MAX PLANCK INSTITUTE
FOR DEMOGRAPHIC RESEARCH

Konrad-Zuse-Strasse 1 · D-18057 Rostock · Germany · Tel +49 (0) 3 81 20 81 - 0 · Fax +49 (0) 3 81 20 81 - 202 · www.demogr.mpg.de

MPIDR Working Paper WP 2025-034 I November 2025
https://doi.org/10.4054/MPIDR-WP-2025-034

From Early to Fewer First Births: ADHD and Family Formation among Young Adults

Sanna Kailaheimo-Lönnqvist
Niina Metsä-Simola
Mikko Myrskylä I myrskyla@demogr.mpg.de

© **Copyright is held by the authors.**

Working papers of the Max Planck Institute for Demographic Research receive only limited review. Views or opinions expressed in working papers are attributable to the authors and do not necessarily reflect those of the Institute.

From Early to Fewer First Births: ADHD and Family Formation among Young Adults

Sanna Kailaheimo-Lönnqvist[1,2], Niina Metsä-Simola[1,2] & Mikko Myrskylä[1,2,3]

[1]University of Helsinki, Helsinki, Finland, [2]Max Planck – University of Helsinki Center for Social Inequalities in Population Health (MaxHel), Helsinki (Finland) and Rostock (Germany), [3]Max Planck Institute for Demographic Research, Rostock, Germany

Abstract

Background

Attention-deficit/hyperactivity disorder (ADHD) is common and linked to relationship difficulties. It may affect the likelihood and timing of parenthood, yet its implications for fertility remain unclear.

Methods

Using Finnish population registers, we followed 759,430 individuals born in 1982–1993 to examine how ADHD is associated with the likelihood and timing of a first birth among young adults. ADHD diagnoses were identified from healthcare and prescription records. Discrete-time event-history models were estimated separately for women and men. Interaction analyses assessed whether a partner's ADHD modified associations.

Results

In age- and cohort-adjusted models, ADHD was linked to lower odds of a first birth (men OR 0.92; women OR 0.90), but after adjusting for partnerships the association was reversed (men OR 1.07; women OR 1.09). At ages 18–23, ADHD was associated with a higher likelihood of having a first birth, whereas an opposite association was observed at ages at 24–30 and 31–38. Thus, ADHD was related to a higher likelihood of first birth at young ages and lower likelihood at older ages. Both partners having ADHD does not seem to intensify the association.

Conclusions

ADHD is associated with earlier entry into parenthood but a lower risk of first birth at later ages. The results highlight the importance of accounting for partnerships: before this adjustment, ADHD was negatively related to the likelihood of becoming a parent, whereas after adjusting for partnerships the association reversed. This underscores partnership

formation as a key pathway and suggests that supporting stable unions may help mitigate ADHD-related disparities in first births.

Keywords: first birth, child, family formation, ADHD, partnerships

Introduction

Investigating how attention-deficit/hyperactivity disorder (ADHD) is related to adulthood outcomes is societally relevant since ADHD is among the most common neurodevelopmental disorders, affecting an estimated 5–10% of school-aged children and 2–5% of adults (Ornoy & Kore, 2021). Neurodevelopmental disorder diagnoses, ADHD in particular, have become increasingly prevalent in recent decades. Prior research on ADHD has focused on various outcomes—such as treatment, life satisfaction, criminality, labour-market and educational attachment (Ostinelli et al., 2025; Turk et al., 2023; Carlander et al., 2024; Christiansen et al., 2021; Chen et al., 2023; French et al., 2024; Soler et al., 2023)—but surprisingly, its links to fertility have not yet been investigated.

ADHD diagnoses are more common among boys, who are also diagnosed earlier than girls (e.g., Cheng et al., 2022). Symptom presentation differs by gender: boys more often display hyperactivity, impulsivity and other externalising behaviours, whereas girls tend to show internalising symptoms such as anxiety and depression, as well as academic underachievement (Antoniou et al., 2021). Individuals with ADHD often experience greater difficulties in peer and social relationships, with some studies suggesting stronger impairments among women (Ros & Graziano, 2018; Kok et al., 2016). Individuals with ADHD are more likely than their

peers to engage in risk behaviours such as smoking, have a lower age at first intercourse, and experience teenage pregnancy (Soler et al., 2023; Meinzer et al., 2020), which suggests that ADHD may be related to earlier age at first birth and having a child outside the context of co-residential partnerships. Although ADHD has been linked to various aspects of social functioning, its relationship to childbearing remains largely underexplored. Together, previous research suggests that ADHD may influence not only whether individuals have children but also the timing of first birth.

Core ADHD-related challenges—such as difficulties with executive functioning, attention and impulse control—can lead to forgetfulness and disorganisation, which often strain partnerships and increase the risk of separation (Hankin, 2001; Robin & Payson, 2002). These challenges may also increase the likelihood of remaining unpartnered. Previous studies have examined ADHD in romantic relationships, documenting lower relationship satisfaction, more frequent conflict and higher risks of separation among individuals with ADHD compared to those without (Huynh-Hohnbaum & Benowitz, 2023; Wymbs et al., 2021; Katzman et al., 2017; Klein et al., 2012; Michielsen et al., 2013). Couples in which at least one partner has ADHD are also more likely to experience stress and depression than couples without ADHD (Ghahramanzadeh et al., 2021). This leads to a higher likelihood of union instability among individuals with ADHD, and such relationship instability may, in turn, reduce opportunities for planned childbearing and contribute to childlessness.

In this study, we extend previous research by examining how ADHD is related to the likelihood and timing of a first birth. We also assess the role of partnership status and a partner's ADHD diagnosis in shaping these associations. To our knowledge, we are the first to examine the link between ADHD and family formation.

Methods

Data

We use Finnish total population register data for cohorts born between 1982 and 1993 (371,563 women; 387,867 men). The sample is restricted to individuals born in Finland since we have complete linkage of education, healthcare, and sociodemographic data throughout the study period for these persons. The use of register data for this study was approved by the Ethics Committee of Statistics Finland (TK/2182/07.03.00/2024) and the Finnish Institute for Health and Welfare (THL/3141/6.02.00/2022). All methods were carried out in accordance with relevant guidelines and regulations. Informed consent is not required for register-based studies in Finland because participants are not contacted.

The main explanatory variable is ADHD, and it is measured using both diagnostic information from specialised healthcare registers and data on prescription medication purchases. The ADHD diagnostic information (ICD-10 codes, F90) is derived from the specialised healthcare registers and the medication information (ATC-codes, N06B) from the prescription register of Social Insurance Institution of Finland. All psychotropic medication is prescribed by clinical doctors, and all persons residing in Finland are entitled to reimbursement for medication expenses by the Social Insurance Institution of Finland, thus increasing the validity of our measure. The partner's disorders are measured in the same way as the index person's disorders. In the analysis, ADHD is treated as a time-invariant variable (by the age of 39) because diagnostic criteria require that symptoms were present already in childhood.

The outcome variable is whether an individual has a first birth by the age of 39. The first birth is measured by having the first child during a given year, coded as a time-varying dummy variable.

The control variables are year of birth, age, number of partners, own education, and current partnership status. All control variables are fully time-varying. Year of birth is a categorical variable and varies from 1982 to 1993. Age is a categorical variable and has values from 18 to 39. Own highest (achieved) education was categorised into basic, secondary (including vocational and general tracks), and tertiary education (including those with a bachelor's degree or higher). The current partnership status was categorised into having a partner without ADHD, having a partner with ADHD and not having a partner. Partnerships are defined as co-residential partnerships, combining both marriages and cohabitations. Number of partners was the highest partner order at each observation point.

Methods

We estimated discrete-time (logit) event-history models of first birth using person-year data with age as the time scale. We predict the time-varying binary variable 'birth of a first child' in time *t* by time-invariant ADHD status. We use lagging of covariates (year *t*-1) for all time-varying variables.

We fit separate models for men and women, estimating both pooled (18–38) and age-stratified (18–23, 24–30, 31–38) analyses. To assess mechanisms, we used stepwise models: M1 includes age and year of birth; M2 adds education; M3 adds current partnership status and number of partners. The results in the tables are presented as odds ratios (ORs).

In order to examine the timing in more detail, we conducted an interaction model between own ADHD and age (between ages 18–38). Finally, to explore how the presence of ADHD in one or both partners is associated with a first birth, we conducted age-stratified models (18–23, 24–

30, 31–38) and included an interaction term between own ADHD and the current partnership status (no partner, partner without ADHD, partner with ADHD). The results in the figures are presented as average marginal effects (AMEs).

Results

The descriptive results are reported at the end of the observation period, i.e., in 2020, when individuals were aged 27 to 38. Young adults with ADHD were less likely to have children, had lower levels of education, and were less often in partnerships (Table 1). ADHD was associated with a roughly 10 percentage-point higher prevalence of childlessness among both men and women, and with an age at first birth approximately two years younger compared to individuals without ADHD.

< Table 1 here >

Across ages 18–38, ADHD is associated with lower first-birth odds in models that adjust only for age and cohort (men M1 OR = 0.918, 95% CI 0.895–0.942; women M1 OR = 0.900, 95% CI 0.873–0.928). Adding education explains the negative association a little (men M2 OR = 0.941; women M2 OR = 0.921). However, after controlling for current partnership status and number of partners, the association reverses and becomes positive overall (men M3 OR = 1.071, 95% CI 1.044–1.098; women M3 OR = 1.089, 95% CI 1.059–1.120). This indicates that partnership dynamics largely account for the disadvantage among individuals with ADHD.

Age-stratified models show a clear pattern with age. At ages 18–23, ADHD is linked to higher first-birth odds in all models (men M3 OR = 1.324, 95% CI 1.243–1.411; women M3 OR = 1.369, 95% CI 1.308–1.433). At ages 24–30, the association is negative in all models for women (M3 OR = 0.928, 95% CI 0.882–0.976), whereas for men it changes from negative in M1 and M2 (OR = 0.82–0.85) to slightly positive (but not statistically significant) in M3 (OR

= 1.023, 95% CI 0.976–1.072). At ages 31–38, ADHD is associated with lower first-birth odds for both genders, with a stronger association among women (men M3 OR = 0.876, 95% CI 0.799–0.961; women M3 OR = 0.665, 95% CI 0.592–0.748). Taken together, our results suggest that ADHD is linked to a higher likelihood of first birth at young ages when partnerships are accounted for, but to reduced first-birth odds at later ages.

< Table 2 here >

To examine the magnitude of the association between ADHD and first birth by age, we used AMEs and conducted an interaction analysis between own ADHD and age (Figure 1). The results show elevated probabilities of having a first birth at younger ages, and reduced probabilities at later ages for men and women alike. In the age- and cohort-adjusted model (M1), ADHD is positively related to first birth in the late teens and early twenties, peaks around ages 20–22, and then declines, turning negative from the mid- to late twenties. The negative association is largest around ages 28–31, after which it attenuates towards zero in the mid- to late thirties.

In the fully adjusted model (M3), the shape of the age pattern is similar, but the magnitudes are somewhat reduced. Overall, ADHD is associated with earlier transitions into parenthood but lower first-birth probabilities at typical peak ages, a pattern that persists—though is less pronounced—after full adjustment.

< Figure 1 here >

< Figure 2 here >

AMEs from the fully adjusted interaction models (Figure 2: ADHD x partnership status) show that ADHD is associated with a higher annual probability of a first birth within partnerships at

ages 18–23 for both men and women (+2–3 percentage points), with similar magnitudes whether the partner has ADHD or not—suggesting that both partners having ADHD does not markedly strengthen the association. For these youngest age groups, individuals with ADHD have a slightly higher likelihood of first birth without a co-residential partner, especially women. At ages 24–30, the association within unions attenuates: for men the association is weak but positive, and for women slightly negative. By ages 31–38, ADHD is linked to lower first-birth probabilities across all partnership statuses for both genders (–0.5 to –1.5 percentage points). Taken together, ADHD is linked to elevated first-birth risks within unions in early adulthood, while the association fades in the mid-twenties and reverses at older ages, and both partners having ADHD does not seem to intensify the association.

We also conducted a robustness analysis by examining whether the results remained similar when ADHD was measured for all individuals by age 27. The results were largely unchanged, with only a slight strengthening of the association (Appendix, Table A1 and Figure A1).

Discussion

This study examined how ADHD is associated with the likelihood and timing of first births among young adults using Finnish total population register data. The results show that young adults with ADHD are less likely to have a first birth by age 38, but controlling for partnership status reverses this association. The finding is consistent with previous studies showing that ADHD is associated with interpersonal difficulties and relationship instability (Wymbs et al., 2021; Katzman et al., 2017) and underscores the role of partnerships as a key mechanism connecting ADHD to family formation outcomes.

Furthermore, although adults with ADHD were less likely to have children overall, those who become parents did so at a younger age than their peers without ADHD. This pattern indicates accelerated early family formation among those with ADHD, followed by a slowdown and lower overall first-birth rate. This finding of early childbearing aligns with research linking ADHD to impulsivity, a lower age at first intercourse and an increased likelihood of teenage pregnancy (Meinzer et al., 2020; Mikkelsen et al., 2017; Solar et al., 2023).

Interaction analyses provided little evidence that both partners having ADHD would substantially reduce the likelihood of first birth compared to couples in which only one partner is diagnosed. This contradicts previous evidence on other mental health indicators such as depression and more severe mental health conditions and childbearing (Kailaheimo-Lönnqvist et al., 2024, 2025). We also found that the youngest individuals (age 18–23) with ADHD were slightly more likely than non-diagnosed peers to have a child without a partner, but a similar association was not observed in older age groups. These results mirror findings from previous studies on mood and addiction-related disorders (Kailaheimo-Lönnqvist et al., 2025), suggesting that in some circumstances mental health disorders are linked with a higher likelihood of first birth outside the context of co-residential partnerships.

Robustness analyses confirmed the stability of these findings. Restricting ADHD measurement to diagnoses made by age 27 produced nearly identical results. Together, these analyses strengthen the conclusion that partnership formation and stability are key mediators of the relationship between ADHD and first births.

The strengths of this study include the use of comprehensive nationwide register data, measurement of ADHD based on healthcare diagnoses and medication records, and the ability

to link individual and partner characteristics. Nonetheless, several limitations should be acknowledged. ADHD is likely to be underdiagnosed, especially among women. However, the modest prevalence difference between women (1.7%) and men (2.1%) suggests that this issue is not likely to substantially bias our findings. While partnership status and number of partners were included, information on partnership quality or informal relationships such as living-apart-together unions was not available. Moreover, the analyses covered fertility outcomes only up to ages 27–38 and thus did not capture completed fertility. Future research should examine whether the associations observed here persist across the full reproductive life course once these cohorts reach older ages.

Overall, this study highlights partnership dynamics as a central mechanism through which ADHD influences family formation. The results show that young adults with ADHD are less likely to have children overall, but those who become parents do so at a younger age than their peers without ADHD. Supporting stable relationships and reproductive health among individuals with ADHD may help reduce fertility disparities. Understanding these dynamics is particularly relevant in light of the rising prevalence of ADHD.

Keypoints

- ADHD is associated with earlier entry into parenthood but a lower risk of first birth at later ages.
- This study highlights partnership dynamics as a central mechanism through which ADHD influences family formation.
- Supporting stable relationships and reproductive health among individuals with ADHD may help reduce fertility disparities.

Funding

Sanna Kailaheimo-Lönnqvist was supported by the Strategic Research Council (SRC), FLUX consortium, decision numbers 364374 and 364375, and Antti and Jenny Wihuri foundation. Niina Metsä-Simola was supported by the Research Council of Finland (grant #363724). Mikko Myrskylä was supported by the European Research Council under the European Union's Horizon 2020 research and innovation programme (grant agreement No 101019329); the SRC, FLUX consortium, decision numbers 364374 and 364375; by grants to the Max Planck – University of Helsinki Center from the Max Planck Society (5714240218); Jane and Aatos Erkko Foundation (210046); Faculty of Social Sciences at the University of Helsinki (77204227); the Cities of Helsinki, Vantaa and Espoo; and the European Union (ERC Synergy, BIOSFER, 101071773).

The views and opinions expressed in the article are, however, those of the authors only and do not necessarily reflect those of the European Union or the European Research Council. Neither the European Union nor the granting authority can be held responsible for them.

References

Antoniou, E., Rigas, N., Orovou, E., Papatrechas, A., & Sarella, A. (2021). ADHD symptoms in females of childhood, adolescent, reproductive and menopause period. *Materia Socio-Medica,* 33(2), 114.

Carlander, A., Rydell, M., Kataoka, H., Hildebrand Karlén, M., & Lindqvist Bagge, A. S. (2024). A remedy for crime? A systematic review on the effects of pharmacological ADHD treatment on criminal recidivism and rehabilitation in inmates with ADHD. *Brain and Behavior,* 14(11), e70120.

Chen, L., Mittendorfer-Rutz, E., Björkenstam, E., Rahman, S., Gustafsson, K., Kjeldgård, L., ... & Helgesson, M. (2024). Labour market integration among young adults diagnosed with attention-deficit/hyperactivity disorder (ADHD) at working age. *Psychological Medicine*, 54(1), 148-158.

Chen, M. H., Hsu, J. W., Huang, K. L., Bai, Y. M., Ko, N. Y., Su, T. P., ... & Chen, T. J. (2018). Sexually transmitted infection among adolescents and young adults with attention-deficit/hyperactivity disorder: a nationwide longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 57(1), 48-53.

Cheng, A., Illango, A., El-Kadi, A., Ma, H., Mitchell, N., Rajapakse, N., & Robb, C. (2022). Factors impacting gender diagnostic differences in ADHD: A review. *The Child Health Interdisciplinary Literature and Discovery Journal*, 1(1).

Christiansen, M. S., Labriola, M., Kirkeskov, L., & Lund, T. (2021). The impact of childhood diagnosed ADHD versus controls without ADHD diagnoses on later labour market attachment—a systematic review of longitudinal studies. *Child and Adolescent Psychiatry and Mental Health*, 15(1), 34.

Chudal, R., Joelsson, P., Gyllenberg, D., Lehti, V., Leivonen, S., Hinkka-Yli-Salomäki, S., ... & Sourander, A. (2015). Parental age and the risk of attention-deficit/hyperactivity disorder: a nationwide, population-based cohort study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(6), 487-494.

French, B., Nalbant, G., Wright, H., Sayal, K., Daley, D., Groom, M. J., ... & Hall, C. L. (2024). The impacts associated with having ADHD: an umbrella review. *Frontiers in Psychiatry*, 15, 1343314.

Ghahramanzadeh, M., Mashhadi, A., Shamloo, Z. S., & Kimiaee, S. A. (2021). Comparing emotional disturbances and quality of life in couples with attention-deficit and

hyperactivity disorder and ordinary couples. *Journal of Fundamentals of Mental Health*, 23(1).

Huynh-Hohnbaum, A. L. T., & Benowitz, S. M. (2022). Effects of adult ADHD on intimate partnerships. *Journal of Family Social Work*, 25(4-5), 169-184.

Kailaheimo-Lönnqvist, S., Moustgaard, H., Martikainen, P., & Myrskylä, M. (2024). Own depression, partner's depression, and childlessness: A nationwide register-based study. *Social Science & Medicine*, 361, 117356.

Kailaheimo-Lönnqvist, S., Nisén, J., Metsä-Simola, N., Martikainen, P., & Myrskylä, M. (2025). Different mental health disorders and childlessness: The importance of partnership status. *Max Planck Institute for Demographic Research Working Papers*.

Katzman, M. A., Bilkey, T. S., Chokka, P. R., Fallu, A., & Klassen, L. J. (2017). Adult ADHD and comorbid disorders: clinical implications of a dimensional approach. *BMC Psychiatry*, 17(1), 302.

Klein, R. G., Mannuzza, S., Olazagasti, M. A. R., Roizen, E., Hutchison, J. A., Lashua, E. C., & Castellanos, F. X. (2012). Clinical and functional outcome of childhood attention-deficit/hyperactivity disorder 33 years later. *Archives of General Psychiatry*, 69(12), 1295-1303.

Kok, F. M., Groen, Y., Fuermaier, A. B., & Tucha, O. (2016). Problematic peer functioning in girls with ADHD: A systematic literature review. *Plos One*, 11(11), e0165119.

Meinzer, M. C., LeMoine, K. A., Howard, A. L., Stehli, A., Arnold, L. E., Hechtman, L., ... & Chronis-Tuscano, A. (2020). Childhood ADHD and involvement in early pregnancy: mechanisms of risk. *Journal of Attention Disorders*, 24(14), 1955-1965.

Michielsen, M., Comijs, H. C., Aartsen, M. J., Semeijn, E. J., Beekman, A. T., Deeg, D. J., & Kooij, J. S. (2015). The relationships between ADHD and social functioning and

participation in older adults in a population-based study. *Journal of Attention Disorders*, 19(5), 368-379.

Ornoy, A., & Koren, G. (2021). The effects of drugs used for the treatment of attention deficit hyperactivity disorder (ADHD) on pregnancy outcome and breast-feeding: a critical review. *Current Neuropharmacology*, 19(11), 1794-1804.

Ostinelli, E. G., Schulze, M., Zangani, C., Farhat, L. C., Tomlinson, A., Del Giovane, C., ... & Cortese, S. (2025). Comparative efficacy and acceptability of pharmacological, psychological, and neurostimulatory interventions for ADHD in adults: a systematic review and component network meta-analysis. *The Lancet Psychiatry*, 12(1), 32-43.

Ros, R., & Graziano, P. A. (2018). Social functioning in children with or at risk for attention deficit/hyperactivity disorder: A meta-analytic review. *Journal of Clinical Child & Adolescent Psychology*, 47(2), 213-235.

Rucklidge, J. J., & Kaplan, B. J. (2000). Attributions and perceptions of childhood in women with ADHD symptomatology. *Journal of Clinical Psychology*, 56(6), 711-722.

Soler Artigas, M., Sánchez-Mora, C., Rovira, P., Vilar-Ribó, L., Ramos-Quiroga, J. A., & Ribasés, M. (2023). Mendelian randomization analysis for attention deficit/hyperactivity disorder: studying a broad range of exposures and outcomes. *International Journal of Epidemiology*, 52(2), 386-402.

Thapar, A., Cooper, M., Eyre, O., & Langley, K. (2013). Practitioner review: what have we learnt about the causes of ADHD?. *Journal of Child Psychology and Psychiatry*, 54(1), 3-16.

Tuerk, S., Korfmacher, A. K., Gerger, H., Van der Oord, S., & Christiansen, H. (2023). Interventions for ADHD in childhood and adolescence: A systematic umbrella review and meta-meta-analysis. *Clinical Psychology Review*, 102, 102271.

Wymbs, B. T., Canu, W. H., Sacchetti, G. M., & Ranson, L. M. (2021). Adult ADHD and romantic relationships: What we know and what we can do to help. *Journal of Marital and Family Therapy*, 47(3), 664-681.

Tables and figures

Table 1. Descriptive statistics by ADHD status and gender at the end of the observation period (Women N=371,563; Men N=387,867).

		Women (%)		Men (%)	
		No ADHD	ADHD	No ADHD	ADHD
ADHD			1.7		2.1
Child		57	50	44	36
Highest education					
	Basic	6	17	11	25
	Secondary	43	56	55	58
	Tertiary	51	27	34	17
Partnership					
	Partner, no ADHD	64	39	55	34
	Partner with ADHD	1	3	1	2
	No partner	35	57	44	64
		Mean (SD)		Mean (SD)	
Number of partners		1.0 (1.0)	0.8 (1.1)	0.8 (0.9)	0.6 (0.9)
Age at first birth		26.7 (4.5)	24.3 (4.5)	27.9 (4.3)	26.4 (4.4)
Number of children		1.2 (1.3)	1.0 (1.3)	0.8 (1.2)	0.7 (1.2)

Note: Min/Max for number of partners is 0 and 9 in all categories. Age at first birth varies from 16 to 39, and number of children from 0 to 9. Age is treated as a categorical variable in the models.

Table 2. ADHD and first birth. Odds ratios (95% confidence intervals) for the association between own ADHD and having a first birth from discrete-time event-history models by genders, shown for the pooled age range (18–38) and for age-stratified models (18–23, 24–30, 31–38).

	Men			Women		
	M1	M2	M3	M1	M2	M3
ADHD						
Age 18–38	0.918*** [0.895,0.942]	0.941*** [0.917,0.966]	1.071*** [1.044,1.098]	0.900*** [0.873,0.928]	0.921*** [0.893,0.950]	1.089*** [1.059,1.120]
Age 18–23	1.509*** [1.414,1.612]	1.267*** [1.187,1.352]	1.324*** [1.243,1.411]	1.688*** [1.611,1.768]	1.305*** [1.247,1.366]	1.369*** [1.308,1.433]
Age 24–30	0.820*** [0.782,0.861]	0.846*** [0.806,0.888]	1.023 [0.976,1.072]	0.691*** [0.657,0.727]	0.780*** [0.741,0.821]	0.928** [0.882,0.976]
Age 31–38	0.596*** [0.543,0.654]	0.696*** [0.634,0.763]	0.876** [0.799,0.961]	0.444*** [0.395,0.499]	0.574*** [0.511,0.645]	0.665*** [0.592,0.748]
Age dummy	X	X	X	X	X	X
Year of birth	X	X	X	X	X	X
Education		X	X		X	X
Current partnership status			X			X
Number of partners			X			X

*Notes: *p < 0.05, **p < 0.01, ***p < 0.001.*

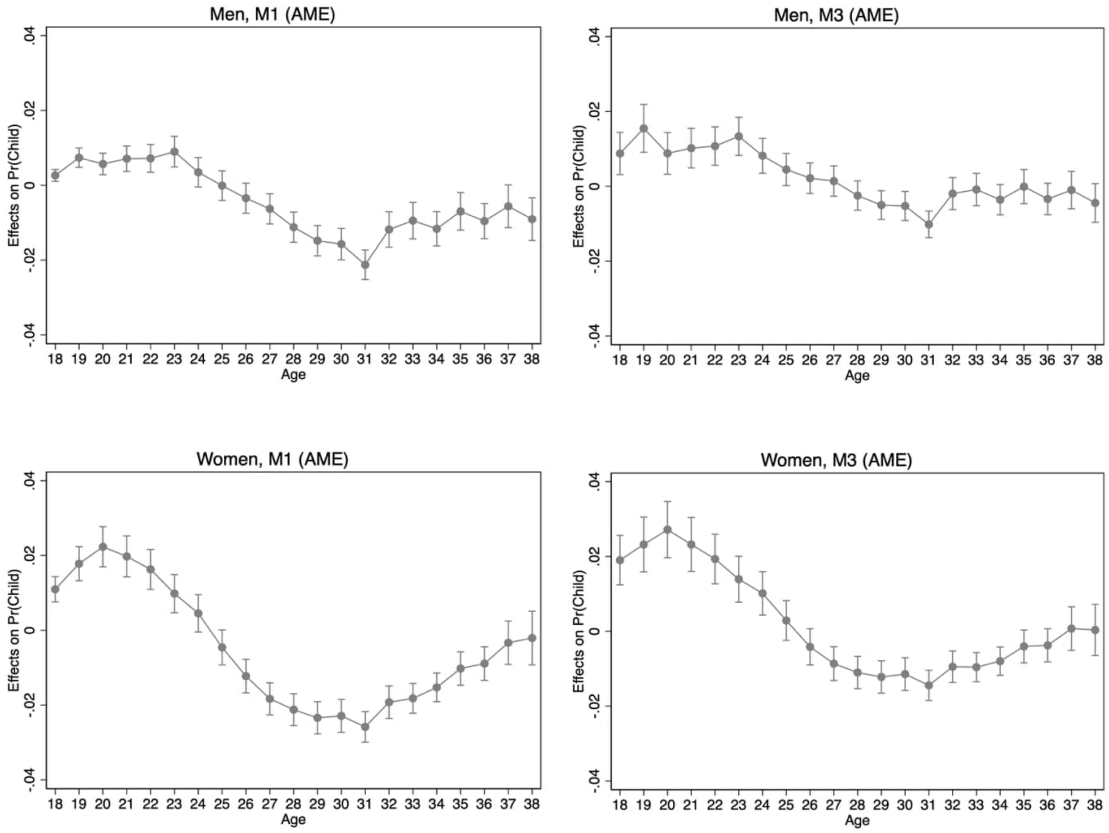

Figure 1. Average marginal effects (AMEs) of own ADHD on the probability of a first birth by age (interaction between own ADHD and age).

Notes: M1 controls for year of birth. M3 is the fully adjusted model (adding education, current partnership status, and number of partners). Points are AMEs with 95% confidence intervals.

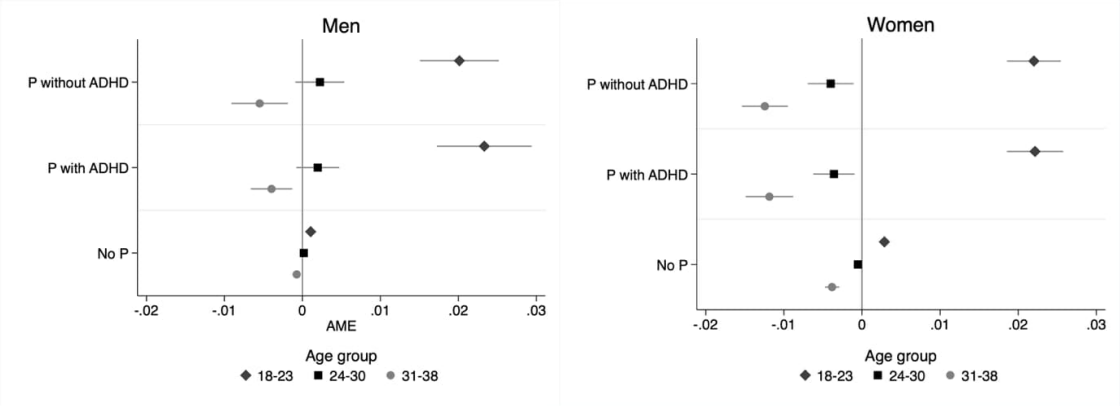

Figure 2. Average marginal effects (AMEs) of own ADHD on the probability of a first birth each year, by current partnership status and gender.

Notes: Points show AMEs from fully adjusted discrete-time logit interaction models including interaction between own ADHD status and the current partnership status, displayed separately for age groups (18–23, 24–30, 31–38). Models control for birth cohort, education, and number of partners; 95% confidence intervals shown. P = partner.

Appendix

Table A1. ADHD and the first birth (ages 18–38). ADHD measured by the age of 27. Odds ratios (95% confidence intervals) from discrete-time event-history models.

	Men			Women		
	M1	M2	M3	M1	M2	M3
ADHD	0.854*** [0.811,0.900]	0.872*** [0.828,0.918]	1.130*** [1.078,1.185]	0.833*** [0.790,0.878]	0.842*** [0.798,0.887]	1.043 [0.991,1.099]
Age	X	X	X	X	X	X
Year of birth	X	X	X	X	X	X
Education (ref. Basic)		X	X		X	X
Secondary		0.895*** [0.884,0.905]	0.738*** [0.730,0.746]		0.699*** [0.692,0.707]	0.644*** [0.637,0.651]
Tertiary		1.231*** [1.215,1.247]	0.877*** [0.866,0.887]		1.107*** [1.094,1.119]	0.947*** [0.936,0.958]
Current partnership status (ref. P without ADHD)						
No P			0.066*** [0.065,0.068]			0.127*** [0.125,0.130]
P with ADHD			0.874*** [0.839,0.909]			0.940*** [0.912,0.968]
Number of partners			1.056*** [1.048,1.063]			1.126*** [1.119,1.133]
N (person-years)	5,906,504	5,906,504	5,906,504	5,627,317	5,627,317	5,627,317

*Notes: *p < 0.05, **p < 0.01, ***p < 0.001. P = partner.*

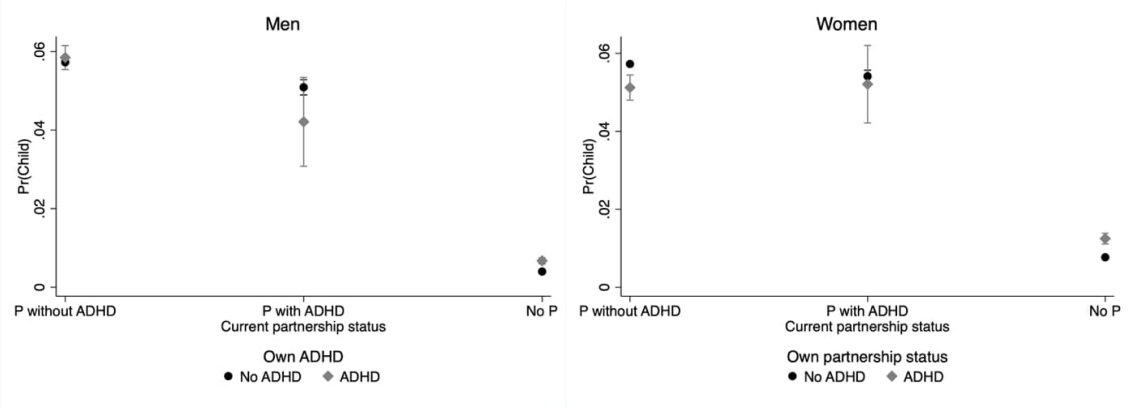

Figure A1. Interaction between own ADHD and partnership status on the first birth (discrete-time event-history model). ADHD measured by the age of 27. P= partner.