

## **Fertility and sexual and reproductive health**

**Strand organisers: Joe Strong (London School of Economics) and Selin Köksal (University of Essex)**

**Dynamics of contraception session organisers: Theresa Nutz and Nora Müller (GESIS - Leibniz Institute for the Social Sciences, Germany)**

**Early marriage and early fertility: Are they harmful and, if so, how harmful are they? Session organisers: Shireen Kanji (Brunel University London), Chris Darko (University of Birmingham) and Fiona Carmichael (University of Birmingham)**

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### **09:00 - 10:30 Tuesday 10 September: Fertility and SRH 1: Early marriage and early fertility**

**Child marriage in Nepal: norms and intersections with education, health and mental health  
Fiona Samuels - Wolfson Institute of Population Health, Queen Mary University of London**

Although there has been progress with girls marrying later and staying in school longer, child marriage persists and Nepal has some of the highest rates of child marriage in South Asia. While child marriage is often driven by poverty, norms around preferences for investing in boys' education vs girls', and relatedly, marrying daughters early to maintain girls' (purity) and the families' honour, are also critical drivers. Drawing on a decade of qualitative research, this paper explores changing patterns of child marriage in Nepal. It shows that despite girls staying longer in schools (supported by programmes offering incentives, e.g. cash), thereby also delaying child marriage, 'love' or 'elopement' marriages have reversed some of these gains. The paper also shows how marrying young - often to older men, though the spousal age-gap is declining - effects a girls' ability to negotiate timing and number of children. Again, this is influenced by norms around son preference and to continue to give birth irrespective of health consequences until he arrives. Not only does this take a physical toll, but the girl's mental health can be affected, exacerbated by being isolated from family (patrilocal residence is the norm in Nepal), with few friends, not going to school and looking after young children. The paper concludes with some positive outlier cases where e.g. girls have married early but continue their education and delay pregnancy. It also shows how technology/mobile phones can promote the wellbeing of girls married early by connecting them to maternal homes/families.

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**Intergenerational implications of women's early marriage in rural Nepal and India  
Akanksha A Marphatia - UCL Great Ormond Street Institute of Child Health & London School of Hygiene and Tropical Medicine, Alice M Reid - University of Cambridge, Jonathan CK Wells - UCL Great Ormond Street Institute of Child Health, Chittaranjan S Yajnik - Diabetes Unit, King Edwards Memorial Hospital Research Centre, et al**

This presentation will share findings from rural Nepal and India on the intergenerational cycle of disadvantage being perpetuated through early women's marriage. Using data on 17,000 women from lowland rural Nepal, we found that women who had married as adolescents were more likely to be lower educated and have poorer mental health. We also disentangled the independent association of women's early marriage and early reproduction with shorter stature. Early married women were more likely to give birth to pre-mature babies. Compared to boys, girls were disproportionately born into household with limited capacity to invest in them, indicating that gender inequality was already present at birth.

Our research in India, on 650 mother-child dyads found that children of early married women were more likely to have lower education and poorer nutritional status. Daughters of these early married women who were born pre-mature, and who had poor early physical growth and less education were also more likely marry early.

This presentation will also discuss why, despite greater knowledge of these adverse outcomes, legislation and

interventions, gendered norms around the roles and expectations of women in society have been slow to shift. Compared to the previous generation, women are marrying later today, but the timing of cohabitation and first intercourse are broadly similar, suggesting a shift in the 'meaning' of early marriage.

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### **13:30 - 15:00 Tuesday 10 September: Fertility and SRH 2: Fertility and birth**

#### **The distribution of reproduction during a fertility transition: Understanding the declining spread of parenthood in Brazil**

**Ewa Batyra - Centre for Demographic Studies, Ben Wilson - Stockholm University**

A fertility transition is defined broadly as the process of population change from high levels of childbearing to lower levels. Demographers have a rich understanding of the fertility transitions that have been observed in many contexts across the globe. Yet, we lack evidence to show whether long-run declines in fertility levels are accompanied by simultaneous changes in reproductive variability. This is an important gap because reproductive variability—the concentration and dispersion of childbearing—may help demographers to better explain fertility trends and predict population change. Here, we address this gap with an empirical case study of Brazil, which is a well-known and well-researched example of a fertility transition, with available microdata on fertility by education for cohorts of women born from 1910-70. We contribute new knowledge using multiple measures of reproductive variability to study how they change over time during an entire fertility transition, how they relate to measures of fertility quantum, and how this evidence varies by education. In general, reproductive variability declines across the Brazilian fertility transition—for measures of concentration and dispersion—although this is less evident when using a measure of dispersion that adjusts for levels of children ever born, and there is considerable heterogeneity by education. We find evidence that several measures of variability are predictive of fertility decline, highlighting a promising avenue for future research. Our findings also suggest that conclusions based on one measure of reproductive variability may need to be treated with caution.

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#### **Shadowing the Knowledge Society: Exploring the Impact of Rising Job Demands for learning on Fertility** **Ewa Jarosz, Chen Luo, Anna Matysiak - Interdisciplinary Centre for Labour Market and Family Dynamics (LabFam), University of Warsaw**

This study investigates the relationship between job demands for learning and fertility. Job demands for learning are pressures on employees to acquire new knowledge and skills. This relates to the pace and intensity of job changes, which correspond to the rate and level of learning required not only to perform effectively but also to adapt to adverse circumstances (Loon & Casimir, 2008). In today's knowledge-based society, upskilling has evolved from an optional strategy to an essential demand for many workers. However, this shift has been underexplored in family demography. Increased job demands often lead to greater workloads and extended working hours (Decius et al., 2023), potentially resulting in work-life conflicts and challenges to childbearing. Additionally, the stress associated with these demands may pose health risks (Höge & Hornung, 2015), thereby negatively affecting fertility plans. Conversely, the higher demand for learning could lead to improved earnings, enhanced future job satisfaction, and a reduced likelihood of emotional exhaustion, suggesting potential long-term positive effects on fertility (Korunka et al., 2015; Kwon et al., 2020). This study combines data from the National Educational Panel Study (NEPS) with objective measures of job demands for learning from the Occupational Information Network (O\*NET). It analyses how objective job demands for learning affect fertility, and whether decisions to pursue further education mediate this relationship. Through this approach, the study aims to extend fertility research by examining an emerging focus area of job characteristics.

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#### **Education and reproductive behavior: Exploring the role of genetic propensities**

**Selin Köksal - London School of Hygiene and Tropical Medicine, Nicola Barban - University of Bologna,**

**Elisabetta De Cao - University of Bologna, Marco Francesconi - University of Essex**

A substantial body of research has explored the link between education and fertility behaviour. However, the impact of genetic factors, which can shape both education and fertility, has been largely overlooked. Using data from the UK Biobank and leveraging a compulsory schooling age reform in 1972 as a natural experiment, we investigate the effect of education on fertility outcomes. Additionally, we assess whether this effect varies by genetic predisposition for educational attainment, measured by polygenic indices. Our findings indicate that an additional year of schooling delays the age of first childbirth by more than a year, primarily through reducing teenage fertility. The reform had been particularly effective on reducing teenage motherhood for the individuals with a lower genetic propensity for educational attainment. The direction of the relationship remains consistent when the analyses is restricted to sisters. Lastly, the education reform also delayed sexual debut without increasing contraception use during teenage years, suggesting a possible "incarceration effect" where remaining in school delays sexual activity without necessarily enhancing contraceptive knowledge or empowerment.

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**Assessing birth outcomes in the context of single motherhood 'by choice': A study of children conceived through Medically Assisted Reproduction**

**Alina Pelikh - University College London, Alice Goisis - University College London, Hanna Remes - University of Helsinki, Mine Kühn - University of Tilburg, Pekka Martikainen, University of Helsinki**

As the use of Medically Assisted Reproduction (MAR) to address infertility increases globally, understanding the health outcomes of children conceived through these techniques remains crucial. A growing subgroup within the MAR population is children born to single mothers by choice. However, limited data on this group has hindered our knowledge of their birth outcomes. Single women undergoing MAR may experience higher stress levels during conception and pregnancy due to societal stigma associated with single motherhood and the demands of fertility treatments, potentially impacting children's birth outcomes negatively. Conversely, women undergoing MAR without a partner often have advantageous characteristics, such as higher education and income levels, which could have a protective effect on birth outcomes. To investigate the birth outcomes of first children born to single mothers through MAR and understand the underlying mechanisms, we compared this group (n=2,763) with children born to single mothers through natural conception (NC; n=45,168), as well as children born to partnered mothers through NC (n=413,326) or MAR (n=38,693). Children conceived by single MAR mothers have, on average, a higher prevalence of adverse birth outcomes, such as low birth weight (LBW; 7.9%) and prematurity (9.4%), compared to children of single NC mothers (6.0% LBW, 6.7% premature) and children of partnered NC mothers (4.3% LBW, 5.5% premature). However, their birth outcomes are generally better than children of MAR partnered mothers (9.7% LBW, 11.9% premature). After accounting for differences in maternal socio-demographic and health characteristics, and multiplicity in a regression, differences between birth outcomes of single MAR mothers and partnered NC mothers fully attenuated, while single NC mothers and MAR partnered mothers had worse outcomes.

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**18:15 - 19:15 Tuesday 10 September: Fertility and SRH 3: Dynamics of contraception**

**Within-couple power dynamics, gender ideology and the distribution of fertility work: Evidence from Germany**

**Katrin Firl, Nora Müller & Theresa Nutz - GESIS - Leibniz-Institute for Social Sciences**

The ability to make informed decisions about fertility is a fundamental human and reproductive right, yet gendered expectations and biomedical constraints often influence these choices. Despite both partner's interest in preventing unwanted pregnancies, women shoulder the primary responsibility for contraception, a task that can involve high costs and time commitments – aptly termed 'fertility work.' This adds to the responsibilities like housework and childcare that women typically bear.

We propose a multidimensional index to metrically assess the balance between the benefits and drawbacks of various contraceptive methods. Using this index, we investigate whether factors related to the gendered division of labor – relative resources and gender ideology – can be associated with contraceptive choices and the amount of costs and risks related to fertility work. We hypothesize that women with greater resources (education and employment) seek to minimize costs and risks related to fertility work, while traditional gender ideologies lead to women shouldering a disproportionate share of fertility work. We analyze these associations by using data from wave 1 (2021) of the German Family Demography Panel Survey (FReDA).

Our study expands existing research on contraceptive choices and reproductive justice by examining the potential constraints on couples' contraceptive decisions arising from the interplay of within-couple decision-making processes and gendered expectations.

Our work sheds light on the intricate dynamics that shape fertility choices and the distribution of reproductive labor within heterosexual relationships. By understanding these factors, we can work towards a more equitable and informed approach to family planning, fostering greater reproductive autonomy for all.

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### **The Discontinuation, Switching, and Contraceptive Failure Patterns of Long-Acting Reversible Contraceptive Users in Kenya (2017-2022)**

**Midanna de Almada - London School of Economics**

Previous studies have highlighted concerns related to the provision and uptake of the IUD and implant (LARCs), including provider bias, a 'method first' approach, undermining patient choice, and refusal to remove these methods. However, these studies are mainly from the US and Europe. The number of LARC users is increasing yearly in Africa, yet little is known about user's experiences in the region. This paper aims to address knowledge gaps in understanding LARC user's experiences by using failure, discontinuation, and switching as proxies for satisfaction and user experience. This study applies event history analysis and life tables to Kenyan contraceptive calendar data to understand LARC users' behaviors and patterns compared to other contraceptive users. Results show that LARC typical-use failure is higher than reported in other studies. LARC users are less likely to switch and discontinue than other users, which may signal user satisfaction or barriers to removal as reported elsewhere. LARC early discontinuation due to a desire to become pregnant increases over time which may indicate a lack of knowledge related to the method's long-acting nature, supply constraints, or a need for improved contraceptive counseling. It also appears there may be method-specific differences in pregnancy outcomes following contraceptive failure depending on the method that failed. Having a deeper understanding of LARC users' experiences in this context can support person-centered contraceptive counseling, improve informed-choice, and ensure the healthcare system can meet user's needs.

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### **Contraceptive access in displacement: a conceptual framework and case study**

**Rosanna Le Voir - London School of Economics**

This submission addresses the question of "How does conflict-related displacement influence contraceptive access?" Access to contraception for displaced populations is both lifesaving and a right. This paper argues that displacement demands a separate analytical lens from other mobilities and crises contexts. I propose a new framework, based on established concepts and available evidence, to understand mechanisms that facilitate or constrain contraceptive access in displacement. I then use the case study of Syrians displaced to Türkiye, a population for whom data quality and availability is comparably better than other displacement settings, as a worked example to test the framework using empirical analysis of nationally representative, publicly available survey data. I analyse contraceptive use and reasons for non-use as a proxy for access among married women, optimising data from the Syrian sample of the 2018 Türkiye Demographic and Health Survey (n = 1,736) and the 2006 Syria Multiple Indicator Cluster Survey (n = 13,619). The results show that the most relevant dimensions of the framework that constrained access to displaced women's preferred methods of contraception were cognitive accessibility and perceived quality of care, specifically fear of side effects and other health concerns. A minority of women who were currently using contraception still faced barriers in accessing their preferred method, suggesting limits to contraceptive autonomy. This case study

offers theoretically transferable findings about data and evidence for other displacement settings. Notably, the present data landscape on the sexual and reproductive health of displaced populations does not adequately capture issues around contraceptive access.

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### **11:00 - 12:30 Wednesday 11 September: Fertility and SRH 4: Sexual and reproductive health**

**“No one really cares”: Understanding adolescent girls' experiences of menstrual pain in Nepal**  
**Melanie Channon - University of Bath, Rebecca Evans - University of Bath, Mahesh Puri - CREHPA, Abbie Jordan - University of Bath, et al**

Menstrual pain is a significant yet often overlooked challenge to the health and wellbeing of adolescent girls, particularly in low-resource settings where menstrual stigma compounds the issue. This study seeks to understand how girls experience and understand their pain, as well as the facilitators and barriers to healthcare seeking.

Drawing on qualitative data from focus group discussions conducted in late 2023 in two districts of Nepal, we explore the multifaceted experiences and perceptions of menstrual pain among adolescent girls using thematic analysis. The findings reveal themes related to the minimization and lack of care from others in response to menstrual pain. Participants described feeling dismissed or scolded by family members, teachers, and elders, which not only diminished their experiences but also discouraged seeking help or accessing medication.

Moreover, there is limited availability and use of medication for managing menstrual pain in rural areas. Girls reported relying on traditional healers due to practical constraints and lack of knowledge or misconceptions. Concerns about potential health impacts, including fears about fertility and future health, further influenced their reluctance to seek healthcare.

Descriptions of pain offered by participants underscored the severity and debilitating nature of menstrual pain, with vivid accounts likening it to feelings of dying or being unable to breathe. Such intense experiences were accompanied by fears about underlying health conditions and implications for future fertility.

In conclusion, this study highlights the substantial negative impact of menstrual pain on girls in Nepal and illustrates how little support there is for those experiencing such pain.

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**Changing Attitudes Towards Abortion in Turkiye: A Mixed-Methods Study Across Decades**  
**Ladin Toplu - Bogazici University**

Second Demographic Transition is generally associated with increased tolerance for controversial issues. Yet, in Turkiye, acceptance of abortion significantly decreased from 42.94% in 1990 to 11.24% in 2018 according to the World Values Survey, while tolerance towards other “controversial” topics like prostitution and divorce remained relatively stable. This mixed methods study aims to examine changes in abortion attitudes within the demographic and political context of Turkiye, focusing on the following research question: What are the demographic determinants of people’s attitudes towards abortion and why has people’s opinion about the justifiability of abortion changed dramatically, whereas their opinions about the justifiability of other “controversial” topics have not?

In the quantitative part of the study, the influence of political conservatism and religiosity on abortion attitudes is analyzed with Ordered Logistic Regression using data from the 2nd (N=1030) and 7th (N=2415) waves of the WVS. Preliminary results indicate that these demographic variables are significantly related with lower tolerance for abortion in both waves. The qualitative component includes semi-structured interviews with gynecologists who have over 25 years of experience, exploring the shift in gynecologists’ attitudes towards abortion and their experiences as professionals. Preliminary results of the interviews highlight the

impact of negative discourse created by political leaders and systemic barriers such as the performance-based payment system that appear to discourage abortion procedures, further emphasizing the political landscape which perpetuates negative attitudes towards abortion. Using a comparative approach, future quantitative analyses will further investigate the specific demographic determinants of this negative shift in abortion attitudes.

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#### **Normalisation of abortion in Britain - what would this look like in practice?**

**Rachel Scott - London School of Hygiene and Tropical Medicine, Maria Lewandowska (London School of Hygiene and Tropical Medicine), Rebecca Meiksin (London School of Hygiene and Tropical Medicine), Natasha Salaria (London School of Hygiene and Tropical Medicine), Patricia A. Lohr (British Pregnancy Advisory Service)**

Abortion is the most common gynaecological procedure provided by the National Health Service in Britain, and is very safe. Despite this, abortion is the only medical procedure subject to a criminal law. Considerable research to date has reflected on this 'exceptionalisation' of abortion'. Relatedly, authors in health, academic and activist sectors have made the case for 'normalising' abortion and the potential for this to improve access to and experience of abortion care by countering stigma and inequity. However, although normalisation is a term that is used frequently it is rarely explicitly defined. With respect to abortion, normalisation could mean different things to different stakeholders, for example patients, practitioners, policy makers and lawmakers. This paper aims to address some of these questions by attempting to conceptualise what normalisation of abortion might look like in practice, drawing on data from 48 semi-structured interviews with people with recent experience of abortion in England, Scotland and Wales, conducted in 2021 and 2022. We suggest that there are four key dimensions to normalisation of abortion: 1) its legal status; 2) its commonness; 3) its social acceptance; and 4) the way it is provided. We discuss the extent to which abortion in Britain might be considered 'normal' with respect to each of these dimensions.

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