human reproduction **SUPPLEMENTARY DATA**

Supplementary Table SI **Characteristics of women with and without children.**

Characteristic	Had children N = 35 479		Had no children N = 7656	
	N	**%**	**N**	**%**
Education				
High school or less	6074	17.1	605	7.9
Some college	12 732	35.9	1921	25.1
Bachelor degree	8977	25.3	2309	30.2
Master's/PhD	7693	21.7	2821	36.8
Missing	3	0.0	0	–
Marital status at interview				
Never legally married	370	1.0	1717	22.4
Ever married/ cohabiting	35 106	99.0	5936	77.5
Currently married[a]	26 482	75.4	3975	67.0
Living as married[a]	1055	3.0	636	10.7
Widowed[a]	2084	5.9	268	4.5
Separated/divorced[a]	5485	15.6	1057	17.8
Missing	3	0.0	3	0.0
Household income at interview				
< $20 000	1535	4.3	341	4.5
$20 000–$49 999	7238	20.4	1604	21.0
$50 000–$99 999	13 852	39.0	3020	39.4
$100 000–$200 000	8938	25.2	1874	24.5
> $200 000	2478	7.0	550	7.2
Missing	1438	4.1	267	3.5
Homosexual	120	0.3	407	5.3
Missing	9	0.0	10	0.1
Tried for > 1 year without conceiving	3689	10.4	1327	17.3
Missing[b]	4636	13.1	810	10.6
Ever took fertility medications	2274	6.4	740	9.7
Missing	17	0.0	13	0.2
Prenatal exposure to DES[c]	731	2.1	291	3.8
Missing	5181	14.6	1257	16.4

[a]Percent values are calculated excluding women who reported never having been married.

[b]In total, 8% of the women did not take part in the follow-up in which this question was asked. Among those who did, 5.3 and 3.8% of those with and without children, respectively, did not answer the question.

[c]DES = diethylstilbestrol. Women reported whether mother had taken DES while pregnant with them. Options were: definitely yes, probably yes (categorized as yes) and definitely not, or probably not (categorized as no).

Supplementary Table SII Sibling-matched analysis of 802 pairs of full sisters discordant for childlessness. Odds ratio (OR) and 95% CI from conditional logistic regression.
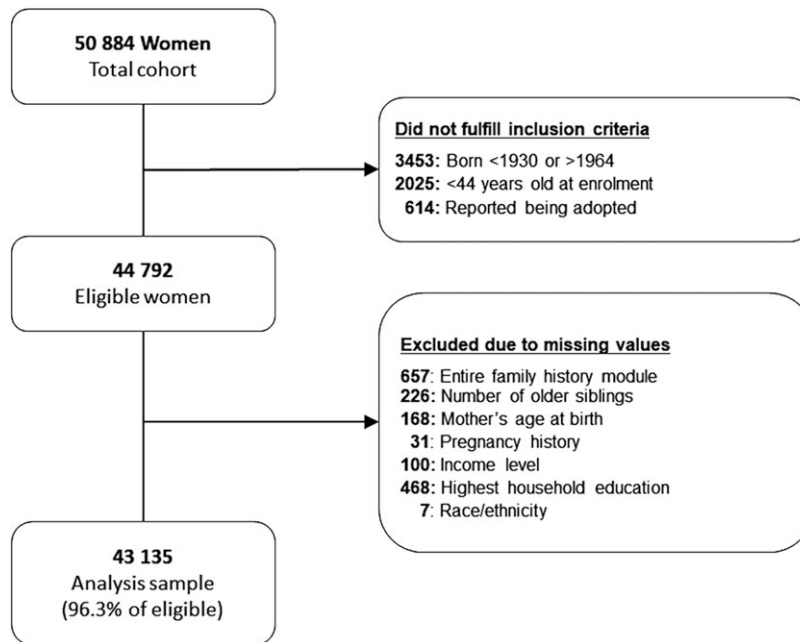
Mother's age at birth	OR	(95% CI)
<20	0.77	(0.40–1.51)
20–24	1.00	
25–29	1.18	(0.89–1.56)
30–34	1.36	(1.00–1.84)
35+	1.71	(1.20–2.43)

Test for trend (1 d.f.): $P = 0.0013$.

Supplementary Table SIII Sibling-matched analysis restricted to 471 pairs of sisters born ≤5 years apart. OR and 95% CI from conditional logistic regression.
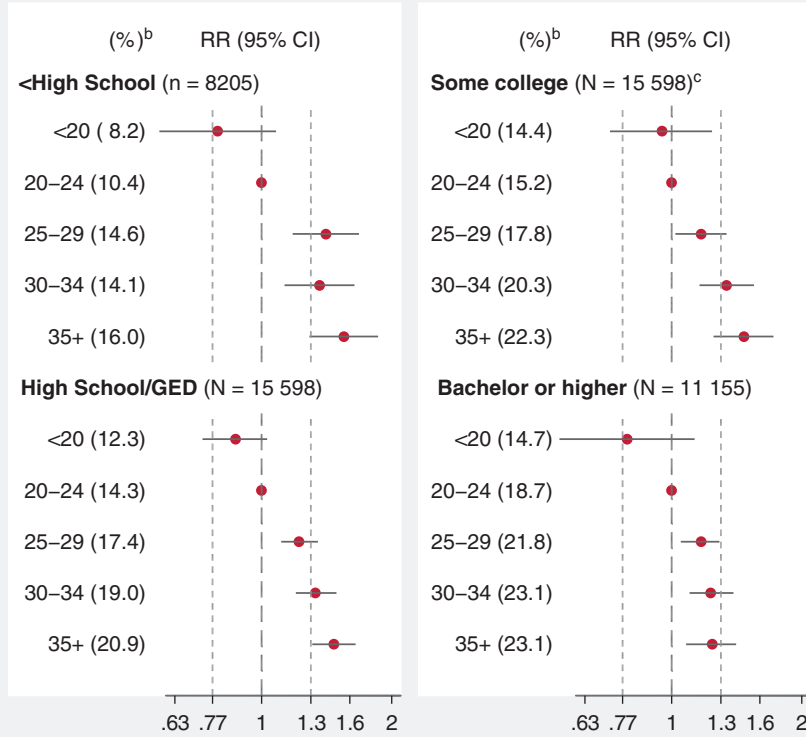
Mother's age at birth	OR	(95% CI)
<20	0.63	(0.26–1.52)
20–24	1.00	
25–29	1.56	(1.04–2.35)
30–34	1.89	(1.09–3.28)
35+	2.12	(0.98–4.57)

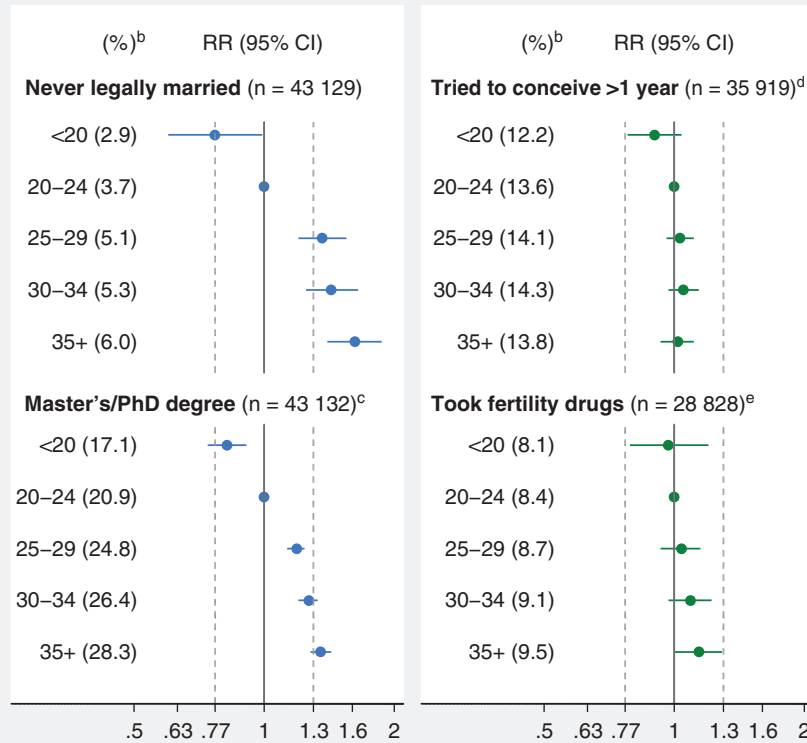Test for trend (1 d.f.): $P = 0.0163$.
d.f. = Degrees of freedom.

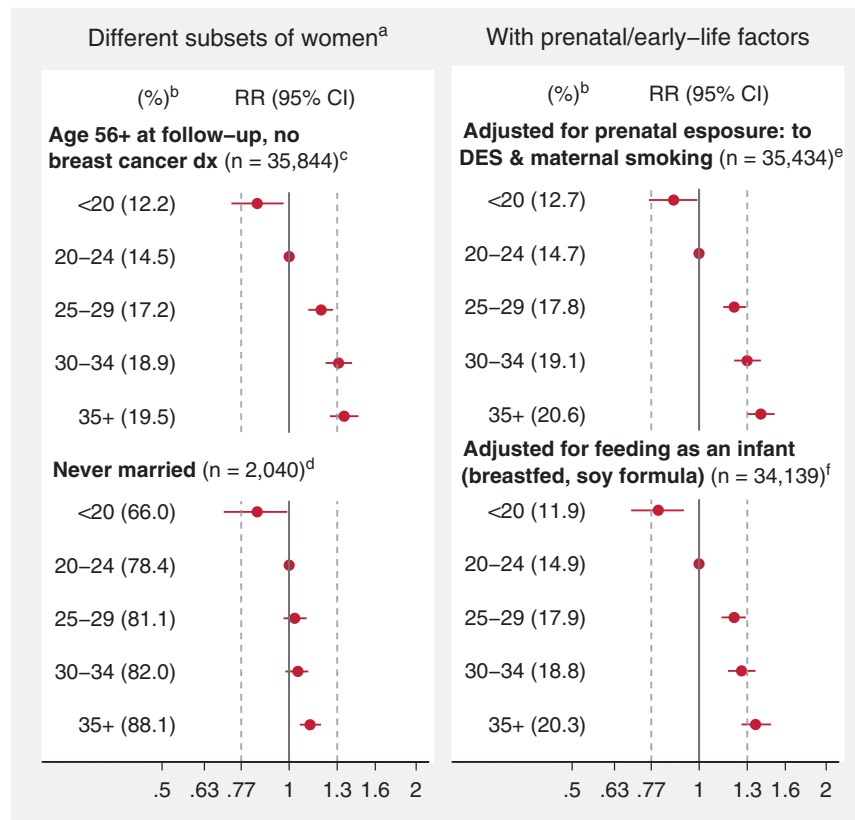**Supplementary Figure S1** Identification of analytic sample.

Supplementary Figure S2 Relative risk (RR) and 95% CI of childlessness as a function of mother's age at birth, by highest household education when the participant was 13. Vertical dashed lines at 0.77 and 1.3 are included to facilitate comparisons. [a]Models include: total number of siblings, birth order, race/ethnicity, income level growing up, and 5-year birth cohort. [b]Adjusted predictive marginal probabilities of childlessness (in %). [c]Includes associate degree.
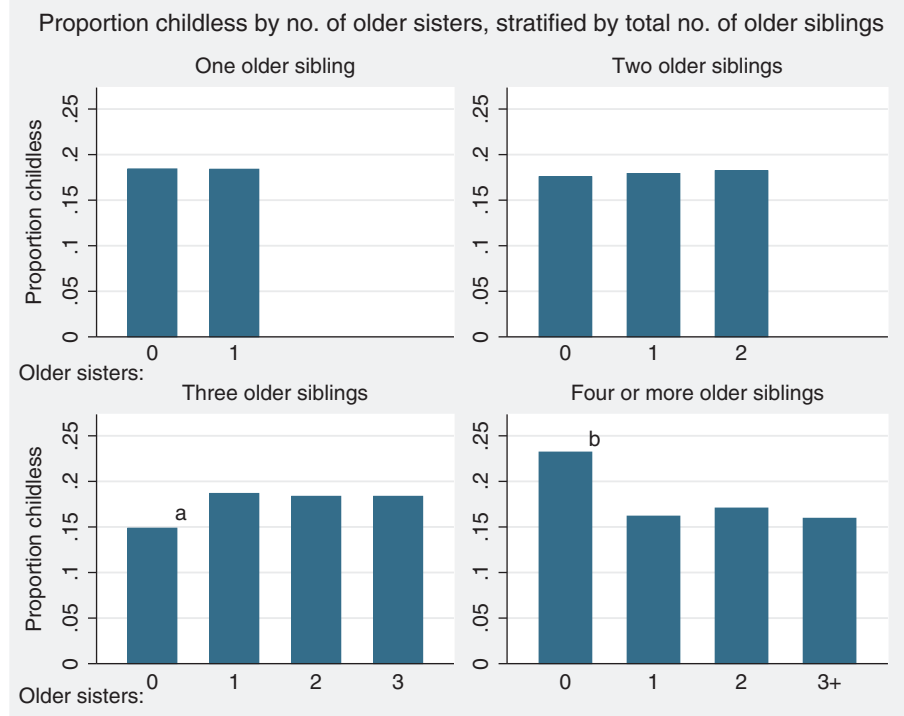
Association of maternal age at birth with predictors of childlessness[a]

(%)[b]	RR (95% CI)	(%)[b]	RR (95% CI)
Never legally married (n = 43 129)		**Tried to conceive >1 year** (n = 35 919)[d]	
<20 (2.9)		<20 (12.2)	
20–24 (3.7)		20–24 (13.6)	
25–29 (5.1)		25–29 (14.1)	
30–34 (5.3)		30–34 (14.3)	
35+ (6.0)		35+ (13.8)	
Master's/PhD degree (n = 43 132)[c]		**Took fertility drugs** (n = 28 828)[e]	
<20 (17.1)		<20 (8.1)	
20–24 (20.9)		20–24 (8.4)	
25–29 (24.8)		25–29 (8.7)	
30–34 (26.4)		30–34 (9.1)	
35+ (28.3)		35+ (9.5)	

.5   .63 .77   1   1.3 1.6   2   .5   .63 .77   1   1.3 1.6   2

Supplementary Figure S3 Association of mother's age at birth with selected predictors of childlessness in daughters. *Left panel*: RR (95% CI) of never having been legally married (top); RR (95% CI) of having obtained a postgraduate diploma (bottom). *Right panel*: RR (95% CI) of having ever tried to conceive without success for >1 year (top); RR (95% CI) of having ever taken fertility medications (bottom). Vertical dashed lines at 0.77 and 1.3 are included to facilitate comparisons. [a]Models include: total number of siblings, birth order, race/ethnicity, income level growing up, highest household education when participant was 13, and 5-year birth cohort. [b]Adjusted predictive marginal probabilities of the outcome (in %) [c]Logistic regression model. RR and 95% CI estimated from predictive marginal probabilities and standard errors. [d]Women who reported never having been married were excluded. The question ('Have you ever tried for more than one year to become pregnant and did not get pregnant?') was asked at the triennial follow-up. [e]Women born before 1945 and those who had never married were excluded from this analysis. The outcome is having used fertility medication on at least one occasion.

Supplementary Figure S4 Relative risk (RR) and 95% CI of childlessness as a function of mother's age at birth. *Left panel*: Analysis restricted to women with reproductive history updated at age 56 or later who remained free of breast cancer through age 55 (top); analysis restricted to women who reported never having been married (bottom). *Right panel*: Adjusted for prenatal exposure to DES and maternal smoking (top); adjusted for having been breastfed as an infant and having been fed soy formula (bottom). Vertical dashed lines at 0.77 and 1.3 are included to facilitate comparisons. [a]Models include: total number of siblings, birth order, race/ethnicity, income level growing up, highest household education when participant was 13, and 5-year birth cohort. [b]Adjusted predictive marginal probabilities of childlessness (in %). [c]6998 women were excluded because the most recent information on pregnancy referred to before age 56, and 293 because they had developed breast cancer (or *in situ* lobular lesions) before age 56. [d]Logistic regression model. RR and 95% CI estimated from predictive marginal probabilities and standard errors. [e]Model includes factors listed in 'a', plus prenatal exposure to DES (yes/no, see footnote 'c' to Supplementary Table SI) and maternal smoking (4 levels: definitely yes, probably yes, probably not, definitely not). Exposure to DES and smoking was missing for 15 and 4.9%, respectively. [f]Model includes factors listed in 'a', plus breastfeeding (missing for 7.6%) and having received soy formula (missing for 17.3%). Both factors were categorized as yes (definitely yes + probably yes) or no (definitely not + probably not).

Supplementary Figure S5 Proportion childless as a function of the number of older sisters, stratified by total number of older siblings (brothers + sisters), full siblings. [a]Category includes 111 women (out of 4429 with 3 older siblings), 18 of whom were childless. [b]Category includes 42 women (out of 5320 with 4+ older siblings), 11 of whom were childless.