Likes, Loves, and Little Ones: Social Media Use, Union Histories, and Fertility Intentions Among Young Adults in Europe

Michał Taracha, Paweł Strzelecki, Marta Kowalska

SGH Warsaw School of Economics

Abstract: This study examines the association between social media use and fertility intentions among adults aged 28–32, using data from the second round of Wave 1 of the Generations and Gender Survey (GGS) and GGS Harmonized Histories for Croatia, Estonia, and Norway. The analysis focuses on union-formation trajectories prior to age 28 and their association with childbearing and fertility intentions. Descriptive findings indicate that individuals spending 2–4 hours daily on social media had extensive union histories, low mean age at first union, long average union duration, and high average ideal family size. Meanwhile, those spending more than 4 hours formed fewer unions, had particularly short unions, fewer intended children, and the lowest share of unions ending up in marriage. Generalized ordered logistic regression models revealed several discrepancies between actual and intended fertility. Younger cohorts were more likely to intend to have children, despite older cohorts having a higher probability of already having children by age 28. High education and better financial well-being were associated with stronger fertility intentions, but also with fewer children in practice. Additionally, Norway exhibited higher early childbearing but comparatively low fertility intentions relative to Estonia and Croatia. Social media use was also differentially associated with actual and intended fertility across genders: Although women using social media for 1–2 and 2–4 hours daily were more likely than men to have had children, they were less likely to intend children in the low-use group. Interestingly, higher social media use appeared to be negatively associated primarily with men's fertility intentions.

Introduction

The year 2004 marked the beginning of the social media boom, with MySpace becoming the first social networking platform to reach one million users in 2004 and the launch of Facebook, today's most widely used social media platform. Since then, the number of social media users has grown rapidly, alongside the broader expansion of internet access (ITU, 2024). The global share of social media users increased from 13.4% in 2010 to 36.7% in 2017, and reached 61.7% by 2024 (Kemp, 2024; World Population Prospects, 2025). Social media has substantially reshaped how people communicate, form relationships, and interpret social reality. As individuals spend increasing amounts of time online, the norms, values, and lifestyles they encounter on these platforms play a growing role in shaping their attitudes and behaviors. These trends are especially pronounced among teenagers and younger adults, who remain the most active users of social media (Lenhart et al., 2010). A growing body of research suggests that frequent internet and social media use is also associated with reduced childbearing intentions (Weimin & Youru, 2024).

Literature review

Cultivation theory suggests that media exposure affects individuals' perceptions of social reality, leading them to interpret the world in ways that align with media portrayals (Gerbner, 1969). Evidence from rural Nepal, a context marked by rapid social change and fast expansion of media access, shows that higher exposure to mass media is associated with reduced childbearing intentions (Barber & Axinn, 2004).

As a newer and more interactive form of mediated communication, social media is an important space in which social realities are constructed and interpreted, and may therefore contribute to more negative fertility attitudes and behaviors. Research suggests that social media use can be associated with fertility through several interconnected pathways. First, easier access to information and communication

online can shape how people meet partners, learn about sexual health, and form expectations about family life. At the same time, social networking platforms may replace face-to-face interactions, potentially reducing opportunities for intimate relationships and, in turn, lowering the birth rate (Guldi & Herbst, 2017).

Some psychologists also argue that dating apps encourage short-term, less committed connections, and reduce potential partners to simplified profiles that overlook the more nuanced, experiential aspects of partnership compatibility, promoting assessment-oriented mindset and making long-term bonds harder to form (Finkel et al., 2012).

Moreover, social media may impact fertility through its association with mental well-being: while social media can enhance social support for some users, excessive use has been linked to weakened cultural and interpersonal trust, and the erosion of face-to-face relationships, which can contribute to emotional loneliness, anxiety, and depression (Kross et al., 2013; Lin et al., 2017).

Social media use may also be addictive, as scholars argue that social networking platforms leverage the brain's mesolimbic system by activating dopaminergic reward pathways associated with successful social interactions (Lewis et al., 2021; Torquet et al. 2018). These same mesolimbic dopaminergic circuits are naturally reconfigured during pregnancy and the postpartum period to heighten the rewarding value of infant cues, thereby motivating maternal caregiving and strengthening the mother-infant bond (Day & Shea, 2025; Rincón-Cortés & Grace, 2020).

At the same time, the association between social media and fertility attitudes and behaviours seem to differ between men and women. Some studies focus specifically on female fertility intentions. In their analysis based on the 2017 Chinese General Social Survey, Liu et al. (2021) found that the more frequently women use the internet, the lower their fertility intentions, and the less they agree with traditional male-breadwinner family model. Based on a sample of 607 young Chinese women, He et al. (2024) showed that frequent social media use increases fertility-related anxiety among married women.

Other studies compared both genders. Weimin and Youru (2024) analysed the role of individual- and family-oriented fertility motivations in the association between internet use and fertility intentions among Chinese aged 18–49. They showed that frequent internet use significantly reduces family-oriented fertility motivation among both men and women, though more strongly among women. On the other hand, internet use was also found to increase individual-oriented fertility motivation among men, with no comparable effect observed for women (Weimin & Youru, 2024). Yao et al. (2025), using an online survey of WeChat users of both genders, showed that exposure to negative fertility-related content reduces childbearing intentions, with the particularly pronounced effects among men. In the same study, the association between negative exposure and fertility anxiety was also stronger for men (Yao et al., 2025). Other literature examining gender differences highlights how social media serves as a space for expressing fertility-related emotions. Adair et al. (2014) found that women were far more likely than men to use child-related hashtags on Twitter, and that such posts tended to be more positive (52.3%) than negative (15.2%).

Importantly, existing research has rarely examined how social media use relates not only to fertility intentions but also to actual fertility outcomes, or how these associations differ between men and women. Furthermore, few studies integrate retrospective union-formation histories when assessing the relationship between social media use and fertility, and mostly rely on single-country or cross-sectional data.

This study investigates the association between social media use and both fertility intentions and realized fertility among adults aged 28–32, using data from the second round of Wave 1 of the Generations and Gender Survey (GGS) and GGS Harmonized Histories for Croatia, Estonia, and Norway. In particular, we focus on union-formation trajectories prior to age 28 and their association with childbearing and fertility intentions.

Data and methods

We use data from the second round of Wave 1 of the Generations and Gender Survey.[1] The key survey item was formulated as follows: *On a typical day, about how many hours do you spend on social media? With social media we mean e.g. Instagram, Twitter, Facebook, YouTube or Tinder?* (GGS, 2023). Additionally, we use the Harmonized Histories database to examine respondents' union histories and fertility outcomes in a longitudinal perspective.

Descriptive statistics for Croatia, Estonia, Norway and the United Kingdom (the countries in which the question concerning social media use was included) indicate a strong age gradient in daily social media use (Figure 1). Focusing on young and prime-age adults (aged 25–34), we also find that the share of respondents with at least one child is consistently lower among those who spend more than two hours per day on social media (Figure 2). These differences are statistically significant.

Figure 1. Average number of hours spent daily on social media by age, selected GGS countries

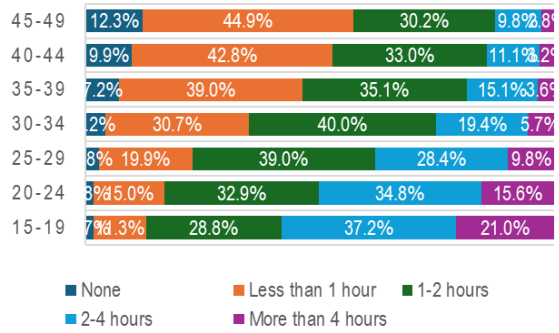
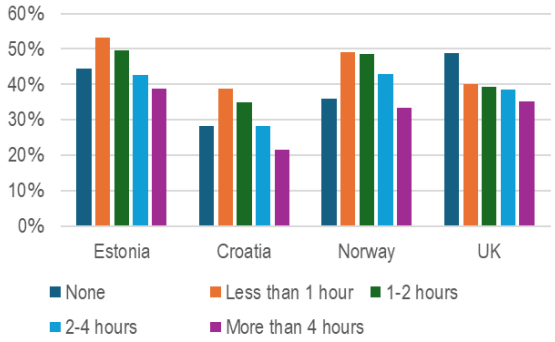


Figure 2. Share of respondents aged 25–34 with at least one child, by daily time spent on social media



Source: Authors' calculations based on GGS data.

Further descriptive analyses were carried out for the three countries for which Harmonized Histories data are available (Croatia, Estonia, and Norway). Results show that individuals spending 2–4 hours daily on social media had the highest average number of unions formed by the age of 28 (0.87) (next to the group spending 1–2 hours online), the lowest mean age at first union (22.20), the longest average union duration (as measured before the age of 28; assigning a value of zero to respondents who did not form a union) (2.77 years), and the highest average ideal family size (general: 1.70; personal: 1.82). In contrast, those spending more than 4 hours on social media daily formed fewer unions (0.82 on average), had particularly short unions (2.14), fewer intended children (1.40), and the lowest share of unions lasting for over a year ending up in marriage (34.2%). Women reported heavy social media use (more than 2 hours per day) more frequently than men (32.3% vs. 19.2%), and were less likely to report using social media for less than one hour per day (23.9% vs. 42.2%).

To reduce the risk of spurious associations and to explore potential causal mechanisms linking social media use and fertility outcomes, we estimate generalized ordered logistic regression models including key determinants of fertility intentions and first and higher-order childbearing. Preliminary results are presented in the next section. In future work, we plan to apply sequence analysis (using the Needleman–Wunsch algorithm) with Harmonized Histories data to compare partnership trajectories of younger adults across different levels of social media use (avoiders, moderate users, and heavy users).

Results

Two generalized ordered logistic regression models were estimated for respondents aged 28–32. The first model explains the actual number of children born before age 28, while the second predicts fertility intentions. In addition to standard fertility determinants, several variables (such as average union length) were constructed using panel data from the Harmonized Histories database. The combination of

[1] This paper uses data from the Generations and Gender Programme (www.ggp-i.org). The Generations and Gender Programme has received funding from the European Commission, its Consortium Board Members, and National Funding Bodies, which are gratefully acknowledged.

information on social media use and union-formation trajectories was available for Croatia, Estonia, and Norway.

Table 1 (in Annex) presents the results from a generalized ordered logistic regression model in which the categorical dependent variable captured the number of children respondents had before age 28 (0; 1; 2+). Respondents aged 28–32 were more likely to have had a child by age 28 if they were older within the cohort, more religious, had formed longer-lasting unions before age 28, had primary or secondary education (compared to tertiary), reported lower subjective financial well-being (as expressed with the difficulty to make ends meet financially), and resided in Estonia or Norway rather than Croatia.

Interaction effects between sex and social media use revealed that women were significantly more likely than men to have a child by age 28 among those using social media for 1–2 hours and 2–4 hours daily (ORs = 2.148 and 2.024, respectively). Overall, by age 28, women had a higher likelihood of having children than men (OR = 1.939).

Among women who already had at least one child, those spending 2–4 hours on social media daily were more likely to have had two or more children compared to women spending 1–2 hours or more than 4 hours (ORs = 2.283 and 2.526, respectively). However, similar patterns were not found when comparing women with at least one child to women without children.

For men, spending 2–4 hours on social media daily was marginally associated with a higher likelihood of having two or more children compared to spending 1–2 hours (OR = 2.294). However, as with women, no corresponding association was observed when comparing men with and without children.

Table 2 (in Annex) reports the results of a second generalized ordered logistic regression model, where the dependent variable captured fertility intentions (intending to have children; unsure; not intending to have children). Respondents aged 28–32 were more likely to intend to have (additional) children if they were younger, more religious, had fewer children already, held tertiary education, reported better health and financial well-being, and resided in Estonia compared to Croatia and Norway.

Gender differences emerged in relation to social media use. Among those spending less than one hour on social media daily, women were less likely than men to intend (additional) children (OR = 0.623). In the groups spending more time on social media, this relationship shifted, with women becoming gradually somewhat more likely than men to intend any (additional) children; however, these differences were not statistically significant.

Among men, those using social media for 1–2 hours daily showed a higher likelihood of intending (additional) children compared to those using social media for 2–4 hours or more than 4 hours (ORs = 1.568 and 1.998, respectively). For women, the largest variation in fertility intentions occurred between those spending less than one hour versus 1–2 hours on social media, with the latter group being more likely to intend any (additional) children (OR = 1.303), though this association was borderline significant. Overall, higher social media use appeared to be negatively associated primarily with men's fertility intentions. The mechanisms underlying this association may relate to such factors as lifestyle preferences, personality differences, variation in exposure to social norms, or previous partnership experiences (including union formation and dissolution), nevertheless, further research is required to clarify causal pathways.

Comparing results across the two models suggests notable discrepancies between fertility intentions and early childbearing among young adults. Younger cohorts were more likely to intend to have children, despite older cohorts having a higher probability of already having children by age 28. Higher education was associated with stronger fertility intentions, but lower-educated respondents had more children by age 28. Similarly, those with better financial well-being expressed stronger intentions to have children but had fewer children in practice. Additionally, Norway exhibited higher early childbearing but comparatively low fertility intentions relative to Estonia and Croatia.

Finally, although women using social media for 1–2 and 2–4 hours daily were more likely than men to have had children by age 28, they were less likely than men to intend (additional) children in the lowest-use group. This gender divergence among moderate social media users highlights a discrepancy between realized fertility and fertility intentions that warrants further investigation.

Annex

Table 1. Generalized ordered logistic regression explaining the total number of children of respondents aged 28–32. Only children born before age 28 are included. Odds ratios displayed.

	Threshold: 1+ vs. 0	Threshold: 2+ vs. 1–0
Age	1.032	0.884
	(0.060)	(0.075)
Education (ref.: primary or lower secondary)		
upper and post-secondary	0.678	0.543*
	(0.216)	(0.202)
tertiary	0.304***	0.160***
	(0.097)	(0.062)
Sex (1 = woman)	1.939***	1.878***
	(0.303)	(0.449)
Social media use (ref.: 1–2 hours)		
0 hours	0.981	0.244
	(0.459)	(0.268)
<1 hour	1.211	1.264
	(0.205)	(0.335)
2–4 hours	1.176	2.136***
	(0.213)	(0.526)
>4 hours	0.870	0.814
	(0.262)	(0.367)
Average length of union (0 if none formed)	1.482***	1.486***
	(0.038)	(0.054)
Subjective financial wellbeing	0.801***	0.750***
	(0.047)	(0.066)
ADL (1 = any limitations)	0.836	1.183
	(0.131)	(0.258)
Religiosity	1.071***	1.029
	(0.028)	(0.039)
Country (ref.: Estonia)		
Croatia	0.616***	0.667
	(0.126)	(0.201)
Norway	0.974	1.020
	(0.159)	(0.246)
Constant	0.119	3.824
	(0.214)	(9.985)
Observations	1,566	
McFadden's R^2	0.2290	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Authors' calculations based on GGS data.

Table 2. Generalized ordered logistic regression explaining respondents' intention to have (more) children – supposing respondents will not have children in the next three years. Odds ratios displayed.

	Threshold: Unsure/Yes vs. No	Threshold: Yes vs. Unsure/No
Age	0.846***	0.824***
	(0.049)	(0.041)
Education (ref.: primary or lower secondary)		
upper and post-secondary	1.760*	1.620*
	(0.529)	(0.472)
tertiary	2.721***	2.435***
	(0.823)	(0.705)
Sex (1 = woman)	0.727	0.845
	(0.166)	(0.159)
Social media use (ref.: 1–2 hours)		
0 hours	0.470*	0.420**
	(0.197)	(0.155)
<1 hour	0.829	1.042
	(0.210)	(0.219)
2–4 hours	0.547*	0.665
	(0.178)	(0.189)
>4 hours	0.470	0.521
	(0.236)	(0.234)
Sex (1 = woman) × Social media use (ref.: 1–2 hours)		
Sex × Social media: 0 hours	1.571	1.821
	(1.288)	(1.346)
Sex × Social media: <1 hour	0.919	0.737
	(0.315)	(0.212)
Sex × Social media: 2–4 hours	2.071*	1.542
	(0.82)	(0.529)
Sex × Social media: >4 hours	1.402	1.965
	(0.833)	(1.048)
Number of children by 28 y/o	0.362***	0.367***
	(0.035)	(0.037)
Subjective financial wellbeing	1.027	1.073
	(0.058)	(0.053)
ADL (1 = any limitations)	0.793	0.760**
	(0.119)	(0.100)
Religiosity	1.189***	1.137***
	(0.034)	(0.026)
Country (ref.: Estonia)		
Croatia	0.953	0.540***
	(0.189)	(0.090)
Norway	0.771	0.536***
	(0.125)	(0.077)
Constant	358.23***	330.69***
	(644.56)	(505.06)
Observations	1,444	
McFadden's R^2	0.1155	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Authors' calculations based on GGS data.

References

Adair, L. E., Brase, G. L., Akao, K., & Jantsch, M. (2014). #babyfever: Social and Media Influences on Fertility Desires. *Personality and Individual Differences*, 71(1), 135–139. https://doi.org/10.1016/j.paid.2014.07.026

Barber, J. S., & Axinn, W. G. (2004). New Ideas and Fertility Limitation: The Role of Mass Media. *Journal of Marriage and Family*, 66(5), 1180–1200. https://doi.org/10.1111/j.0022-2445.2004.00086.x

Day, K. R., & Shea, S. D. (2025). Dopamine Dynamics Underlying Maternal Motivation and Reward. *Neuroscience Research*, 218, 104928. https://doi.org/10.1016/j.neures.2025.104928

Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online Dating: A Critical Analysis From the Perspective of Psychological Science: A Critical Analysis From the Perspective of Psychological Science. *Psychological Science in the Public Interest*, 13(1), 3–66. https://doi.org/10.1177/1529100612436522

Gerbner, G. (1969). Toward "cultural indicators": The analysis of mass mediated public message systems. *AV Communication Review*, 17 (2), 137–148.

GGS (2023). Generations and Gender Survey UK Questionnaire Version 14.1, NatCen, March 2023, https://doc.ukdataservice.ac.uk/doc/9247/mrdoc/pdf/9247_ggs_questionnaire.pdf (access 2025.10.31).

Guldi, M., & Herbst, C. M. (2017). Offline effects of online connecting: the impact of broadband diffusion on teen fertility decisions. *Journal of Population Economics*, 30(1), 69–91. https://doi.org/10.1007/s00148-016-0605-0

He, Y., Wahab, N. E. T. A., & Muhamad, H. (2024). Factors impacting fertility anxiety among Chinese young women with marital status differences. *Heliyon*, 10(1): 1e23715. https://doi.org/10.1016/j.heliyon.2023.e23715

ITU (2024). *Individuals using the Internet*, https://www.itu.int/en/ITU-D/Statistics/pages/stat/default.aspx (access 2025.10.31).

Kemp, S. (2024). *5 billion social media users*, DataReportal, January 2024, https://datareportal.com/reports/digital-2024-deep-dive-5-billion-social-media-users?utm_source=Global_Digital_Reports&utm_medium=Analysis_Article&utm_campaign=Digital_2024&utm_content=Digital_2024_Analysis_And_Review (access 2025.10.31).

Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., et al. (2013). Facebook Use Predicts Declines in Subjective Well-Being in Young Adults. *PLOS One*, 8(8), e69841. https://doi.org/10.1371/journal.pone.0069841

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social Media & Mobile Internet Use among Teens and Young Adults*. Millennials, http://pewinternet.org/Reports/2010/Social-Media-and_Young-Adults.aspx (access 2025.10.31).

Lewis, R. G., Florio, E., Punzo, D., & Borrelli, E. (2021). The Brain's Reward System in Health and Disease. *Advances in Experimental Medicine and Biology*, 1344, 57–69. https://doi.org/10.1007/978-3-030-81147-1_4

Lin, J. S., Lee, Y. I., Jin, Y., & Gilbreath, B. (2017). Personality Traits, Motivations, and Emotional Consequences of Social Media Usage. *Cyberpsychology, Behavior and Social Networking*, 20(10), 615–623. https://doi.org/10.1089/cyber.2017.0043

Liu, P., Cao, J., Nie, W., Wang, X., Tian, Y., & Ma, C. (2021). The Influence of Internet Usage Frequency on Women's FertilityIntentions—The Mediating Effects of Gender Role Attitudes. *International Journal of Environmental Research and Public Health*, 18: 4784. https://doi.org/10.3390/ijerph18094784

Rincón-Cortés, M., & Grace, A. A. (2020). Adaptations in reward-related behaviors and mesolimbic dopamine function during motherhood and the postpartum period. *Frontiers in Neuroendocrinology*, 57: 100839. https://doi.org/10.1016/j.yfrne.2020.100839

Torquet, N., Marti, F., Campart, C. et al. (2018). Social interactions impact on the dopaminergic system and drive individuality. *Nature Communications*, 9(1): 3081. https://doi.org/10.1038/s41467-018-05526-5

Weimin, C., & Youru, W. (2024). Mediating Role of Fertility Motivation in the Impact of Internet Use on Fertility Intentions. *Population Research*, 48(2), 44–59.

World Population Prospects (2025). *UN Population Division Data Portal*, https://population.un.org/dataportal/home?df=86599958-9df9-4365-94ef-533ff41259dc (access 2025.10.31).

Yao, L, Li, M., Tao, L., Xiao, L., & Li, Y. (2025). Negative social media exposure and Chinese unmarried young adult's fertility intention: The mediating role of fertility anxiety and gender differences. *Personality and Individual Differences*, 241: 113192. https://doi.org/10.1016/j.paid.2025.113192