

Fertility and reproductive health

Strand organisers: Dr. Alyce Raybould (UCL), Dr. Alina Pelikh (UCL) and Joe Strong (LSE)

Fertility and uncertainty session organiser: Dr. Sarah Christison (University of St Andrews)

1:30 - 3:00 Monday 11 September: Determinants of fertility

First birth postponement, completed fertility, and literacy skills in sub-saharan Africa

Afua Durowaa-Boateng and Eva Beaujouan - Wittgenstein Centre for Demography and Global Human Capital, University of Vienna

Sub-Saharan Africa records among the lowest average ages at first birth in the world, of around 21.0 years on average, and the highest fertility rates with an average of 4.6 children per woman. In high-fertility countries, age at first birth and the total number of children women have in their lifetime are strongly interrelated. Previous studies have linked participation in education to the postponement of first childbirth, and educational attainment is negatively associated with fertility levels. Level of education is a measure that conflates the timing of educational attainment and skills acquisition. We analyse the relationship of literacy skills and education level with age at first birth and with the total number of children, in cohorts at the end of their reproductive lives. Using DHS data, we study if there is within-education level variation in age at first birth and completed fertility by literacy skills in 38 Sub-Saharan African countries, among women born in 1940-75 and aged over 40 at the time of the survey. The results show that, taken independently, all educational characteristics are positively associated with age at first birth and negatively associated with total number of children. Nonetheless, within education levels, the coefficients for age at first birth do not differ significantly by literacy skills. However, we find significant differences for the total number of children ever born. Our results suggest that, while literacy skills matter for the quantum of fertility, first birth timing may be more related to the timing of end of education.

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Jumping together or not? The association between sibling relationship quality and fertility transitions

Yu-Chin Her - University of Antwerp and Matthijs Kalmijn - Netherlands Interdisciplinary Demographic Institute (NIDI)

According to social interaction effects, individuals' behaviors, including fertility patterns, are associated with those of their social network partners for reasons such as social learning, social contagion, and social support. Focusing on the sibling network, we aim to better understand how siblings' fertility transitions are intertwined. Studies indicated that siblings' influences on each other's life courses are stronger when they have similar demographic characteristics or personality traits (e.g., same-gender siblings). Despite being a proxy for their relationship quality, no study has yet directly investigated the association between sibling relationship quality and their life courses. Using four waves of data from the Netherlands Kinship Panel Study, we used baseline predictors to predict fertility outcome in the next wave and estimated multilevel binary and multinomial logistic models (N dyad-years = 6326). We adopted a new dynamic design where the outcome is whether or not siblings had a (new) child in the same period between panel waves: jumping together or not. We found that siblings with higher relationship quality and lower conflict were more likely to both had a child together, as opposed to the other categories. Compared to when only one had a fertility transition, sibling relationship quality was positively associated with both transitioning, whereas sibling conflict was positively associated with both not transitioning. The study is the first to incorporate sibling relationship measures when examining how siblings affect each other's demographic life courses. It is also the first attempt to distinguish sibling similarity in not transitioning together from sibling dissimilarity.

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Rising deprivation, economic uncertainty, and contemporary low fertility in an underdeveloped state of India
Kakoli Das - Institute of Development Studies, West Bengal, India; Saswata Ghosh - Institute of Development Studies, West Bengal, India; Mary K. Shenk, Pennsylvania State University, USA.

Poverty, or more accurately, objective economic crisis, has historically been altering family formation. The narrative appears to be quite positive in the case of emerging nations up to the pre-crisis period. However, a reverse narrative surfaced following the global financial crisis and recent fertility reduction in many emerging nations including India. Interestingly, the eastern state of West Bengal (in India) experienced a sharp reduction in fertility despite the absence of favourable socioeconomic conditions. While even the rural TFR (Total Fertility Rate) of West Bengal (1.6 births/woman) is on par with many developed countries (Norway, Germany, Netherlands, Belgium, etc.), its developmental stage is not – which poses a paradox. Using data from a primary survey of 405 mothers aged 15 to 35 years alongside focus group data of parents, the present study argues that fertility outcomes can be influenced by purposeful decisions/motivations, along with current income and social status. Perceptions of economic uncertainty enable lifetime preferences (on fertility decisions) to shift based on perceived opportunities (for oneself and one's progeny), irrespective of changes in actual socioeconomic conditions. The estimation of adjusted odds ratios (AOR) and average marginal effects (AME) derived from sequential logit regressions, shows that with a high degree of economic insecurity and relative deprivation, the likelihood of having a predetermined ideal child count increased by 14% and 3% respectively. Additionally, when mothers experience economic anxiety, their probability of achieving unsatisfactory completed fertility increases by 16%. As a result, fewer children than they had planned to have are actually born. Therefore, rural women's primary motivation is to provide an economically secure life for their children, and in order to do so, they must act rationally within a given economic framework. This initiates a distinctive socio-economic competition that ultimately creates a unique local low-fertility socio-ecology that has not been identified in the past within the context of rural fertility decline in India or any other developing country.

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Subsistence strategy does not predict fertility at the group level, but women who farm have more children

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While it is commonly assumed that agriculturalists have higher fertility than foragers, we lack robust supportive evidence. We test this hypothesis in 10,250 women from 27 small-scale societies, finding substantial variation in fertility. This variation did not correspond to subsistence typology given substantial diversity in subsistence strategies themselves: average fertility in societies dependent largely on agriculture was not clearly differentiated from others. We re-tested this relationship across a range of individual-level subsistence measures, leveraging the intrapopulation diversity in subsistence activities. We found that fertility was positively associated with farming, and negatively associated with foraging and market integration. Overall, however, (traditional) livelihood activities were not strong predictors of fertility, likely because the determinants of fertility, and their associations with subsistence activities, are complex.

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4:45 - 6:15 Monday 11 September: Fertility and uncertainty 1

Are worries about the future and brexit voting behaviours related to fertility intentions? New evidence from the UK Gender and Generations Survey

Ann Berrington, Bernice Kuang, Brienna Perelli-Harris - University of Southampton

Whilst, the relationship between economic uncertainty and fertility intentions is well-studied. Several new dimensions of uncertainty (the climate crisis, the COVID-19 pandemic, the war in the Ukraine and rising living costs) have become increasingly relevant across Europe. In the UK, where this study takes place, Brexit has also reflected and exacerbated social division between groups, exposing the disconnect in experience and economic trajectories between those strongly connected to global growth and those who are not. Uncertainty definitionally refers to unknowns about the future, which requires a prospective lens to evaluate. Recent research suggests that fertility plans may be shaped by the subjective perception of future uncertainty or

narratives of the future, even if objective, cross-sectional measures such as current employment status, education, or income do not suggest insecurity or long-term economic vulnerability. Using data from the first ever UK Generations and Gender survey (n=7,130) and multinomial logistic regression, we investigate how worry about political, social, and economic issues and voting for Brexit relate to fertility intentions of men and women aged 18-39. Our outcome of interest is the intention to have a(nother) child and if so, how many. Independent variables include Brexit voting behavior, worry about global pandemics, climate change, military conflict, expectations for how their children will fare in the future. We stratify the analysis by parity and examine intended family sizes and the extent to which a preference for childlessness versus smaller families accounts for lower fertility intentions among younger birth cohorts.

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A Question of Security? Educational Expansion, Labour Market Uncertainty and Family Formation Christian Brzinsky-Fay - Berlin Social Science Center, Ana Karalashvili - Humboldt University Berlin

This study examines the impact of increased educational participation and decreased labor market stability on the transition to parenthood in the context of the low fertility regime in Germany. In contrast to previous studies that focus on employment precarity centered around the time of childbirth, this study employs a longitudinal perspective by measuring sequence turbulence of employment instability, considering present circumstances and past experiences. Using retrospective life course data from the National Educational Panel Study of men and women from Western Germany, born between 1944 and 1986 (N=9699), the study analyzes the duration until the first birth throughout 20 years after leaving school. The Event History Analysis reveals that women with more turbulent labor market trajectories experience earlier transitions to parenthood across all cohorts and regardless of the level of education. The effect is strongest among women with lowest level of education, and weakest – among highly educated women. The study identifies no effect of employment turbulence in the case of transition to parenthood among men. These findings highlight that family formation may serve as a gendered alternative to labor market attachment to attain security, especially, among women with lower educational credentials. Lastly, the study finds that the cross-cohort variation in the timing of entering into parenthood is a function of prolonged schooling, suggesting that education plays a crucial role in shaping family formation patterns. These findings provide insights into the complex interplay between education, employment, and family formation and emphasize the need of going beyond static measures.

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Fertility Trends and Changing Housing Contexts in Scotland: A longitudinal analysis Sarah Christison¹, Hill Kulu¹, Ann Berrington² - ¹University of St Andrews, ²University of Southampton

In life course research, the domains of residential mobility and fertility are closely linked, with residential relocations often occurring either in anticipation of, or in response to, a birth (Kulu & Milewski, 2007). Housing and childbearing may therefore be understood to be interconnected within the context of family formation. In Scotland, there is growing interest among policy makers in trying to understand the country's low and declining population. When examining how fertility has changed, it is important to consider the context in which these fluctuations have occurred. This study focuses on housing as housing contexts are considered to have a significant impact on decision making in regard to starting or expanding a family. This issue of housing is relevant in Scotland as there has been considerable change observed in tenure structure over the last 40 years (Graham, et al., 2017). Analysis was conducted using data from the Scottish Longitudinal Study, a rich source which links census and vital events data. This data spans three decades from 1991 to the most recent available data in 2013. Event history analysis techniques were used to examine the way in which housing and residential factors may have influenced childbearing outcomes. Results suggest that there has been an increase in births to private renters, not only for first births, but also for second and third births. However, this change in the likelihood of a birth across different tenure types is not consistent across Scotland but varies depending on the urban/rural context.

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9:00 - 10:30 Tuesday 12 September: Fertility intentions, preferences and attitudes

Stuck in the middle? Ambivalent gender role attitudes and fertility intentions in northern Europe.

Nicole Hiekel - Max Planck Institute for Demographic Research, Katia Begall - Radboud University Nijmegen

The recent fertility decline in the Nordic countries - driven by fertility postponement, childlessness as well as low parity progression and affecting high and low SES groups similarly - calls into question the Nordic Family Regime in which high gender equality was linked to high fertility. By utilizing harmonized survey data collected in 2020 in Norway, Denmark, and Estonia as part of the new round of the Generations and Gender Surveys on n=15,140 respondents, we identify variation in women's and men's intentions to have a(nother) child by their gender role attitudes. We contribute both theoretically and empirically by (1) studying not just women's but also men's internalized social norms regarding gender equality, and by (2) capturing gender role attitudes in their multidimensionality, i.e., public and private gender roles because progress in gender equality is neither uniform nor linear. Latent Class Analysis identifies two gender role profiles outside of the traditional-egalitarian continuum. Regression analysis reveals that their association with fertility intentions differ systematically at the intersection of gender, parenthood status and country context. Effects are more pronounced among the childless compared to parents. Childless egalitarian women and men are least likely to report fertility intentions. Members of three other gender role profiles are more likely to report intentions to have a first child. This association is particularly strong for non-egalitarians and egalitarian essentialists. Those with the public-private ambivalent profile exhibit weaker positive intentions, potentially reflecting the perceived work-family incompatibility that this profile may imply.

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The effect of parental caregiving on the fertility expectations of adult children

Ester Lazzari - Wittgenstein Center and University of Vienna, Valeria Zurla - University of Naples Federico II

Caregiving for elderly parents can have significant physical and emotional demands on adult children, who may need to step in to provide support. As people age, the likelihood of needing to care for aging parents increases, making caregiving a source of uncertainty, particularly for those who have postponed having children, who may face difficult choices and trade-offs between caring for their parent and starting a family of their own. Parental health may negatively impact the fertility plans of adult children through the time and energy devoted to caregiving and by disrupting the provision of informal childcare. Previous research has highlighted the positive impact of grandparents on their adult children's fertility through childcare, but the association between parental health and childbearing expectations remains unclear. Thus, this paper offers a novel perspective on the issue of family support by investigating how parental caregiving responsibilities affect adult children's decision to have a child. Using Australian panel survey data, we examine whether perspective parents changed their childbearing expectations after becoming care providers to their parents. To address issues of unobserved heterogeneity and selection into parenthood and caregiving, we employ an event study difference-in-differences model. We found that becoming a parental caregiver leads to a 5% reduction in fertility expectations within the first two years, and this effect intensifies over time. The results are consistent across genders and more pronounced for childless adults. These findings suggest that interventions aimed at reducing the caregiver burden could provide a window of opportunity to positively influence fertility.

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The evolution of son preference in Turkey across four cohorts

Selin Köksal - University of Essex

Son preference is one of the most embedded forms of gender inequality, as it reflects how gender-based discrimination starts at a very early stage of life. Previous studies have shown that fertility decisions of the parents in Turkey are substantially shaped by son preference as the number children is higher for families with firstborn daughter compared to those with a firstborn son. In the past 50 years, Turkey has undergone substantial economic, demographic, and cultural transformations through increased levels of education, a rapid wave of urbanization, increased female labor force participation and persistent decline in fertility. Yet, no study has investigated whether and to what extent the son targeting fertility behavior persists among families living in Turkey. To address this question, I pooled together all the waves of Turkish Demographic and Health Survey

(TDHS) collected between 1993-2018. Employing a series of linear regression and Cox proportional hazard models, I show that the effect of having firstborn daughter on total number of children weakened in younger cohorts. The declining trend is largely driven by younger women with lower education whose fertility levels and gender attitudes are becoming increasingly similar to their highly educated counterparts. Having two subsequent daughters increases the likelihood of having the third child for less educated women, while the gender composition no longer determines the likelihood of transition to the third parity for younger women holding at least a secondary degree.

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What do people mean when they are 'unsure' about having children?

Alyce Raybould - University College London, Monika Mynarska - Cardinal Stefan Wyszyński University Warsaw

Fertility intentions or desires are typically measured using an ordered categorical measure of certainty about having children within a time frame: definitely yes, probably yes, unsure, probably not, definitely not. Uncertainty about having children (the 'unsure' category) is gaining interest as an explanation for reproductive behaviour and outcomes in high and low-income settings (e.g. Bernardi, Mynarska and Rossier, 2015, Trinitapoli and Yeatman, 2018). However, little work has been done to understand whether people who are 'unsure' present a distinct middle category from those who say 'probably', and whether they are truly uncertain or simply don't have a strong opinion ('reproductive ambivalence'). This paper seeks to understand more about what it means to be 'unsure' about having children, using a UK (n=782) and Polish (n=999) online sample. We compare how participants of different ages, partnership and parenthood status rate the certainty of wanting a child using a categorical scale (as above), and their strength of wanting a child using a discrete 10-point scale. We found that individuals who answered 'definitely' loaded their 'strength of wanting' at the pole ends of the discrete scale. However, the middle categories (probably yes, unsure and probably not) showed much greater spread along the discrete scale, although they had distinct group means. We conclude that grouping 'definitely' and 'probably' categories together in analyses misses important variation in the 'strength of wanting' a child between these groups. We also reflect on what our findings contribute to the theoretical understanding of reproductive uncertainty.

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Change and stability in abortion attitudes over the life course

Nitzan Peri-Rotem - University of Exeter

While abortion remains a highly controversial issue, the drivers of change in attitudes towards abortion are not well understood. Previous studies recorded increasing support for abortion rights over time in Britain and in other countries. However, it is unclear whether individuals change their attitudes to abortions over the life course and what factors might contribute to that. This study uses data from the 1970 British Cohort Study to explore the role of life cycle events, including marriage and transition to parenthood, on changes in individuals' support for abortion. A multinomial regression model is employed to test whether the level of support for abortion – measured by a 5-point Likert scale – among men and women increased, decreased or remained the same between 1999 and 2012, when cohort members were 29 and 42 years old. The control variables include changes in marital and parental status during those years, as well as education and religious denomination. It is found that 22% of respondents increased their support for abortion, while 24% expressed reduced support for abortion rights by the age of 42. Among women, those who entered motherhood were more likely to reduce their support for abortion compared to those who remained childless. Similarly, men who became fathers were less likely to increase their support for abortion compared to childless men. Nevertheless, higher educated men and women were less likely to reduce their support for abortion, regardless of their parental status. These findings contribute to a better understanding of the trends in abortion attitudes.

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1:00 - 2:30 Tuesday 12 September: Fertility and uncertainty 2

Austerity and reproductive justice

Laura Sochas - University of Oxford, Jenny Chanfreau - UCL

Qualitative research and feminist theory scholarship have linked austerity cuts in the UK to constraints on Reproductive Justice and infringements to the right to have children and parent with dignity, particularly for poorer and racialised communities. However, the aggregate impact of public funding cuts on income inequalities in age at first birth and on the probability of becoming a parent remains unclear. Using Understanding Society data, we operationalise austerity at the Local Authority level, by examining how cuts to council funding have differentially affected age at first birth and the probability of becoming a parent across different income groups between 2009 and 2019. Preliminary findings indicate that the marginal effects of the cuts are area-dependent. More deprived areas saw greater cuts in council spending over the period. However, the poorest tercile of the population in those local authorities already had a low probability of becoming a parent and this probability did not greatly reduce with the cuts. Instead, the richest tercile saw a greater marginal decrease in the probability of becoming a parent in those areas. In relatively less deprived areas, where the scale of the cuts were smaller overall, the poorest tercile started out with higher probabilities of becoming a parent and each pound of funding cut had a substantially stronger marginal effect on them relative to the richest tercile.

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Economic cycles and migrant fertility: Evidence for Belgium, 1950-2015

Karel Neels and Leen Marynissen - University of Antwerp

Diversity in European countries is increasing rapidly and patterns of family formation of young adults with a migration background are expected to increasingly shape fertility trends across Europe. For majority populations, the association between economic cycles and aggregate-level fertility trends has been well documented. Although a counter-cyclical association has been found in some cases – economic recession lowering opportunity costs and increasing fertility – evidence for most countries suggests a pro-cyclical association where economic recessions induce postponement and decline of period fertility as young adults avoid jeopardising long-term career tracks by early family formation. Despite the growing diversity in younger age groups and the stark differentiation of labour market outcomes by migration background in many European countries, only a limited body of research has considered the association between economic cycles and fertility in migrant populations and how this association is shaped by migrants' characteristics such as origin group, migration motive, migrant generation or duration of residence. This paper uses longitudinal microdata from Belgian censuses and registers for the period 1950 to 2015 to estimate nested hazard models of entry into parenthood and subsequent parity progression, which allow to identify the effects of economic cycles on subsequent stages of family formation and to assess whether and how migrant populations have been differentially affected by economic cycles. In addition, the extended observation window encompasses several severe recessions, making it possible to test whether and how the effect of economic cycles on family formation has changed over time, and how this differs by migration background.

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Local Social Networks and Fertility in the United Kingdom

Brian Buh and Eva Beaujouan - University of Vienna, Wittgenstein Centre; Ann Berrington - University of Southampton

Individuals seek out social connections in their communities and neighbourhoods for various benefits: improved well-being, self-actualisation, social support, and information exchange. Literature finds associations between pro-fertility referent and higher fertility. On the other hand, individuals with small local social networks may turn to parenthood for a sense of connection. Previous studies, however, do not consider the geographic proximity of the social network. We ask, how does a stronger sense of connection to the local neighbourhood associate with the likelihood of having a child? We hypothesise that a higher perceived connection to the neighbourhood increases fertility through attachment to the community, stability, support, and information exchange. Also participating in non-work clubs/activities (a proxy for larger local networks) is associated with a higher likelihood of birth. We employ the United Kingdom Household Longitudinal Survey to study partnered individuals of childbearing age. In our preliminary results, we observe, for men, there to be a significant positive

relationship between valuing local friends and acquaintances and the likelihood of having a higher-order birth. We also find a positive association between participating in non-work clubs and activities and the likelihood of having a(nother) child. The next steps include further refining the theoretical relationship between our measures, fertility, and UK-specific cultural aspects. We aim to reduce confounding factors by expanding our research to include the type of neighbourhood, parental connections to other parents, the proportion of local friends, the time since residential mobility, employment situation (working hours and schedule), and filtering the sample through fertility intentions.

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Work and childbearing in the XXI century: When large work autonomy meets high job demands
Anna Matysiak¹, Beata Osiewalska^{1,2}, Ewa Weychert¹ - ¹University of Warsaw, ²Cracow University of Economics

The study aims to investigate the under-researched role of growing job demands and increasing work resources for women's fertility choices in the labour markets that are undergoing rapid transformations due to globalization and digitalization. Specifically, we examine whether women who face demanding jobs are more likely to delay or abandon parenthood (H1). Drawing on the job demands-resources framework, which posits that job resources can buffer the negative effects of job demands on workers' lives, we explore whether the availability of various resources can alleviate the negative association between job demands and childbearing (H2). Job demands are assessed as a multidimensional construct measured by both work 'extensification' (work hours) and 'intensification' (learning demands, time pressure, job complexity). Similarly, job resources include autonomy over where (workplace control), how (job control), and when to work (schedule control). The study employs event history models for the transition to the first birth and uses panel data from the Household, Income and Labour Dynamics Survey in Australia (HILDA). Our preliminary findings indicate that increased work hours (41 or more), work complexity, and job-related stress are all associated with a decreased likelihood of motherhood. Surprisingly, women facing learning demands are more likely to have a first child, except when they express concerns about their future work prospects. In the subsequent stages of the analysis, we will examine the moderating role of job resources in the relationship between job demands and childbearing.

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2:45 - 4:15 Tuesday 12 September: Pregnancy/Abortion

Is it the same or different? Rohingya women's perceptions of family planning, miscarriage and "ending a pregnancy:" Evidence from a household-based survey in Cox's Bazar, Bangladesh, 2022
Ann M. Moore, Pragna Paramita Mondal, Atiya Rahman, Tasnima Haque, Joe Strong, Mira Tignor

Ambiguity about the difference between family planning, miscarriage and abortion has been previously documented in the literature. While differences between embryo implantation and non-implantation, confirmation of a pregnancy, and interference with the pregnancy is straightforward in a biomedical context, health literacy as well as belief systems influence individuals' understanding of what's happening in their bodies and what words they might ascribe to it. Furthermore, the stigma and weight of certain words also impacts the way women may understand and name different pregnancy-related experiences. This study interrogates Rohingya women ages 15-49's understanding(s) of family planning, miscarriage and "ending a pregnancy", using a household-based survey conducted in four Rohingya camps in Cox's Bazar, Bangladesh in 2022 (n=1173). The variables included in the survey capture attitudes and perceptions about family planning, miscarriage and "ending a pregnancy". Women's responses highlighted subjective conceptualizations of pregnancy and pregnancy loss. Only one-fourth of respondents agreed with the statement, "When a woman's period is late, doing something to make it come back means she's ending a pregnancy". Nineteen percent agreed with the statement, "Doing something to end a pregnancy is the same as using family planning". Eight percent agreed that "Ending a pregnancy with medication means the same thing as losing the pregnancy naturally" while five percent agreed with the statement: "Ending a pregnancy with a device means the same thing as losing the pregnancy naturally". Further analysis will examine which respondents are most likely to hold these understandings according to their age, parity and current contraceptive use.

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Lifetime risk of maternal near miss morbidity: A novel indicator of maternal health

Ursula Gazeley¹, Julio Romero Prieto¹, José Manuel Aburto^{1,2,3}, Antonino Polizzi^{2,4}, Georges Reniers¹, Veronique Filippi¹, ¹London School of Hygiene and Tropical Medicine, ²University of Oxford, ³University of Southern Denmark, ⁴International Max Planck Research School for Population, Health and Data Science, Rostock

Background: The lifetime risk of maternal death is the risk that a 15-year-old girl will die of a maternal cause in her reproductive lifetime. Its intuitive appeal means it is a widely used summary measure for advocacy and international comparisons of maternal health. But relative to mortality, women are at a higher risk of experiencing life-threatening maternal morbidity called “maternal near miss” events – complications so severe that women almost died. **Objective:** As maternal mortality continues to decline, stronger health indicators that include information on both fatal and non-fatal maternal outcomes are required. We propose a novel measure – the lifetime risk of maternal near miss – to estimate the risk a girl will experience at least one maternal near miss in her reproductive lifetime, accounting for survival from ages 15-49. **Data and methods:** We use estimates of fertility and survival from the World Population Prospects for Kenya in 2021 along with simulated data on the maternal near miss ratio to demonstrate the calculation of the lifetime risk of maternal near miss. This new indicator is urgently needed because existing measures of maternal morbidity prevalence (near miss ratio or rate) do not capture the cumulative risk over the reproductive life course. **Preliminary results:** We estimate that the lifetime risk of maternal near miss in Kenya is 1 in 37, compared to a lifetime risk of maternal death of 1 in 59. We advocate for the use of this indicator to compare trends in maternal near miss morbidity alongside trends in maternal mortality.

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Women at the crossroads: A qualitative study on induced abortion and violence in Ghana **Mercy Otsin - University of Education, Winneba-Ghana.**

Background: Legal abortions are available in Ghana if performed by registered and trained health professionals in approved facilities, in cases of rape, incest, serious foetal anomaly and risk to the woman's health. This notwithstanding, unsafe abortion is an important contributor to maternal morbidity in Ghana. Additionally, Ghanaian studies on abortions rarely focus on acts of violence perpetuated against women which results in unwanted pregnancies, compels them to seek abortions at unsafe places and only use the formal healthcare delivery system after experiencing an abortion related complication. **Research question:** What factors influenced women in deciding on an abortion and a method of termination. **Methodology:** Informed by phenomenology, semi-structured interviews were conducted with 10 women who had experience various forms of violence leading to an abortion. **Results:** Findings revealed that intimate partners were the main perpetrators of violence against women. The fear of being emotionally and verbally abused by health workers was also found to have made some participants use unsafe means of termination and only report at health facilities with a complication as some assumed this would elicit sympathy from the health workers. **Conclusion:** Women desiring terminations sometimes find themselves at a crossroad in their method choice due actual and perceived threat of violence by partners and health workers. The study recommends empowering women to enable them leave violent relationships and the re-training of health workers on respectful and empathetic client care practices.

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Postpartum care in Morocco: An assessment of its determinants and its relationship with postpartum morbidities

Asmaa Habib, Hafiz Khan, Caroline Lafarge - University of West London

Postpartum care (PPC) attendance are essential to prevent maternal mortality and morbidity. This study aimed to identify the determinants associated with PPC utilisation and postpartum morbidity (PPM) and determine the relationship between PPC and physical PPM in Morocco. A cross-sectional study was conducted with a nationally representative dataset of 5593 women in childbearing age who delivered between 2012 and 2018. A multivariate logistic regression was performed to measure the association of sociodemographic and obstetrical determinants with PPC utilisation and PPM. Early PPC (EPPC) before discharge from hospitalisation were provided to 62.6% of women. Within six weeks after delivery, 21.3% of women used later PPC (LPPC) and 28.3% reported PPM. Women's education (AOR=1.34, 95%CI:1.11-1.63), rich socioeconomic status (AOR=1.42, 95%CI:1.02-1.98), antenatal care (AOR=1.64, 95%CI:1.08-2.47), caesarean (AOR=2.50, 95%CI:1.89-3.31), postnatal care for babies (AOR=6.97, 95%CI:5.89-8.25) had a positive influence on PPC utilisation. Absence of

doctors during assisted delivery with midwives reduced LPPC (AOR=0.63, 95%CI:0.48-0.83). The risk of PPM decreased significantly with secondary and higher education level (AOR=0.71, 95%CI:0.54-0.93), antenatal care (AOR=0.30, 95%CI:0.14-0.65) whereas it increased with instrumental delivery (AOR=1.24, 95%CI:1.04-1.48) and morbidities during pregnancy (AOR=2.10, 95%CI:1.72-2.56). They were different relationships between PPC utilisation and PPM: likelihood of PPM decreased with EPPC (AOR=0.65, 95%CI:0.52-0.79) but increased with LPPC (AOR=1.76, 95%CI:1.46-2.13). Finally, receiving EPPC encouraged LPPC utilisation (AOR=1.36, 95%CI:1.08-1.71). PPC utilisation remained low, and PPM persisted. Both were marked by social health inequities. However, interventions are needed to increase PPC utilisation and prevent PPM by targeting women with low sociodemographic characteristics. More studies would be desirable to confirm causality relationships.

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Stratified reproduction: Legislations on and public funding for abortion and medically assisted reproduction in Italy and Japan

Mio Tamakoshi – WZB Berlin Social Science Center

This paper explores how different modes of regulating abortion and medically assisted reproduction (MAR) contribute to stratifying reproduction in Italy and Japan. Although abortion and MAR serve opposite outcomes, regulations in these two fields influence how states are involved in stratified reproduction by encouraging procreation of a certain group of population while discouraging that of others. On the one hand, while abortion is legal under a certain condition in both countries, de facto access to abortion is differentiated according to one's regional and socioeconomic position. On the other hand, both Italy and Japan have recently expanded access to MAR but have excluded certain groups from MAR services such as same-sex couples, single individuals and those at the later stage of reproductive age. The analysis on legal documents and public financing on abortion and MAR in both countries over the last two decades illustrate patterns of social selectivity for how the states imagine reproductive trajectories. By taking a comparative perspective on the two similar cases, both of which show strong family norms and are facing a lowest-low fertility rate, the study demonstrates how the states along with physician's organizations and religious authorities encourage procreation in a heterosexual couple context while restricting socioeconomically disadvantaged individuals from attaining the reproductive outcome they desire.

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5:30 - 7:00 Tuesday 12 September: Late fertility

Educational differences in ART: Disentangling unequal access, differential need and delay

Jenny Chanfreau and Alice Goisis - UCL

Parents of children conceived following assisted reproductive technology (ART) medical treatments tend to be older, more highly educated and have higher earnings than parents of naturally conceived children. However, given the educational gradient of fertility postponement and difficulties conceiving increasing with age, such socio-economic differences among parents cannot straightforwardly be interpreted as inequalities in treatment access. These patterns likely also reflect differences in need for treatment attributable to age at starting to try for a first child, but it is unclear from existing research to what extent. Interpretation is further complicated by the very experience of subfertility, seeking medical assistance and receiving treatment all taking time and thus increasing maternal age at birth following ART-conception. Using data from the Norwegian Population Register linked with the primary care Health Reimbursements Database and the Medical Birth Register, this paper investigates educational differences in primary care diagnoses associated with subfertility and referral for ART, and how these are linked to the probability and timing of having an ART birth. We ask whether having a diagnosis of subfertility differs by education, and to what extent this is explained by the woman's age. Preliminary results show that the probability of a woman having a subfertility diagnosis is positively associated with both level of education and with the woman's age. However, highly educated women's higher probability of having a subfertility diagnosis is not explained by their older age approaching their doctor about difficulties conceiving, instead the probability of diagnosis increases when controlling for age.

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Having a live birth following medically assisted reproduction: Does socio-economic status matter?

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Prior work has highlighted marked social disparities in births after Medically Assisted Reproduction (MAR) as socio-economically advantaged couples are, on average, considerably more likely to use MAR treatments to conceive. Recent research suggests multiple mechanisms – such as the (un)affordability of the MAR treatments and geographic proximity to infertility clinics – are likely to be involved in explaining this association, yet the extent to which these differences are due to barriers in accessing MAR or lower demands for MAR treatments amongst less socio-economically advantaged couples is still not fully understood. An aspect which has so far been overlooked in this emerging area of work is the fact that social disparities in MAR births could emerge not only before but also after accessing MAR treatments. For example, the live birth rate after MAR could be higher for more advantaged individuals who might be able to afford a higher number of treatments and to continue the treatments if the subsidized ones do not result in a live birth. In this paper, using data from Finnish administrative registers covering all childless women in the Finnish population in 1995 who underwent MAR treatments between 1995-2015, we explore for the first time the association between undergoing MAR treatments and having a live birth by socio-economic status. Preliminary results show large inequalities in the probability of having a live birth throughout the MAR process between more and less advantaged women. For example, amongst childless women who start MAR treatments, those with a lower than tertiary degree show a predicted probability of having a live birth of around 66% and those with a postgraduate degree of around 78%. The results suggest that a non-negligible portion of the social inequalities in MAR births could emerge throughout the MAR process.

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Involuntary childlessness: Distinguishing the biologically childless

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In the long-running debate about voluntary and involuntary childlessness, there has been little evidence about the biological component of involuntary childlessness. Some people do not want to have a child at any point in their life, others are "perpetual postponers" and end up childless although they had planned to become a parent, and a third group encounter infertility problems that prevent them from having a child (whom we call "biologically childless"). The Generation and Gender Surveys II include a question on whether respondents have ever experienced difficulties to conceive for at least one year. So far, we analysed this question in 4 countries (Austria, Czechia, Estonia, Denmark), with data for many more countries already available or becoming available this year. By focusing on women and men who are childless at the end of their reproductive lives, we quantify the proportion of biologically childless people in a (growing) number of countries where fertility is being delayed. At the macro level, first results suggest that infertility explains a larger proportion of childlessness (up to one third) in countries where the prevalence of childlessness is lower. Childless men less often report experiencing infertility (less than one fourth do). At the individual level, we suggest that people who join a couple later in life are more likely to remain biologically childless, with some variation by education level. In a context of delayed fertility, we expect a growing group of people to be biologically childless, making the study of this phenomenon urgent.

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Spatial and temporal variation of late fertility across European regions

Ingrid Setz, Marie-Caroline Compans and Éva Beaujouan – University of Vienna

Since the 1980s, Europe has witnessed a rise in births occurring from the maternal age of 35, but the pace and intensity of this phenomenon vary between countries. So far, research on late fertility has focused on cross-national differences or, more recently, on within-country heterogeneity by using cross-sectional designs. Sub-national fertility profiles appear to differ according to factors such as degree of urbanization, education level in the area, economic structure, and labour force participation. Along with the continuous expansion of higher education, regional economies, and labour markets are still undergoing many transformations, which may have implications for the trend towards (very) late fertility. This study analyses the temporal and spatial variation of late fertility in 281 European regions between 2002 and 2019 by employing (spatial) panel methods. Descriptive results suggest a distinct trend of increasing late fertility over time in all regions, with considerable heterogeneity in the magnitude of changes. In line with previous research, we also find a significant variation by

degree of urbanisation. In future steps, we will test the influence of a set of economic factors over time in explaining differences in late fertility prevalence across European regions.

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9:00 - 11:00 Wednesday 13 September: Conditions of SRH

Knowledge and attitudes toward sexuality and reproductive health education in primary schools in Malawi: a cross sectional study

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Introduction: Despite sex education being offered in primary schools in Malawi, pupils are less equipped with knowledge and skills to protect their sexual and reproductive health (SRH) and well-being. This study examines knowledge and level of awareness regarding SRH among pupils in Malawi, a setting where attitudes regarding sex education remain conservative. Methods: An exploratory cross-sectional study was conducted in Mangochi and Zomba districts from July to August 2019 targeting 1200 pupils aged 10-19 years in grades 5 to 8. Indices measuring knowledge and attitudes on sex education were computed from a list of variables. Multivariate logistic regression was employed to examine the determinants of SRH knowledge and attitudes. Results: Preliminary analysis reveals that overall, general knowledge on sex education was 89% while 72% of the pupils had comprehensive knowledge about HIV. Factors that are associated with pupils being less knowledgeable about sex education include younger age (aOR: 0.15, 0.02-0.92, $p < 0.005$); and having difficulty discussing issues regarding sex with mother (aOR: 0.17, 0.04-0.77, $p < 0.05$). However, being in higher grade was associated with increased knowledge (aOR 15.6, 3.05-90.7, $p < 0.001$). Discussion: Although there is wide coverage on sex education topics in schools in Malawi, its impact on behaviour is minimal as cultural practices moderate teaching, and adolescents solicit information mainly from peers and media which expose them to a range of sexual health misinformation. Conclusion: Low knowledge of some specific SRH issues may hinder safer sexual practices. There is an urgent need for appropriate awareness programmes targeting adolescents at an early stage.

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Life course reproductive dynamics associated with menopause in Ugandan women aged 40-49

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Background: Early menopausal onset can increase adverse health outcomes in later life; meanwhile, reproductive experiences before menopause may affect its timing. Framed by life course methodology, the study tested for independent and interdependent associations between reproductive history (contraception, age at first birth, parity, terminated pregnancy) and socioeconomic factors (education, wealth, rural-urban residence, cigarette use, marital status, age at first cohabitation) with the occurrence of early menopause. Methods: The study population was ever-married women aged 40-49 from the 2016 Demographic & Health Survey (N=2,748). Analytical methods involved probability- and age-adjusted multivariate logistic regression models and predictive margins. Results: Connections between reproductive and socioeconomic characteristics were key dynamics associated with menopause in aged 40-49. Contraception, parity, and ages at first birth and marriage were found to be independently associated with menopause in this age group. Evidence of interactions was found where no contraceptive use was associated with higher probabilities of menopause for first-time mothers aged 12-15 and for women with no education. Conclusions: Studying Ugandan women's reproductive histories highlighted the importance of regional knowledge about menopause. Though we hypothesized an additive risk chain as the life course model, the results pointed to risks clustering around contraception, suggesting that improving contraceptive use and women's education could increase menopausal age. Furthermore, the positive association between low parity and early menopause supports the biological mechanism of faster oocyte depletion; however, high-parity populations like Uganda tend to have a younger menopausal age than low-parity populations. Declining mortality in the demographic transition could explain these inverse associations.

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Violent insurrections and modern contraceptive use: Evidence from Mali
Orsola Torrasi - New York University Abu Dhabi and London School of Economics

This study examines the consequences of armed violence on sexual and reproductive health in Mali, a country where modern contraceptive use remains low and a violent insurrection has been raging since 2012. I combine information on modern contraception from the 2006 and 2018 Mali Demographic and Health Surveys with conflict event location data. Exploiting spatio-temporal variation in violence intensity in a difference-in-difference framework, I investigate whether and how exposure to violence influenced modern contraceptive use among both women and men. Results show that violence and instability significantly reduced progress in modern contraceptive use in the affected population – specifically, in condom use for men, in injectables and the pill for women. Conflict exposure was related to an increased probability of being(/having a partner) currently pregnant, but also of those pregnancies being unwanted, and overall to greater intention to use family planning in the future. Additional analyses suggest that, for women, part of the decline in contraceptive use was related to diminished knowledge about where to obtain contraception in conflict areas. For men, conflict exposure was simultaneously linked to a downward shift in fertility preferences and an upward shift in sexual activity, perhaps again indicating access issues and unmet needs for male-controlled contraception. Importantly, I find that conflict exposure severely undermined women’s reproductive autonomy: directly, by lowering their ability to negotiate condom use and refuse sex in their partnerships; indirectly, by fostering inequitable and reactionary attitudes towards contraceptive use among men. Ensuring access to safe and effective contraceptive methods remains a priority in humanitarian settings.

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Why do Black women have less gynecological monitoring? evidence from mixed methods research in France
Mireille Le Guen^{1,2}, Virginie Rozée¹, Elise de La Rochebrochard^{1,3} - ¹Ined, ²UCLouvain, ³Inserm

In this presentation, we aim to study the reasons why Black women in France, i.e., those from sub-Saharan Africa and the French overseas departments, have less gynecological follow-up (understood as not using a medical and reversible contraceptive method and not having had a PAP smear test within three years). To do this, we used both quantitative and qualitative data. The quantitative data are from the TeO2 survey (Ined-Insee) conducted in metropolitan France in 2019-2020 among women and men aged 18-59, which overrepresented people born in the French overseas departments and abroad, and their descendants. The qualitative data come from 22 semi-structured interviews conducted with Black women who responded to the quantitative survey and had no gynecological follow-up. We studied the reasons for the lower level of gynecological follow-up among Black women compared to women born in metropolitan France of French parents (called main population) from three perspectives: i) difficulties of access, ii) differentiated socialization to health and sexuality, and iii) the experience of multiples discriminations. Our results showed that, contrary to the public policies currently implemented, the lower level of gynecological follow-up of Black women in metropolitan France is less due to a lack of access to health services than to a lack of health literacy and to their socialization which constructs sexuality as a taboo.

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Understanding reproductive autonomy among heterosexual and LGBT couples in the Netherlands: A reproductive justice perspective
Billie de Haas - University of Groningen

Research on fertility often focuses on women and their reproductive autonomy. Although the need to involve men is increasingly being recognised, a knowledge and attention gap remains with regard to the importance of couple dynamics in reproductive decision-making processes. This paper aims to better understand reproductive autonomy as part of couples’ reproductive decision-making in the Netherlands, with specific attention to gender and other power dynamics, by comparing cisgender heterosexual and LGBT couples. A reproductive justice perspective (Loretta J. Ross, 2017) was applied to study couples’ perceived opportunities to exercise their right to have or not have a(nother) child under the conditions of one’s choosing, thereby taking into account the perceived power dynamics internal and external to the couple. Dyadic in-depth interviews were conducted with 21 couples: 11 identified as cisgender and heterosexual, and 10 as lesbian, homosexual, bisexual and/or transgender (LGBT). The interviews took 2 hours and 29 minutes on average, and they were audio and video recorded and transcribed verbatim. Among other things, the findings showed how not being able to conceive via

sexual intercourse strongly limits LGBT persons' reproductive autonomy because they are forced to consider options that are often more insecure, complex, time-consuming and expensive. The Dutch legislation further decreases options for LGBT couples, e.g. in finding a surrogate or assigning legal parents. Some LGBT persons experienced discomfort making their fertility desire public, and some experienced choice-related stress. As such, LGBT couples' fertility process could feel more vulnerable and less spontaneous compared to fertile heterosexual couples.

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Sexual and reproductive health in displacement – unpacking the politics of evidence, needs, and priorities
Rosanna Le Voir - London School of Economics and Political Science

This submission addresses the question of “How are sexual and reproductive health (SRH) needs in displacement constructed and (de)prioritised by international humanitarian actors?”. Connections between power, politics and knowledge production are well documented. Evidence can amplify specific issues, attracting increased funding and policy attention. Meanwhile, silence or gaps in knowledge production can render specific issues or groups invisible, with data exclusion as a form of inequality. Which needs are given attention and who defines those needs is not an apolitical process. This is especially true for SRH and displacement, where gendered and global north-south power hierarchies are embedded and inextricably linked to data collection, identification of needs, and priorities. Complex areas such as SRH can be reduced to a narrow humanitarian lens on prevention of pregnancies and gender-based violence, rather than a rights-based or reproductive justice approach. The methodology uses semi-structured interviews with employees of international organisations, donors or academic institutions working on SRH and displacement. I draw inspiration from Bacchi's (2009) “what's the problem represented to be” approach to unpack how data – or data gaps – link to problem representations and (de)prioritisation of SRH needs in displacement. Data are analysed using analytical memos and formal coding of transcripts. The paper contributes to literature on the social studies of quantification, and aims to speak to global policy actors, encouraging a more reflexive and critical approach to needs-based action on SRH in displacement. The BSPS presentation offers an insight into preliminary findings, with opportunity for feedback to inform and shape the study.

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