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Under Cover: Sex Drive and Parenthood

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ABSTRACT
Sexual activity is key to human reproduction, and sexuality is a core element of (romantic) partnerships. Yet, the sexuality theme and its linkages to fertility and family dynamics are utterly under-researched in family-demography, likely due to a lack of both theoretical perspectives and suitable data. Our study sets out to address this research gap, conceptually and empirically. Leaning on Helen Fisher's (1998) concept on 'lust' and human reproduction, we theorize that humans may possess a latent 'sex drive' function, which systematically underlies their family formation trajectory via shaping human fertility desires, union formation trajectories, and sexual and reproductive behaviours. Next, we empirically test some of our hypotheses with data from the German Panel Analysis of Intimate Relationships and Family Dynamics (pairfam). Specifically, we will use measures on the timing of sexual debut and sexual-self perceptions to estimate latent 'sex drive' classes, and will then test whether latent 'sex drive' membership predicts the time to first parenthood over the life course.

INTRODUCTION AND BACKGROUND

Sexual intercourse is necessary for human reproduction (Wilcox et al., 1995). Sexual activity, or "sexual exposure", is hence a key proximate determinant of fertility (Bongaarts, 1978). Moreover, sexuality (i.e. sexual desire, sexual activity, sexual satisfaction) is a defining component of romantic/co-residential relationships— perhaps even *the* relational component, which distinguishes private, intimate relationships from public social life and relationships (Donnan & Magowan, 2020; Impett et al., 2014). In addition, sexual health and sexual well-being are key elements of adult health and well-being, across all ages of the lifespan (Heiman et al., 2011; Schmiedeberg et al., 2017; Smith et al., 1997; Starrs et al., 2018). Finally, sexuality seems closely linked to the production of gendered (family-) interactions and outcomes (Harris et al., 2022; van Anders et al., 2022; Vohs et al., 2004). Thus, sexuality is an essential ingredient in reproductive behaviours and outcomes, in family- and gender dynamics and in population health and healthy ageing.

Yet, astonishingly, in family- demography and sociology, there is little discussion on sexual behaviours and variation therein between social groups, across space or over time, nor, more importantly, on how such variation may be linked to variation in the core outcomes demographers study. Evidence from other disciplines, however, shows significant linkages

between sexuality and fertility, sexuality and family dynamics, and sexuality and population health. For instance, in the biomedical sciences, it is well known that variation in sexual intercourse, such as frequency and timing, is a causal factor affecting age-variation in conception rates (Konje & Ladipo, 2021; McDONALD et al., 2011; Stanford & Dunson, 2007). Moreover, psychological and sexuality research indicates that a mismatch in sexual desire between partners (or a mismatch between desired and experienced sexual activity in a partnership), also called sexual desire discrepancy, is a common occurrence in couples (Mark, 2015). Sexual desire and sexual desire discrepancy are both significant predictors of men's and women's relationship satisfaction and sexual satisfaction (Mark, 2012, 2015; Willoughby et al., 2014; Willoughby & Vitas, 2012).

Interestingly, sexual desire (also: sex drive/libido) is used as a key measurement for assessing future fertility in veterinary studies on other mammals (Chenoweth, 1981, 1993; Petherick, 2005). In this vein, anthropological studies on human reproduction have theorized, but not yet empirically tested, a significant relationship between sex drive and reproduction (H. Fisher, 2000; H. E. Fisher, 1998). Medical studies indicate that immunotherapy negatively affects both fertility/fecundability and sex drive in humans, further underscoring a potential link between sexual desire, fecundability, and reproductive outcomes—and the great potential of studying the connection between sex drive and systematic variation in human reproduction (Garutti et al., 2021), and populations health (Flynn et al., 2016). We theorize that humans possess a 'latent sex drive', which is likely shaped by a multitude of biological, social, environmental and cultural factors. While this function may vary over the life course, we propose that a baseline underlying 'sex drive' function develops and matures during late adolescence and early adulthood, as humans mature. Further, we theorize that membership in a latent class that combines higher levels of sex drive with earlier sexual initiation behaviours likely predicts higher fertility desires (number of children desired in lifetime), earlier co-residential union formation, and sooner transitions to first birth.

RESEARCH QUESTION AND HYPOTHESES

The aim of our study is twofold. First, we will test whether there is evidence for the existence of empirical 'latent sex drive' classes during young adulthood. Second, we will investigate whether class membership in late adolescence and young adulthood is predictive of the probability and timing of experiencing a first birth over the subsequent life course.

We hypothesize that membership in classes with more intense sex drive and earlier sexual expression/initiation will experience earlier first birth. We further hypothesize this link to be stronger among women than men.

DATA AND METHOD

The data for our analysis comes form the *German Panel Analysis of Intimate Relationships and Family Dynamics (pairfam)*. It follows over 12000 individuals, born in the early 1970s,

early 1980s, and early 1990s from 2008 to 2022 in yearly wave. The pairfam data contains a rich array of both retrospective and current measures on sexual histories, sexual perceptions, sexual desires, and sexual behaviors, as well as full fertility and relationship histories.

We will carry out two different sets of analyses. First, we will use latent class analysis to estimate latent classes based on measures on ages at first sexual behaviours (kissing, petting, intercourse), the desired number of sexual frequency, and sexual self-efficacy measures. Second, we will estimate either event history models to predict the timing of first birth as a function of the sexual history variables, and/or latent class membership in the "sex drive latent classes". We will stratify all analyses by gender to allow for different patterns to emerge between women and men.

EXPECTED FINDINGS

We hypothesize a) that different latent classes of "sex drive" exist, e.g. a class of "high desire", which combines early sexual initiation with high desired sexual frequency and perceived sexual efficacy. We further hypothesize that b) class membership predicts the timing of first birth; high sex drive is hypothesized to predict earlier transitions into parenthood.

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