months (mainly in medicine) up to several years. Using sequence analyses, we aim to identify patterns of doctorates, e.g. consistent courses in a single institution or very complex courses in many different ones. This can help to identify typical doctoral trajectories in different subject areas, to identify problematic processes and to help optimizing doctoral conditions. So far, there was a lack of suitable episode data to examine doctoral trajectories and, moreover, there are methodological challenges in aligning the sequences due to the great differences in length. In 2015, the DZHW set up a PhD panel survey. This representative sample comprises around 5,400 doctorate holders of all disciplines who received their degree from a German university in 2014. This data set also includes information about their employment characteristics during doctoral phase on a monthly base. In order to make the doctoral candidates' trajectories comparable, we use an innovative method of sequence analyses standardizing the sequence lengths by using the relative duration of episodes. First analyses show that there are mostly consistent patterns representing the "ideal types" of doctoral trajectories. However, we also discovered remarkable deviating patterns. Further analyses should look into individual and contextual mechanisms that lead to these deviating patterns and the impact less consistent doctoral trajectories have on the PhD holders' further careers.

Health, Academic Self-Efficacy and Career Goals of Doctoral Candidates in Germany

Presenter: Janine Lange, DZHW, Germany

Co-author: Andreas Sarcletti, DZHW, Germany

Several studies show that there are groups which are systematically disadvantaged in academia, based, for instance, on gender (Wissenschaftsrat 2012) or social background (Hartmann 2002). To our knowledge, however, until now there are no extensive studies which focus on the (academic versus non-academic) career goals of doctoral candidates with impairment(s) or with poor health. We assume that career goals are subject to rational consideration. The basic assumption is that humans try to maximise their benefit in consideration of restrictions (Kunz 2004: 32; Esser 1993: 222). The question which activity maximises utility does not only depend on their (possible) returns (benefit), but also on the probability of success and on the direct and indirect cost the activity induces. The probability of success is strongly associated with restrictions. Returns of an academic career (professorship) are, in particular: a high income, a great autonomy concerning work content and a high social status (prestige of the profession). We assume that the probability of success concerning remaining in academia and a successful academic career is strongly influenced by the academic self-efficacy, which we believe to be lower for doctoral candidates with impairment(s)/poor health due to their restrictions. We use (pre-test) data of the German National Academics Panel Study (Nacaps; www.nacaps.de) in which 1,766 persons took part in 2018. Our quantitative results show that doctoral candidates with poor health/impairment(s) and with good health/without impairment(s) do not differ concerning their intention to stay in academia or become a professor. However, they significantly vary with regard to two crucial aspects of academic self-efficacy, namely trusting themselves to regularly publish in peer-reviewed journals and give a presentation on an international conference on their own. Further research based on future waves will show if results will remain stable during the career.

PhD Outcomes in the UK: Exploring Entry into Academic Employment

Presenter: Sally Hancock, University of York, UK

Internationally, governments are seeking to increase the number of PhD graduates (Smith 2010; Nature 2011). These intentions reflect a commitment to the knowledge for growth agenda – to say, the belief that future economic prosperity rests upon the creation, application and dissemination of knowledge. Expertly knowledgeable, creative and highly skilled, PhD graduates are repositioned as vital to industrial strategy. The UK is no exception to this policy consensus, with a state loan system recently introduced to increase the number of PhD graduates (Department for Education 2017). Despite this policy consensus, UK PhD students' express ambivalent attitudes to the broader knowledge economy agenda, and the majority initially embark on a PhD with the intention of becoming an academic (Hancock 2018; Hancock et al., 2017). While it is well established that most PhD graduates will not secure an academic career, relatively little is known about the characteristics of those that do. This paper seeks to explore this question, with a particular focus on the role that academic and demographic variables may have in explaining academic employment outcomes. Extending our understanding of this is particularly pertinent in light of recent evidence suggesting institutional differences in pathways to the doctorate, and a lack of diversity in the UK research workforce (Pasztor & Wakeling 2018; Bridge Group 2017). This analysis uses a bespoke dataset of UK domiciled PhD holders in the Destination of Leavers of Higher Education Longitudinal Survey, which records the employment circumstances of UK PhD graduates some 3.5 years after they have graduated (n=4,731; 39.5% response rate). The results suggest significant institutional and disciplinary differences in entry to academic careers. With the exception of gender however, the effect of demographic variables on the attainment of academic careers is limited. The implications of these findings will be discussed.

Does a Doctoral Degree (Still) Pay Off? Changing PhD-Wage-Gaps in the Last Decade

Presenter: Thorsten Euler, DZHW, Germany

Co-author: Fabian Trennt, DZHW, Germany

Labour markets have been facing constant changes in recent years. Routine based tasks are increasingly done by machines and algorithms (Frey & Osborne, 2013) and skills dealing with sophisticated and complex work contents are gaining importance. Investments in higher education can secure a good placement on the labour market (Dengler & Matthes, 2015) but are faced with a potential oversupply of skilled workforce due to the expansion of tertiary education (Green & Zhu, 2010). A doctoral degree – as a further educational investment – especially prepares for sophisticated and complex tasks (Arbeitskreis Deutscher Qualifikationsrahmen, 2011) and yields – as expected by job-competition theory (Thurow, 1979) – higher incomes. We ask whether those labour market developments have impact on monetary returns for graduates after the PhD. To answer this question, we analyse the (logarithmised) hourly wages comparing higher education graduates with and without a doctoral degree of three different graduate cohorts ten years after their respective graduation. By controlling for various covariates (e.g. field of study, managerial position, job-adequacy, working experience) we are able to separate changing raw PhD-wage-effects from changing earnings due to compositional differences between the cohorts. The data basis comprises the third waves of the DZHW-graduate panel studies 1997-, 2001- and 2005-cohorts (n = 5.477; 4.734; 3.760). First analyses present different results for the private and public service due to varying mechanisms for the formation of

wages. Private employees of more recent cohorts experience a slight decrease in hourly wages compared to earlier cohorts while still receiving higher averages than public servants. In both sectors, a doctoral degree significantly pays off. Blinder-Oaxaca decompositions for each cohort attribute the higher wages of postdocs to compositional differences between graduates with and without a doctorate.

8B   SYMPOSIUM

The Social and Economic Consequences of Health
Convenor/Chair: Alice Sullivan, University College London, UK
Economic and social factors have a complex, dynamic and multidirectional relationship with people's health. While much is known about their impact on people's health, relatively little is understood about the impact of individuals' health on the economy and society. This symposium reports on early findings from a programme of work funded by the Health Foundation which aims to generate new knowledge and expand our understanding of the impact that a person's physical and/or mental health has on their own economic and social outcomes over the medium to long term. The programme will help develop understanding of the economic and social case for investing in strategies that maintain, protect and create health more broadly than through investment in health care, by reframing health as an asset that can potentially deliver wider economic and social returns on investment. The papers within the symposium address a range of health indicators, including general physical health, mental health and obesity, and a range of outcomes, including educational attainment, economic attainment, partnership and wellbeing.

Do Parental and Childhood Mental and Physical Health Influence School Attainment? Evidence from the 1970 and 2000 Birth Cohorts
Presenter: Alice Sullivan, University College London, UK
Co-authors: Samantha Parsons, Emla Fitzsimons, George Ploubidis, University College London, UK
Rich birth cohort data allows us to investigate the role of early life factors including both parental physical and mental health and the child's own health, on subsequent educational attainment at the end of compulsory schooling (age 16). In addition, since clear socioeconomic gradients in health have been established, both parental and child health may be a mediator of socio-economic differentials in educational outcomes. Both health inequalities and educational inequalities are of pressing concern to policy-makers, but the potential link between them has so far been insufficiently addressed. We use Structural Equation Modelling (SEM) to assess pathways from childhood circumstances, via health, to educational attainment, using two cohorts born in the UK in 1970 and 2000. We find that maternal depression influences childhood outcomes via a range of pathways, and a child's physical health is also implicated in their educational attainment.

The Economic and Social Value of Midlife Mental Health: Evidence from the 1958 British Birth Cohort
Presenter: George B. Ploubidis, University College London, UK
Co-authors: Vanessa Moulton, David Bann, Alex Bryson, Gabriella Conti, Alice Sullivan, University College London, UK
Background. Midlife is situated at the crossroads of growth and decline with those in the middle decades holding key roles in the family, the workplace and the community. It is also known to be associated with stress and considered a period marked by crisis. A recent systematic review showcased the lack of evidence on the association between midlife mental health and economic and social outcomes in later life. Considering that psychological distress "peaks" in midlife we ask whether this has an impact on economic and social outcomes in later life and if so if this association is independent of early life mental health.

Methods: We used data from the 1958 British birth cohort, one of the oldest and well characterised birth cohort studies, with 10 major follow-ups since birth (n = 17,415). Our exposure, psychological distress at age 42, was measured with the Malaise Inventory. Income, social participation, partnership status, economic activity and quality of life assessed with the CASP6 at age 55 were employed as outcomes. Multivariable regressions with appropriate link functions for the nature of the outcome, adjusting for early life and concurrent to the exposure confounders were employed.

Results. We observed associations between psychological distress at age 42 with all outcomes ag age 55: Social participation: RR = 0.0985, 95%CI = 0.974 to 0.995; quality of life: b = 0.069, 95%CI = -0.074 to - 0.063; income: -0.018, 95%CI = -0.029 to -0.017, as well as partnership status and economic activity.

Conclusion. Midlife mental health at age 42 is associated with income, quality of life, social participation, economic activity and partnership status 13 years later. The associations were independent of early life mental health implying that interventions aiming to improve mental health in midlife have the potential to influence social and economic outcomes in early old age.

Effects of Body Mass Index on Relationship Status, Social Contact, and Socioeconomic Position: Mendelian Randomization Study in UK Biobank
Presenter: Amanda Hughes, University of Bristol, UK
Co-authors: Laura D. Howe, University of Bristol, UK; Roshni Kanayalal, Robin Beaumont, Tim Frayling, Samuel Jones, Andrew Wood, Jessica Tyrrell, University of Exeter Medical School, UK; Alisha Davies, Public Health Wales, UK; Sean Harrison, University of Bristol, UK; Franco Sassi, Imperial College Business School, London, UK
Objectives: To assess whether body mass index (BMI) has a causal effect on social and socioeconomic factors, including whether both high and low BMI can be detrimental.

Methods: Using data on 378,244 men and women of European ancestry from the UK Biobank study, we used Mendelian Randomization, which uses genetic variants for BMI to obtain un-confounded estimates, and non-linear Mendelian Randomization, to assess the relationships of BMI with: Townsend deprivation index, income, age completed full time education, degree level education, job class, employment status, cohabiting relationship status, participation in leisure and social activities, visits from friends and family, and having someone to confide in.

Results: Higher BMI was causally associated with higher deprivation, lower income, fewer years of education, lower odds of degree-level education and skilled employment. For example, a 1 SD higher genetically-determined BMI (4.8kg/m2 in UK Biobank) was associated with £1,660 less income per annum [95%CI: £950, £2,380]. Non-linear Mendelian Randomization provided evidence that both low BMI (bottom decile, <22kg/m2) and high BMI (top seven deciles, >24.6kg/m2) can increase deprivation and reduce income. In men only, higher BMI was related to lower participation in leisure and social activities. There was no evidence of causal effects of BMI on visits from friends and family or in having someone to confide in. Non-linear Mendelian Randomization analysis showed that low BMI (bottom three deciles, <23.5kg/m2) reduces the odds of cohabiting with a partner or spouse for men, whereas high BMI (top two deciles, >30.7kg/m2) reduces the odds of cohabitation with a partner or spouse for women.

Conclusions: BMI affects social and socioeconomic outcomes, with both high and low BMI being detrimental for some measures of SEP. This suggests that in addition to health benefits, maintaining healthy ranges of BMI across the population could have benefits both for individuals and society.

For Better, But Maybe Not for Worse! The Effects of Health on the Quality of Household Relationships
Presenter: Harish Kumar, Loughborough University, UK
Co-authors: Paul Downward, Simona Rasciute, Loughborough University, UK
That there is a socio-economic gradient to health is well known, despite the fact that there is debate around the causal relationships involved. Typical factors that are analysed are indicators of access to resources such as income, educational attainment, or rank in an occupational hierarchy (Braveman & Gottlieb, 2014). However, it is also increasingly known that poor health – and well-being- can be driven by weaker personal and social ties for individuals, families, and society (Huppert & Baylis, 2004; Pietromonaco & Collins, 2017; Umberson & Karas Montez, 2010). What is less understood is the impact that health has on personal relationships. The reverse causality has not been established, although there is some empirical evidence of associations suggesting partners' poor health not only affect their relationship with their significant others (Leonard, Chatkoff and Maier, 2018; Mohammadi, Chambers and Rosen, 2018; Harju et al., 2018) but also the significant other's physical and psychological health too (Ross, Ranby, Wooldridge, Robertson and Lipkus, 2016), indicating that the households' well-being and health declines when one of the household member reports poor health. This study will attempt to establish causality between the effects of health on personal relationships drawing on 25 years of longitudinal data n from the British Household Panel Survey (BHPS) from 1991 to 2008 and Understanding Society: The UK Household Longitudinal Study (US) from 2009 to 2015-16. The analysis strategy involves the use of panel data estimators and instrumental variables.

Does Childhood Obesity Hinder Social Capital Development? A Review of Evidence and Analysis of Data from Three UK Cohorts
Presenter: Alexa Segal, Imperial College Business School London, UK
Co-authors: Carmen Huerta, Franco Sassi, Imperial College Business School London, UK
Introduction: Evidence suggests that childhood obesity may affect human capital development and social outcomes later in life. However, evidence of the causal nature of this effect is limited and causal pathways are not well understood. Long-term effects of childhood obesity are difficult to evaluate due to confounding and reverse causality. This study aims at assessing the causal pathways linking childhood overweight and obesity to human capital development and social outcomes over the life-course using data from three large population-based cohorts in the United Kingdom (ALSPAC, NCDS and BCS70) and state-of-the-art causal inference approaches. We will be reporting the early findings of the study.

Methods: Review of causal inference studies of childhood obesity impacts on educational achievement, labour market and social outcomes. Descriptive statistical analysis of BMI and selected outcomes in UK cohorts. A series of models, exploiting the nature of longitudinal data, to estimate causal relations between childhood obesity and future outcomes.

Results: Analyses highlight the importance of trajectories of BMI in childhood, suggesting that improving BMI during subsequent stages of childhood may lead to similar adult outcomes to those of consistently normal-weight children. A series of instrumental variables were tested to estimate the causal relations of interest.

Conclusion: Elucidating the pathways and mechanisms through which childhood obesity affects social and economic outcomes will inform effective strategies to combat the childhood obesity pandemic. Evidence that is being generated from three UK cohorts will strengthen support for targeted interventions to improve lifetime health, social and economic outcomes.

8C SYMPOSIUM

Ageing and Well-Being: Future Directions

Convenor/Chair: Noriko Cable, University College London, UK

We are facing rapid growth of the ageing population across developed countries. Disabilities, including cognitive impairment, are the main problems among them, while loneliness threats their well-being. Cross-national comparative work will be needed even more to understand how healthy ageing could be achieved. Tapping into research examples from Japan and the UK, this symposium addresses how ageing and well-being could be examined from methodological and conceptual aspects. It also introduces a new research initiative that aims to facilitate scientific debates on social relationships and ageing well-being across ageing nations.

Future Projection of the Health and Functional Status of Older People in Japan: A Pseudo-Panel Microsimulation Model

Presenter: Megumi Kasajima, University of Tokyo, Japan
Co-authors: Hideki Hashimoto, University of Tokyo, Japan; Sze-Chuan Suen, University of Southern California, USA; Brian Chen, University of South Carolina, USA; Karen Eggleston, Stanford University, USA; Jay Bhattacharya, Stanford School of Medicine, USA

Background: Precise future projection of population health distribution is imperative for designing an efficient healthcare system in rapidly ageing countries. Multistate-transition microsimulation models such as the US Future Elderly Model have been developed based on panel data collection, but these data may not always be available. We proposed a pseudo-panel method using repeated cross-sectional representative surveys as a complementary approach and specifically applied the model to Japan's population.

Methods: We calculated birth-cohort and sex-specific prevalence for all combinations of 14 health statuses using microdata from five waves of the Comprehensive Survey of People's Living Conditions. Combining obtained prevalence with vital statistics data, we determined transition probabilities of statuses over time using contingency tables. Assuming that state transition and mortality-exit follow the first-order Markov process, we then designed a virtual Japanese population aged older than 60 years as of 2013 and performed a microsimulation to project disease distributions to 2046 with forward, backward, and external validation tests. Following validation, we compared our projection results with those based on traditional static models.

Results: Our calculated morbidity and mortality rates successfully replicated governmental projections of population pyramids and matched cardiovascular and cancer incidences reported in existing epidemiological studies, supporting the validity of our estimation. Our future projection of stroke and heart disease indicated lower prevalence than expected from static models, presumably because of recent declining trends in disease incidence and fatality.

Conclusions: Our pseudo-panel approach provides a valid alternative microsimulation frame for future health projection in ageing societies.

Biological Costs and Benefits of Social Relationships for Men and Women Early, Mid and Late Adulthood: The Role of Partner, Family and Friends
Presenter: Patrick Rouxel, CMI, University of Manchester, UK
Co-author: Tarani Chandola, CMI, University of Manchester, UK
Social relationships are key for psychological wellbeing, physical health, and survival across the lifespan. Negative aspects of relationships are generally more consequential for wellbeing than positive aspects and these relationships change across the lifespan. One plausible biological mechanism linking social relationships to health and wellbeing is allostatic load (AL), a multisystem physiological dysregulation index that reflects chronic stress responses. Despite a wealth of theoretical and empirical studies on social relationships and health, much of the focus has been on middle-aged or older adults, even though young-adulthood is a period of considerable change in social networks and support. Drawing upon lifespan developmental theories such as the socioemotional selectivity theory and the social convoy model, we explored the association of perceived social support and social strain from a partner, immediate family and friends with allostatic load, and whether the association varied by type of relationship, life stage and gender. We used data from the UK Household Longitudinal Study, waves 2-3 (2010-2012), in a sample of adults aged 21-85+ (N=10,380). AL was operationalized as a composite index of 12 biomarkers representing the primary and secondary mediators. Social strain appeared to elicit greater stress-related dysregulation during early adulthood (age 21-35) compared to later life. Moreover, the associations with allostatic load differed by the type of social relationship. Strained relationships with partners and immediate family were associated with AL in early adulthood, whereas low emotional support from friends appeared to be more stressful for this age group. The structure and quality of different types of social relationships could affect multiple physiological regulatory systems, especially among younger men and women.

Understanding the Pictures of Social Relationships and Ageing Well-being Across Ageing Nations (SWAN): UK-Japan SWAN Project
Presenter: Noriko Cable, University College London, UK
Co-authors: Urszula Tomoszuk, Royal College of Music and Imperial College London, UK;
Tarani Chandola, University of Manchester, UK; Kaori Honjo, Osaka Medical University, Japan;
Hideki Hashimoto, University of Tokyo, Japan; Brian Beach, UK International Longevity Centre, UK
Bonding being a fundamental human needs, both social integration and isolation are known to affect well-being, especially among the ageing population. However, we are challenged by answering country differences in those associations and recent demographic change that is growing ageing population and solo-living across developed countries. To facilitate systematic investigation on social relationships and well-being across ageing nations, we implement the UK-Japan Social Relationships and Well-being across Ageing Nations (SWAN) project. Commenced in January 2019, the UK SWAN project will strengthen UK-Japan partnerships by enhancing existing and identifying new partnerships and facilitate a series of knowledge exchange opportunities between these countries. The SWAN project will provide a list of harmonised social relationships variables from comparable datasets in the UK (English Longitudinal Ageing Study and the UK Household Longitudinal Study) and Japan (Japanese Study of Aging and Retirement and Japanese Study on Stratification, Health, Income and Neighbourhood) to facilitate cross-national comparative work on social relationships and well-being in these countries. Also, the project work will show roles of contextual factors surrounding social relationships and well-being among older people.

8D   PAPER SESSION: NEWS FROM THE LAB: NEW STUDIES

Monitoring Young Lifestyles (MyLife): Introduction of a New Longitudinal Study of Adolescent Substance Use
Presenter: Geir Brunborg, Norwegian Institute of Public Health, Norway
Co-author: Jasmina Burdzovic Andreas, Norwegian Institute of Public Health, Norway
The Monitoring Young Lifestyles (MyLife) study is a large-scale longitudinal investigation of substance use among youth in Norway. The aim is to advance our understanding of substance use development, associated individual and contextual risk factors, and the consequences for substance use. The ultimate aim is to inform public health policies, and to improve prevention and intervention strategies. The cohort comprises 3512 adolescents (55 % girls) who were recruited from 33 middle schools in 2017. Of the cohort, 99 % were born between 2002 and 2004. To ensure geographic and demographic diversity, the schools were selected from low, medium and high quality of life areas, and both rural and urban areas were represented. Of the cohort members, 37 % lived in a rural municipality, and 63 % lived in an urban municipality. 27 %, 40 % and 33 % lived in low, medium and high quality of life areas respectively. In the fall of 2017, 2975 adolescents participated by completing an online questionnaire with questions about demographic and socio-economic characteristics, the parent child relationship, important life events, leisure time activities, school, physical health, substance use and expectancies, personality, mental health and experiencing parental substance use. At the same time, about 2000 parents of these adolescents completed a shorter questionnaire which mapped socio-economic status variables, substance use and perceptions of their children in depth. One follow-up data collection was completed in the fall of 2018, with 2857 participants. Three more follow-

ups are scheduled for the fall of 2019, 2020 and 2021. We have consent for linking questionnaire data to national registries, for instance health registries (hospital admissions and primary health care), the national educational database, which has information about educational level completion, and the Norwegian Social Insurance Database, which has information about income, unemployment, and disability pensioning. Registry linkage is planned around 2027.

20 Years Apart, Two Birth Cohort Studies in Québec (Canada): Key Findings on the First Edition and Orientations Regarding the Second Edition
Presenter: Nancy Illick, Institut de la statistique du Québec, Canada
Co-author: Hélène Desrosiers, Institut de la statistique du Québec, Canada
The first edition of the Québec Longitudinal Study of Child Development (QLSCD 1) was designed to advance our knowledge of child development. Since 1998 and until today, a representative cohort of 2,120 children and their families have been followed, with the young participants now aged 21 years old. Given that Québec society has significantly changed over the past decades, it is time to study the reality of families whose children will be born in the early 2020s. This is why a second edition of the Québec Longitudinal Study of Child Development (QLSCD 2) is being started. This presentation will focus on these two studies carried out 20 years apart and will address the following question: What are the main findings from the QLSCD 1 and what will be the general orientations in the new birth cohort study (QLSCD 2)? First, we will present some findings from the QLSCD 1 focusing on school readiness, academic achievement and family trajectories. Then, we will summarize the main parameters of the new birth cohort study resulting from a large consultation exercise. Finally, some results from the QLSCD 2 pilot, which was completed in the winter of 2019, will be presented.

The Australian Longitudinal Study on Male Health: Cohort Profile and Cohort Reconciliation
Presenter: Dinusha Bandara, Australian Institute of Family Studies, Australia
Co-authors: Galina Daraganova, Karena Jessup, Australian Institute of Family Studies, Australia
The Australian Longitudinal Study on Male Health, also known as Ten to Men, is the first Australian longitudinal study that focuses exclusively on male health and wellbeing. The study was designed to examine different aspects of individual and population male health, including the prevalence of disease and disability, and the contributing social determinants to assist the development of health programs and policies that are targeted to the special health needs of men and boys. It was initially anticipated that the study would consist of around 55,000 Australian males aged 10 to 55 years to be followed across the life course. However, due to a number of logistical challenges and a lower than expected response rate, the recruited Ten to Men cohort consisted of about 16,000 participants. Based on participant age at Wave 1, the Ten to Men population-based cohort was classified into three groups: Adults (18 years and over); Young Men (15-17 years) and Boys (10-14 years). At Wave 2, the response rate was 76% for Adults, 73% for Young Men and 83% for Boys. Given the needs and experiences of each group are vastly different, it is important to consider re-engagement of all active participants from the baseline wave and to top-up the Ten to Men cohort to ensure the viability of the study in future. To meet study objectives, it is also essential to establish that the sample size following cohort reconciliation is adequate and has sufficient statistical power to generate a comprehensive picture of or health-related trajectories and contributing factors. This paper will focus on Ten to Men cohort profile, sampling implemented in Waves 1 and 2, strategies adopted to achieve Wave 3 re-engagement of all participants in the baseline study, and cohort reconciliation.

The Medical Schools Outcomes Database (MSOD) and Longitudinal Tracking Project: Achieving a Sustainable Health Workforce for New Zealand
Presenter: Antonia Verstappen, University of Auckland, New Zealand
Co-author: Craig Webster, Phillippa Poole, University of Auckland, New Zealand; Joy Rudland, University of Otago, New Zealand
Introduction/background: The MSOD project is a landmark study which was established by the Medical Deans of Australia and New Zealand. Internationally, it is the first to consistently collect data on medical students at the commencement of study, at graduation, and into the postgraduate years to answer health workforce questions 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.

Aim/objectives: The aim of the MSOD project is to collect data from medical students in Australia and New Zealand in order to explore associations between demographic factors, medical course experiences, career aspirations and pathways. Information gained from the study informs curriculum
development and future medical workforce planning, particularly with respect to careers where there are shortages (e.g. general practitioners, psychiatrists and rural doctors).

Methods: Each year, every medical student in New Zealand, as well as medical graduates 1, 3, 5 and 8 year's post-graduation, are invited to complete a MSOD questionnaire. Items include current and future practice, location and career aspirations. Responses are linked to medical school experiences.

Results: There are strengths and challenges associated with using a longitudinal prospective cohort study methodology. Response rates vary, but are as high as 99% at exit from medical school, and over 50% at PGY5 with strong buy-in from medical students and graduates. Key results from recent studies will be presented, including early predictors of medical student interest in a General Practice career, and/or to work in a rural location.

Discussion: Longitudinal data that tracks the same student throughout their training and into the workforce is critical for answering health workforce questions. This allows the ability to pinpoint factors such as medical school or training experiences that are influential in career decisions.

8E   PAPER SESSION: FAMILY

Labor Market Deregulation, Fixed-Term-Employment and Family Formation in the Life-Course: A Comparison of Germany and the UK
Presenter: Christian Schmitt, Rostock University, Germany
This study investigates how job stability and predictability in employment contexts affects fertility behavior in the life course. To investigate this issue, I contrast the highly de-regulated labor market of the UK with the German labor market that was characterized by moderate levels of employment protection until the Agenda 2010's liberalization efforts expanded legal options of limiting the duration of working contracts. This study aims to investigate how holding either a permanent or a fixed term job affects the speed up or delay of family formation in the life-course. Moreover, the cross-national comparison aims to further disentangle what job stability means in a highly deregulated labor market as in the UK, as opposed to a context of encompassing employment protection legislation that characterized Germany throughout the 1990ies. Contrasting data from the German Socio-Economic Panel Study (SOEP), and the British Household Panel Study, as well as the subsequent Understanding Society, 1991 to 2015, I find that holding a temporary job leads to a pronounced postponement in the transition to parenthood among both German men and women. Family formation in Germany is delayed until individuals have established a sound economic basis, which is closely related to holding a permanent job. In the UK, in contrast, fixed-term contracts do not significantly differ from permanent jobs in the impact on family formation as the low levels of employment protection in the UK diminish the economic predictability emerging from a permanent job, which also translates to fertility behavior.

Family Migration Context and Adolescent Family Formation Expectations: Comparative Evidence from Three High-Migration Settings
Presenter: Sarah Hayford, The Ohio State University, USA
Co-authors: Monica Grant, University of Wisconsin, USA; Jennifer Glick, Pennsylvania State University, USA
Migration by a family member may alter adolescents' preferences for family formation. For migrants, migration carries with it the idea of entering a new context and participating more directly in a global economic system. These changes in turn are symbolically linked with ideals about family, including power dynamics between men and women, parents and children, and individuals and families. New ideals among migrants may be shared with non-migrant family members, either through communication with the sending household or after the migrant's return. We hypothesize that adolescents in migrant sending households hold distinctive orientations toward family formation, and, potentially, toward related life course outcomes (education, own migration). Because family systems are highly gendered, these orientations may differ for boys and girls. To test these hypotheses, we draw on survey data from the Family Migration and Early Life Outcomes (FAMELO) project collected in three distinct settings: Jalisco state, Mexico; Gaza Province, Mozambique, and the Chitwan Valley of Nepal. These sites share high levels of outmigration, but differ in other aspects of social context. Our main outcomes are adolescent goals for future family formation, education, and migration (e.g, desired marriage timing, spousal education, educational attainment, migration before marriage, etc.). We will use latent class analysis to describe the correlation between these measures and identify clusters of related expectations. We will then use descriptive statistics and multivariate analysis to compare characteristics of the adolescents classified in each group in terms of family migration context (past and current migration by a household member, relationship to migrant, migrant destination, etc.) as well as family and household control variables. We will formally test for differences between boys and girls and between older (14-17) and younger (11-13) adolescents. We will conduct all analyses separately for the three countries and qualitatively compare findings across settings.

Does the Maternal Separation Anxiety at 1 Year Influence Outcomes at 2 Years? Results from the 'All Our Families' Cohort

Presenter: Suzanne Tough, University of Calgary, Canada
Co-authors: Erin Hetherington, Funmi Olaoye, Jessica-Lynn Walsh, University of Calgary, Canada; Sheila McDonald, Alberta Health Services, Canada

Background: Based on the central tendency attachment theory and object relations theory, separation difficulties between mother and child is important. The degree of mother's anxiety about separating from her child can influence both the mother's mental health and the child's emotional development. The objective of this study was to examine the effect of postpartum maternal separation anxiety (MSA) on parenting self-efficacy and child behaviour outcomes (BITSEA) in early childhood.

Methods: Participants included 1,596 participants from the All Our Families study, a longitudinal prospective pregnancy cohort, in Calgary, Alberta, Canada. The sample is representative of the pregnant population in an urban Canadian centre. Bivariate and multivariate analyses determined characteristics of women with MSA and the relationship to child behaviour problems at age 2.

Results: Based on the MSA Scale, 25% of women had MSA at 1 year postpartum. Women not born in Canada, who were non-white, single, of low income and not working or studying were more likely to report MSA. Women with MSA at 1 year were more likely to report anxiety, lower parenting self-efficacy, and no formal child care arrangements when children were 2 years of age. Mothers with MSA at 1 year were less likely to report daily reading with their child at 1 and 2 years, and more likely to have children with behaviour concerns at 2 years (BITSEA). Multivariate logistic regression indicated mothers who had MSA at 1 year were over twice as likely to have children with behavioural problems, at two years, compared to mothers without MSA (aOR: 2.05, 95% CI: 1.35-3.11), after controlling for maternal demographics, maternal psychosocial characteristics, and child characteristics.

Conclusion: The results suggest an independent and potentially lasting influence of separation anxiety on child development. Addressing issues of attachment and separation among new parents may infer positive developmental benefits to children.

Desired Fertility and Migration Aspirations: Comparative Results from Three High-Migration Contexts

Presenter: Melissa Alcaraz, Ohio State University, USA
Co-authors: Sarah R. Hayford, Ohio State University, USA; Jennifer E. Glick, Pennsylvania State University, USA

Adolescent preferences for future life course transitions, including marriage, childbearing, education, migration, and work, predict later outcomes. These preferences also reflect adolescents' interpretations of the kinds of outcomes that are possible and desirable. In particular, the relationships between preferences in different domains are an indicator of how adolescents perceive (normative or practical) conflict or complementarity between different domains. Because the degree of conflict is shaped by cultural and institutional context, we would expect associations to vary across settings. In this paper, we focus on the relationship between desired family size and aspirations for migration. Adolescents who want to migrate may have lower fertility goals, if they expect migration to disrupt family formation, or, alternatively, they may have higher fertility goals if they view migration as a pathway to economic prosperity. We analyze this relationship in three high-migration contexts with very different fertility and labor market conditions: Chitwan Valley of Nepal, Jalisco state of Mexico, and Gaza Province, Mozambique. We draw on data from the Family Migration and Early Life Outcomes (FAMELO) study, a household-based survey of approximately 2000 households in each context, to analyze migration and fertility desires in a sample of approximately 1500 boys and girls ages 11-17 in each country. We measure both adolescents' aspirations for their own migration and (for girls) their preferences for a hypothetical husband's migration, and account for differences in exposure to migration within the household. We use descriptive and multivariate analyses to assess the correlation between migration and fertility goals; examine variation in this association according to family migration context and educational aspirations in the presence of controls for other sociodemographic factors; and compare associations for boys and girls. We examine variation across the three settings in order to shed light on the role of institutional factors in shaping gendered aspirations.

Perception of Material Situation and its Association with Self-Rated Health: A Fixed Effects Analysis of Changes Over the Life Course
Presenter: Anja Knöchelmann, Martin-Luther-University Halle-Wittenberg, Germany
Co-authors: Nico Seifert, TU Kaiserslautern, Germany; Sebastian Günther, Irene Moor, Matthias Richter, Martin-Luther-University Halle-Wittenberg, Germany

Background: The individuals' perception of their material situation can serve as a more detailed measure of relative deprivation, taking their subjective evaluation of the situation into account. Studies have shown that higher income satisfaction is associated with a higher risk of early mortality. Until now, it has not been analyzed how the relevance of the individuals' perception of their material situation varies over the life course. Accordingly, we aim to assess the effect of the perceived material situation on health for different ages.

Methods: The sample is based on data from the German Socio-Economic Panel (GSOEP) study covering the period between 1994 and 2016. The final sample included 384,280 observations from 50,004 persons, aged 20 to 75 years. Self-rated health was used as health outcome. Perception of the material situation was measured using income and dwelling satisfaction. Fixed-effects models with interactions between type of satisfaction, age and age² were estimated for men and women separately. Based on these models, average marginal effects were calculated to obtain the effect of changes in income and dwelling satisfaction on changes in self-rated health for each year of age.

Results: Changes in income and dwelling satisfaction showed a small-to-moderate effect on changes in self-rated health. However, the magnitude of this effect followed an inverted U-shaped pattern, with the strongest effect found between ages 55 and 60. This pattern was more pronounced for men than women, and more pronounced for income than dwelling satisfaction.

Conclusion: The results suggest that the effect of the individuals' perceived material situation on self-rated health varied considerably between life stages. It can be assumed that the life stage around 55 to 60 serves as a turning point where individuals take a look at their life-time achievement by comparing their current situation with their goals and aspirations.

Poverty Dynamics and Subjective Health: New Evidence from Fixed Effects Models with Individual Health Trajectories?
Presenter: Nico Seifert, TU Kaiserslautern, Germany
Co-authors: Anja Knöchelmann, Matthias Richter, Martin Luther University Halle-Wittenberg, Germany

Although the association between poverty and subjective health is well established in social epidemiology, the relative contribution of social causation and health selection remains an unsolved puzzle. Several studies relied on panel data with fixed effects models to account for selection of individuals with poor health into poverty. A systematic review of these studies concluded that there is still evidence for a weak but still significant association between income poverty and subjective health, indicating that some part of the association cannot be attributed to selection. In this study, we argue that standard fixed effects models may fail to fully account for selection because they erroneously assume that the health trajectories of exposed and unexposed individuals follow parallel trends. Substantially parallel trends imply that, had the exposed individuals not slipped into poverty, their health would have developed parallel to the health of unexposed individuals. We argue that this assumption is violated whenever there is selection of individuals with less favourable health trajectories into poverty. Using data from the German Socioeconomic Panel (GSOEP) study 1984-2016, we analysed whether the association between income poverty and subjective health can still be found in a fixed effects model with individual slopes (FEIS). This model allows the slope of the effect of aging on health to vary between individuals as a result of stable unobservables interacting with age. The results confirm that standard fixed effects models yield an upwardly biased estimate of the poverty effect, especially among men. When accounting for the correlation between individual health trajectories and poverty, no significant association between poverty and subjective health remained. These findings let us conclude that while fixed effects models are a strong toolkit for disentangling social causation and health selection, model assumptions may need to be adjusted when the aim is to identify social determinants of health.

The Spillovers Between Joint Family and Work Trajectories and Multidimensional Wellbeing
Presenter: Chiara Comolli, University of Lausanne, Switzerland
Co-authors: Laura Bernardi, Marieke Voorpostel, University of Lausanne, Switzerland
Informed by the theoretical approach of life course research and the interdependences that it predicts across life domains, this paper investigates how employment and family trajectories jointly influence multiple dimensions of health and wellbeing across gender and socioeconomic groups. The aim of the study is to measure how subjective and objective health as well as relational and financial wellbeing are affected by the simultaneous occurrence and accumulation of critical events in both work and family domains across the life-course. The critical transitions the family domain are: parenthood, union dissolution and re-partnering; in the employment domain we consider critical transitions the transition to a precarious or part-time employment, downward mobility and income drops, unemployment. We assume a) that individual resources such as social origin, social position, and social networks shape both the likelihood of individuals of experiencing a certain work-family trajectory and moderate the nexus between the critical transitions and various forms of wellbeing; b) that different types of trajectories, domains or events have a stronger impact on certain dimensions of wellbeing than on others which will therefore be analyzed separately to account for the multidimensionality of wellbeing. We draw on data from the large-scale, nationally representative longitudinal Swiss Household Panel (SHP, 1999-2017). The survey offers 18 annual waves of detailed information on family and professional life course events. Moreover, the data include socio-demographic and background detailed information and a good number of health and well-being indicators. Holistic approaches as sequence analysis identify and describe the different trajectories jointly defined by labor market and family transitions for men and women separately. Logistic regression models adapted to the specific outcome assess the association between those trajectories and wellbeing outcomes.

8G   PAPER SESSION: LONELINESS AND HEALTH

Social Isolation, Loneliness and Engagement with the National Health Service: A Latent Class Approach Using Survey Data Linked to Administrative Health Data
Presenter: Elaine Douglas, University of Stirling, UK
Co-author: David Bell, University of Stirling, UK
Social isolation and loneliness are multi-dimensional constructs that are inter-related yet distinct. Both are associated with poorer health status and health outcomes. Yet, little is known about how the patterns of social isolation and loneliness in ageing populations are associated with health service usage. A USA study using survey data linked to administrative health records found that those who self-reported as lonely had a higher total number of health issues and used more hospital services than those who were not lonely. To our knowledge, similar research has not been done in the UK. Latent class analysis (LCA) was used to determine profiles (population groups) of loneliness and social isolation in older people in Scotland (Healthy Ageing in Scotland, HAGIS, n = 1,057) using model-fit criteria. Loneliness was measured using the UCLA Loneliness Scale and social isolation used a measure of social networks and social contact. We then analysed the socio-demographic, perceived health, and health behaviour of these profiles using descriptive statistics and logistic regression. The survey data (HAGIS, 2016/17) were linked to retrospective administrative health data to investigate patterns of repeat prescription use (from 2009) and health service usage (from 2005). Our results highlight the distinction and inter-relation between social isolation and loneliness (including associations with sociodemographic and health characteristics), and the variation in health service usage between the population groups. LCA profiles may help focussed targeting of these groups for health interventions. Further, the data-driven approach of LCA may overcome some of the limitations of indices of social isolation and loneliness. As such, this will extend the existing methodological approaches to quantitative analyses of social isolation and loneliness and demonstrate the benefits of using linked administrative health data. This study adds new evidence to the impact of social isolation and loneliness on health and its implications for health services.

Generational Differences in Loneliness and its Psychological and Sociodemographic Predictors in the UK
Presenter: Drew Altschul, University of Edinburgh, UK
Co-authors: Matthew Iveson, Ian Deary, University of Edinburgh, UK
Loneliness is a major concern among older individuals, and is comorbid with a variety of other health conditions. Our goal was to identify notable predictors of loneliness across two generations of individuals, represented in four separate samples. We used the same broad set of psychological and sociodemographic variables in all samples, including: cognitive function, personality, self-rated health, social class, living circumstances and family background. Using extreme gradient boosting (a machine learning technique that identifies the most important variables and interactions without bias), in an exploratory-confirmatory framework, we started our analyses with two exploratory samples that each represent a different age group: Healthy Ageing in Scotland as a sample of middle age individuals (69 and younger), and the 36 Day Sample of older age individuals (70 and older). We identified meaningful predictors of loneliness using gradient boosting, and then transferred our models to our confirmatory samples. These two samples were, for younger individuals, the English Longitudinal Study of Ageing, and, for older individuals, the

Lothian Birth Cohort of 1936. We found that only neuroticism and self-rated health were reliably associated with loneliness across both generations. Additionally, in the younger generation, a social personality – e.g. extraversion – was also associated with loneliness, whereas in the older generation, social circumstances such as living alone were associated with loneliness. The efficacy of our models and implications of generational differences will be discussed.

The Longitudinal Association of Perceived Neighbourhood Disorder and Lack of Social Cohesion with Depression Among Older Adults: An Individual Participant Data Meta-Analysis from 16 High-Income Countries
Presenter: Gergő Baranyi, University of Edinburgh, UK
Co-authors: Jamie Pearce, Chris Dibben, University of Edinburgh, UK; Stefan Sieber, Stéphane Cullati, Swiss NCCR LIVES, University of Geneva, Switzerland; Delphine S. Courvoisier, University of Geneva, Switzerland
Although residential environment might be an important predictor of depression among elderly, systematic reviews point to a lack of longitudinal investigations and the generalizability of the findings is limited to a few countries. The aim of this paper was to examine the longitudinal effect of perceived neighbourhood disorder and lack of social cohesion on depression in older age, and to explore the differences in the estimates between 15 European countries and the United States. We used data collected after 2012 in three representative population surveys (ELSA, HRS, SHARE), including 33519 adults older than 50. The risk of perceived neighbourhood disorder and lack of social cohesion on depression was estimated using two-stage individual participant data meta-analysis. We ran additional analyses on individuals reaching retirement. After retaining estimates for each country and extracting macro-level indicators from the World Bank database, we conducted meta-regression to explore country differences. Neighbourhood disorder (Odds Ratio [OR] 1.21) and lack of social cohesion (OR 1.64) were significantly associated with depression in the fully adjusted models. In retirement, the risk of depression was even higher (neighbourhood disorder: OR 1.32; lack of social cohesion: OR 1.79). Heterogeneity across countries was low but reduced by the addition of country-level income inequality and population density. Perceived neighbourhood disorder and lack of social cohesion increased the overall risk of depression among older adults. Policies, especially in countries with strong neighbourhood effects, should focus on improving psychical environment and supporting social ties in communities, which can contribute to healthy ageing.

8H PAPER SESSION: SELF-RATED HEALTH

Pathways from Early Childhood to Physical and Emotional Well-Being and Cognitive Function in Mid-Life
Presenter: Brian Dodgeon, University College London, UK
Co-authors: Richard D. Wiggins, Praveetha Patalay, George B. Ploubidis, University College London, UK
Objective: Previous studies have shown that advantaged family SES during a child's early years and higher educational attainment result in better health, well-being and cognition in later years. In this paper we set out with early family circumstances that are known to have such an effect, and observe the socio-economic, family, behavioural and educational indicators which mediate this effect, quantifying their relative contributions.

Methods: We use the NCDS Birth Cohort, a nationally-representative UK population of 18,558 children born in one week in 1958, who turned 50 in 2008. We employ structural equation modelling to examine the pathways from birth through childhood and early mid-life which are linked to a range of outcomes at age 50 indicating cognition, physical and emotional well-being and quality of life. We look at the mediating effect of:
• cognitive ability assessed at ages 7, 11 and 16
• childhood emotional/psychological issues (measured by Rutter index 7/11/16)
• family difficulties during childhood such as housing, financial problems, unemployment.
• educational qualifications
• early mid-life SES age 42.

Results: We find socio-economic status at birth has a strong indirect effect on the age 50 outcomes via its influence on cognitive ability, educational attainment and mid-life occupational status. Gender differences include teenage cognition having a stronger positive effect on later physical health for women, and qualifications having a stronger positive effect on emotional well-being for men at age 50.

Conclusions: Our findings strongly consolidate previous work in this field, using a range of outcomes in mid-life which have not been previously tested. Our contrasting results for men and women support other research findings which show stronger mediated links from childhood SES to adult SES for men.

Midlife Cognitive Function in Groups of People with Different Longitudinal Trajectories of Affective Symptoms

Presenter: Darya Gaysina, University of Sussex, UK
Co-authors: Amber John, Urvisha Patel, Jennifer Rusted, University of Sussex, UK; Sarah-Naomi James, Marcus Richards, MRC Unit for Lifelong Health and Ageing, University College London, UK

Background: Affective disorders are associated with poorer cognition in older adults; however, it is not known whether these associations can vary based on different trajectories of affective symptoms across the life course.

Aims: The present study aims to investigate effects of affective symptoms over a period of 30 years on midlife cognitive function. First, we explored whether timing (sensitive period) or persistence (accumulation) of affective symptoms predicted cognitive function. Second, we tested how different longitudinal trajectories of affective symptoms were associated with cognitive function.

Method: The study used data from the National Child Development Study. Memory, verbal fluency, information processing speed and accuracy were measured at age 50. Affective symptoms were measured at ages 23, 33, 42, and 50 and used to derive longitudinal trajectories. A structured modelling approach compared a set of nested models to test accumulation versus sensitive period hypotheses. Linear regressions and structural equation modelling were used to test for longitudinal associations of affective symptoms with cognitive function.

Results: Accumulation of affective symptoms was found to be the best fit for the data, with persistent affective symptoms being associated with poorer immediate memory (B=-0.07, SE=0.03, P=.01), delayed memory (B=-0.13, SE=0.04, P<.001), and information processing accuracy (B=0.18, SE=0.08, P=.03), but not with information processing speed (B=3.15, SE=1.89, P=.10). Longitudinal trajectories of repeated affective symptoms were associated with poorer memory, verbal fluency, and information processing accuracy.

Conclusions: Persistent affective symptoms can affect cognitive function in midlife. Effective management of affective disorders to prevent recurrence may reduce risk of poor cognitive outcomes and promote healthy cognitive ageing.

Air Pollution and Health in the Older Population: Evidence from the Irish Longitudinal Study on Ageing (TILDA)

Presenter: Anne Nolan, Economic and Social Research Institute, Ireland
Co-authors: Philip Carthy, Sean Lyons, Economic and Social Research Institute, Ireland

Air pollution is an issue of significant public health concern. Airborne pollutants have been associated with various non-communicable diseases and premature deaths. Left unmanaged, the issue has the potential to be responsible for serious economic losses. It is therefore important that research strives to provide clarity on the potential links between specific pollutants and health outcomes, with particular regard to potentially vulnerable population subgroups. This paper explores potential associations between estimated exposures to Nitrogen Dioxide (NO2) and the prevalence of self-reported asthma cases among older adults. The work employs a novel dataset, which combines geo-coded data from The Irish Longitudinal Study of Aging (TILDA) with an existing map which estimates geographic variation in the presence of NO2 across the Republic of Ireland (Naughton et al., 2018). By combining individual level estimates of exposure to NO2 at the residential addresses of TILDA respondents with the survey microdata, we are able to exploit the spatial variation in air pollution while also controlling for a wide range of potentially confounding factors at the individual level. We further address any potential bias that may arise from the use of self-reported asthma diagnoses by complementing the analysis with one which aims to identify asthma cases objectively, through the respondents' use of indicative medications. The analysis employs various econometric techniques. We find preliminary, suggestive evidence of a positive relationship between NO2 and asthma in this population of older adults.

Sexual Orientation and Mental Health Over the Life Course in a Birth Cohort

Presenter: Janet Spittlehouse, University of Otago, New Zealand
Co-authors: Joseph M. Boden, John Horwood, University of Otago, New Zealand

Background: The Christchurch Health and Development Study (CHDS) has been collecting data for over 35 years from a birth cohort of 1265 individuals born in Christchurch, New Zealand during 1977. The CHDS has collected data on sexuality at ages 18, 21, 25, 30 and 35 which allows the study of sexuality over the life course to be undertaken. Sexual minority individuals consistently report higher rates of mental disorder than heterosexuals. However, much of the research has methodological limitations related to the classification of sexuality, the use of cross-sectional data and problematic sampling procedures, such as using convenience samples.

Methods: Latent class analysis was used to classify participants' sexuality based on self-report data of sexual behaviour, attraction, identity and fantasy, gathered over five assessments between the ages of 18-35 years

(n=1040). Mental health and substance use outcome data were gathered at four assessments between the ages of 21-35 years. Potential covariate variables were collected during childhood.

Results: The latent class analysis identified four groups interpreted as: "heterosexual" 82%, "mostly heterosexual" 12.6%, "bisexual" 3.5% and "homosexual" 1.9%. In the sexual minority groups, women outnumbered men by at least 2:1. Pooled rates for mental health disorders of depression, anxiety disorders and suicidal ideation, after adjustment for childhood covariate variables, were significantly higher in the sexual minority groups (p<0.0001). With the exception of cannabis abuse, there were no significant differences between the sexuality groups and rates of substance abuse. The strength of association between sexuality group and mental health outcomes did not differ according to sex.

Conclusions: The results indicate that sexuality lies on a spectrum. Over the life course, membership of a sexual minority group is clearly associated with mental health problems of depression, anxiety and suicidal ideation.

8I   PAPER SESSION: HEALTH AND MORTALITY

Adult Children's Education and Parent Mortality: Exploring Mechanisms
Presenter: Shawn Bauldry, Purdue University, USA
Co-author: Joseph D. Wolfe, University of Alabama at Birmingham, USA
A substantial body of work documents associations between both parents' and individual's educational attainment and health (Antonovsky 1967; Elo and Preston 1996; Elo 2009; Kitagawa and Hauser 1973; Ross and Wu 1995), but more recently attention has turned to whether adult children's educational attainment also contributes to an individual's health—an inversion of the more commonly studied intergenerational transmission from parents to offspring. Studies have identified relationships between adult children's educational attainment and a range of health outcomes including functional limitations, self-rated health, and mortality using samples from a number of different countries including China, Finland, Mexico, Sweden, Taiwan, and the United States (Friedman and Mare 2014; Torssander 2013, 2014; Yahirun, Sheehan, and Hayward 2016; Yang, Martikainen, and Silventoinen 2016; Zimmer et al. 2007; Zimmer, Hanson, and Smith 2016; Zimmer, Hermalin, and Lin 2002). Three mechanisms are thought to link adult children's education to their aging parents' health: 1) direct care, 2) financial resources, and 3) health lifestyle and behavioral spillover (Friedman and Mare 2014; Torssander 2013, 2014, Zimmer et al. 2007, 2002). This research draws on data from the National Longitudinal Surveys of Older Men and Mature Women and causal mediation models to test the three mechanisms. Preliminary analyses for both the NLS-OM and NLS-MW cohorts document associations between adult children's education and parent mortality. The results support a three-generation model in which parent occupation, personal wealth, and adult child education and occupation are independently associated with men and women's mortality in later life. We have not yet completed the mediation component of the analysis.

Cause-Specific Mortality After Non-Traumatic Spinal Cord Injury: Results from a Longitudinal Cohort Study in Switzerland
Presenter: Anne Buzzell, Swiss Paraplegic Research, Switzerland
Co-authors: Jonviea Chamberlain, Martin Brinkhof, Swiss Paraplegic Research, Switzerland;
Marcel Zwahlen, Institute of Social and Preventive Medicine Bern, Switzerland
Background: To improve life expectancy in populations with complex chronic health conditions such as Non-Traumatic Spinal Cord Injury (NTSCI), it is important to differentiate the most significant risk factors for early mortality. Mortality after NTSCI is likely affected by both the underlying health condition that caused the injury, in addition to the SCI-specific complications. Data on cause-specific mortality allows for the identification of critical health issues that lead to reduced survival. Therefore, it is imperative to benchmark cause-specific mortality following NTSCI to the general population (GP) as well as the Traumatic-SCI (TSCI) population.

Objective: To estimate relative risk of cause-specific mortality in NTSCI with reference to the GP and TSCI population.

Methods: Longitudinal data (1980-2011) from the multi-center Swiss Spinal Cord Injury (SwiSCI) cohort on cases of NTSCI admitted to specialized rehabilitation will be linked to data from the Swiss National
Cohort to obtain information on cause of death. To ensure clinical relevance, underlying causes of death and NTSCI etiological categories will be grouped strategically. Standardized mortality ratios will be estimated using mortality rates from the Swiss GP and the TSCI population. Flexible parametric regression will be used to model survival estimates.

Discussion: Disparities in survival between the general population and the disabled population are often characterized by health inequities. In order to close this gap in survival, it's necessary to determine where these

differences lie. Thus, results from this study are essential for our understanding of NTSCI and the greatest risks attributed to this chronic disease. We will further evaluate common challenges of causeof-death studies, including of linkage uncertainty as well as inaccuracies in cause of death coding, and present sensitivity analyses to evaluate the robustness of empirical findings and conclusions.

Mortality Differentials Between Traumatic and Non-Traumatic Spinal Cord Injury: A Causal Inference Approach
Presenter: Martin Brinkhof, Swiss Paraplegic Research, Switzerland
Co-authors: Anne Buzzell, Jonviea Chamberlain, Swiss Paraplegic Research, Switzerland
Introduction: The causal role of underlying health conditions on etiology of spinal cord injury (SCI) and subsequent force of mortality is often speculated upon, but rarely measured. Use of Directed Acyclic Graphs (DAGs) can inform causal inference and aid in identification of causal factors for premature mortality. The objective of the current study is to investigate differentials in the force of mortality according to SCI etiology.

Methods: This study uses data collected in the Swiss Spinal Cord Injury (SwiSCI) cohort, which includes residents of Switzerland admitted for first rehabilitation at one of the specialized SCI rehabilitation centers between 1990-2011. Hazard ratios and survival probabilities were estimated using flexible parametric models. A validated DAG that hypothesized the causal relationship between SCI characteristics and premature mortality was developed to inform models for potential confounders.

Results: This study includes 2,435 cases of TSCI with 19,704personyears (PYs) of follow-up and 376 recorded deaths; and 1,450 cases of NTSCI with 6,137 (PYs) and 528 recorded deaths. TSCI and NTSCI shared similarities in risk of premature mortality, with a higher risk observed for older ages, increased lesion severity, and etiology. However, when comparing risk of premature mortality for TSCI with NTSCI, notable differences in survival were observed, which increased with cumulative time since injury. For example, the survival of NTSCI was 3.4% (95% CI 2.0 to 4.7%) below that of TSCI at 10 years, expanding to 5.6% (95% CI 3.4 to 7.9%) after 20 years post-injury. These differences persisted after exclusion of cases with malignant etiology.

Conclusions: This study substantiates the benefits of a causal inference approach when inferring the potential impact of predetermined risk factors. We identified an added force of mortality attributable to SCIs of non-traumatic origin. Our methodology may be applicable to other settings in which multiple factors affect overall mortality.

A Longitudinal Study of Health-Related Trends, in a Population-Based E-Cohort with Updated Follow-Up of All Residents in Venice (2000 – 2014)
Presenter: Claudio Barbiellini Amidei, University of Padua, Italy
Co-authors: Silvia Macciò, Francesca Gessoni, Andrea Bardin, Federica Turatto, Lorenzo Simonato, University of Padua, Italy
Introduction: The Integrated Epidemiological System (IES) is a methodologically advanced tool that can be used for longitudinal studies, to monitor health-related trends of a population, with a high geographic resolution. The IES based on healthcare data of residents assisted by the Local Healthcare Unit (LHU) in Venice, has been updated and now includes information of 15 years (2000-2014).

Methods: A population-based e-cohort enrolled all residents (415,252 overall) identified through the population registry, from 01/01/2000-12/31/2014, assisted by the Venetian LHU, living the municipalities that compose it (Venice, Marcon, Quarto d'Altino and Cavallino-Treporti). A record-linkage of the following sources has been performed: death certificates (53,423), hospital discharge records (1,383,541), drug prescriptions (34,614,816), healthcare copayment exemption (750,995) and the cancer registry of Veneto Region (34,836). Mortality rates, cancer incidence and incidence rates on relevant diseases such as asthma, chronic obstructive pulmonary disease (COPD), ischemic heart disease, acute myocardial infarction and diabetes have been calculated with disease-specific algorithms. The estimates refer to the entire population, to residents of insular Venice (historic city-center and islands) and mainland Venice, as well as residents of the 20 districts in the LHU. Analyzes were divided by sex, age and disease.

Results: During the 15-year follow-up, there has been a constant, slightly inhomogeneous, decrease in mortality for the major causes of death. Lung cancer incidence (2000-2010) decreased only among men. Breast and colon-rectum cancer incidence rates remained stable among women and colon-rectum cancer rates reduced among men. The marked differences in general mortality rates of insular and mainland Venice, as well as differences among districts, progressively diminished.

Conclusions: The main finding of these results is a general tendency of health conditions to converge with a reduction of health differences. The cohort approach offers a unique possibility to monitor dynamic differences in the population, with a geographic resolution that would not be possible otherwise.