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Education and Intended Number of Children in Germany, Moldova and Norway: An International Comparison Using FReDA and GGS-II-data*

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Abstract: In this study, we compare the intended number of children in Germany, Moldova and Norway in 2020 and 2021, during the COVID-19 pandemic. In a first step, we compare the intended number of children (including children born) in the newly available Generations and Gender Survey round 2 (GGS-II) and the German FReDA-GGS data. In a second step, we estimate the number of further intended children with multinomial logistic regression models. The results reveal considerable differences across the three countries. Respondents in Moldova plan to have rather large families (on average 3.3 children, including children born), whereas individuals in Norway and Germany intend to have 2.0 and 1.8 children, respectively. In the multinomial logistic regression analyses, we find differences in the association of educational level and fertility plans by gender and country. In Germany, education is positively related to the intention to have further children. This pattern is more pronounced for women than for men. Furthermore, this association is also found among Norwegian men. In Moldova, we find only weak evidence for this association. For Norwegian women, education and the intention to have further children also seem to be unrelated. While most data about the intended number of children refer to the 2000s or earlier, we contribute to the literature by providing recent insights on the intended number of children in three European countries, including Moldova, a country that is understudied in demographic research.

Keywords: Parity intentions · Intended family size · Generation and Gender Survey · Fertility · Educational differences

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1 Introduction

The average educational attainment of young adults is increasing across OECD countries and the share of young adults who will enter university education before the age of 25 is currently expected to be around 50 percent (*OECD* 2021). Results from the 2006 and 2011 Eurobarometer surveys show that education is positively related with the intended number of children in EU 27 countries (*Testa* 2014). However, the social context in which childbearing plans are formed might have changed in recent years. For example, younger birth cohorts, who experienced their childbearing years during and after the Great Recession of 2007-09, faced widespread economic uncertainty. Such economic pressure has a negative effect on childbearing decisions (*Comolli et al.* 2021; *Kreyenfeld* 2015; *Vignoli et al.* 2020). Most recently, the COVID-19 pandemic with its still unclear effects on fertility decisions (*Aassve et al.* 2021) might have led to changes in the intended number of children.

The aim of this study is to give an overview of the intended number of children in Germany, Moldova and Norway in recent years (2020 and 2021) using data collected during the COVID-19 pandemic. Moreover, we analyse potential differences in the intended number of further children across educational groups. The selection of the three countries does not allow us to investigate the effect of contextual differences explicitly. Our goal is more modest: we aim to provide a descriptive account of how many (further) children women and men aged 18-49 in three European countries intend to have. The results for these three countries might inform future research in other societies that are similar with regard to political institutions, economic development and fertility patterns. Aligning with country groups used regularly in fertility research, Germany represents the politically more conservative countries in Western Europe. In Germany, the total fertility rate (TFR) was on a low but comparably stable level for decades (around 1.4 and 1.5). Norway is a Northern European country with a strong welfare state. After years of comparably high TFR, Norway has witnessed a considerable decline in fertility in the last years with a TFR of 1.50 in 2021 (*UN Population Division Data Portal* 2022c). Moldova is situated in Eastern Europe and emerged as an independent state following the collapse of the Soviet Union in 1991. The Moldovan economy relies heavily on agriculture and the GDP per capita is among the lowest in Europe. In recent years, fertility has increased to a TFR of 1.81 in 2021 (*UN Population Division Data Portal* 2022c). While Germany and Norway are often covered in comparative fertility research, the Republic of Moldova is studied only rarely. Newly available data from the Generations and Gender Survey (GGS-II) enable us to compare the intended number of children in Moldova with other countries.

This paper answers three research questions: (1) What is the average intended number of children (including children born) in these three countries around 2020? (2) Are individuals' educational levels and intended number of further children correlated? (3) Do we observe differences in this association between countries? Our empirical analyses are based on round two of the Generations and Gender Survey (GGS-II). For Germany, we use FReDA-GGS, the German contribution to

GGS-II (*Hank et al.* forthcoming). This allows us to benefit from the comparative design of FReDA within the international research infrastructure of the GGS.

2 Background

The intended number of children is one component in the complex decision-making process that precedes actual reproductive behaviour. A comparison of completed fertility of the cohorts born in the early 1970s and their intended number of children measured in the 1990s in the Fertility and Family Surveys indicates that actual fertility is slightly lower than the previously intended number of children (*Beaujouan/Berghammer* 2019). However, a person's fertility intentions are indeed a predictor of their fertility behaviour both with regard to short-term intentions (*Kuhnt/Trappe* 2016) and to realised fertility by the end of a person's reproductive period (*Guzzo* 2022).

Demographers use a number of social psychological theories to explain the process of fertility decision making (see *Buber-Ennser et al.* 2023, for a short overview). An approach that explicitly considers child-number intentions is the Traits-Desires-Intentions-Behaviour framework formulated by *Miller* and *Pasta* (*Miller* 2011; *Miller/Pasta* 1995). It models reproductive behaviours as the outcome of a motivational sequence. Motivational dispositions (traits) cause desires. Child-number desires refer to the parity individuals want to achieve. However, such desires might be constrained by an individual's situation, including partnership, financial circumstances and other life domains: the partner might have different child-number desires, the person's career aspirations might conflict with the demands of having the desired number of children, etc. The integration of one's own desires, the perceived desires of relevant others and other situational constraints lead to the formation of concrete fertility intentions (*Miller/Pasta* 1995: 533). The authors distinguish between three types of intentions: the intention to have a child in the near future (childbearing intentions), the intention to have a certain number of children (child-number intentions), and the intention to have a child at a particular time in the future (child-timing intentions). These three types of intentions shape the actual reproductive behaviour of an individual. Our study focuses on the intended number of children, i.e., the commitment to achieve a specific number of children within a person's reproductive phase, in addition to the number of children born.

A person's educational attainment can affect the intended number of children through different pathways. First, one might expect that highly educated individuals intend to have more children than those with lower levels of education, as they have higher lifetime earnings and thus can afford to have a higher number of children (*Becker* 1981). Moreover, from a gender perspective, highly educated women are more likely to have gender-equal partnerships in which the male partner contributes substantially to housework and childcare duties. This might encourage the desire for larger families (*Mills et al.* 2008). A competing expectation would be that highly-educated women intend to have fewer children than their less-educated peers. Even if highly-educated women might desire larger families or a similar number of

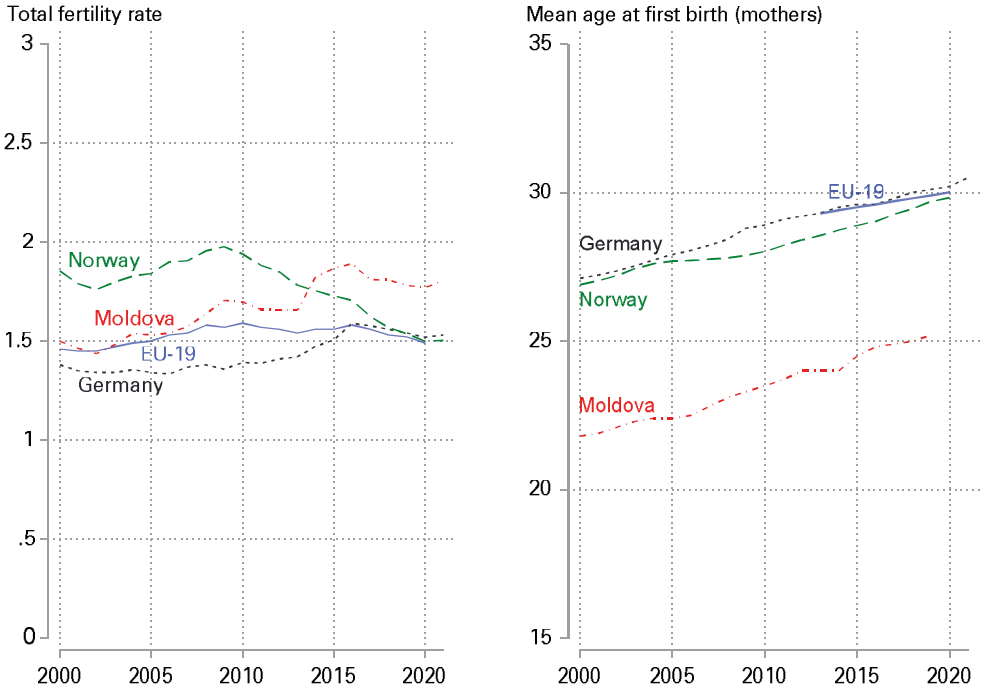
children as lower educated women do (see e.g., *Berghammer et al.* 2016) they might translate this into a lower intended number of children in order to avoid or reduce a potential motherhood penalty. Indeed, evidence shows that wage losses associated with the presence of children is smaller the longer a woman postpones childbirth (*Taniguchi* 1999). Another reason for a lower intended number of children among highly-educated women is related to their generally higher wages. Higher earnings lead to higher opportunity costs of childbearing (*Schultz* 1969) and thus to a lower intended number of children.

Numerous studies have shown a nexus between education and actual fertility (e.g., *Beaujouan et al.* 2016; *Nisén et al.* 2021; *Perelli-Harris et al.* 2010; *Pötzsch et al.* 2013). With regard to the intended number of children, prior research in Western countries has mainly focused on women and shown mixed results. Some studies find that highly-educated women do not plan to have fewer children than less-educated women (*Hayford* 2009; *Heiland et al.* 2008; *Mills et al.* 2008). By contrast, others find a positive educational gradient for the intended number of children (*De Wachter/Neels* 2011; *Guzzo* 2022; *Testa* 2014). Less is known about the association between education and child number intentions in less economically developed countries. Studies that use the Moldovan GGS-II data, the same source we use in our analyses, find only a small or no assoiation between respondents' education levels and their fertility intentions (*Emery/Koops* 2022; *Nadaraia* 2021). It must be noted, however, that these studies analysed the survey questions "Do you want to have a child at all?" and "Do you intend to have children in the next three years?". Results for other less developd countries indicate that highly-educated women want fewer children than those with lower education (*Alcaraz et al.* 2022; *Nguyen/Sukontamarn* 2022). These studies use child number *desires* in their analyses, which refer to the number of children a person wishes to have without taking potential constraints into account. This differs conceptually from the intended number of children, which explicitly focuses on a realistic intention.

3 Country contexts in Germany, Moldova and Norway

The three countries analysed in this study differ considerably in their fertility levels, economic development and the institutional and social settings (e.g., gender norms) in which childbearing decisions are formed. As indicators for actual fertility in the three countries, Figure 1 gives an overview of the TFR and the mean age at first birth between 2000 and 2021. At the beginning of the millennium, the TFR in Germany stood at 1.38 and increased to 1.53 in 2021. The increase in fertility observed in Moldova was more pronounced, rising from 1.44 in 2002 to 1.81 in 2021. By contrast, the TFR in Norway followed a different pattern. It was 1.85 in 2000, increased to 1.98 in 2009, but had declined to 1.5 by 2021. Among the three countries studied in this paper, the TFR in 2021 was lowest in Norway – which stands in strong contrast to the 1990s and 2000s, when fertility levels in Norway were among the highest in Europe. Moreover, we observe a pronounced increase in mothers' age at first birth in Norway (from 27.3 years in 2000 and 29.8 years in 2020). In Germany and

Fig. 1: TFR and mothers' mean age at first birth in Germany, Moldova, Norway and EU-19 countries, 2000-2021



Source: Total fertility rates (TFR) for Germany, Norway and Moldova: *UN Population Division Data Portal* (2022c); TFR for EU-19: *Eurostat* (2023); Women's mean age at first birth (MAB1) for Germany 2000-2008: authors' own calculations based on *Bujard/Diabaté* (2016); MAB1 for Germany 2009-2021: *DESTATIS* (2021); MAB1 for Norway: *Human Fertility Database* (2023); MAB1 for Moldova: *UNECE Statistical Database* (2020); MAB1 for EU-19 2013-2020: *Eurostat* (2023). Notes: EU-19: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain.

Moldova, age at first birth also increased during these two decades (Germany: from 27.1 to 30.5 years in 2021; Moldova: from 21.8 to 25.2 years in 2019). Apart from this increase in age at first motherhood, the transition to motherhood is notably much earlier in Moldova than in the other two countries.

Clearly, a multitude of factors affect fertility behaviours. Educational attainment and employment status in particular seem to be powerful socioeconomic determinants of fertility (*Balbo et al.* 2013). Apart from the individual level, macro-level indicators are also associated with fertility. Table 1 presents some national indicators that inform our country comparison. Countries with high levels of female labour market participation generally have the highest fertility levels in Europe (*Engelhardt et al.* 2004). The compatibility of family life and employment, especially when children are young, seems to be key for fertility. In this regard, Norway has a long tradition of policies to support working parents and gender equality

Tab. 1: Macro-level indicators for Germany, Norway and Moldova (2021 or latest available year)

Indicators	Germany	Norway	Moldova
Population (2021)[a]	83,408,555	5,403,021	3,061,507
GDP per capita (2017 €), adjusted to purchasing power (2021)[b]	46,844	58,134	12,597
Median life expectancy at birth (2021)[c]	80.63	83.23	68.85
Unemployment rate, % of total labour force (2021)[d]	3.54	4.99	3.96
Female labour force participation rate, % of age group 15-64 (2019)[e]	74.73	75.61	44.83
Childcare enrolment rate, % of age group 0-2 (2020)	35[f]	56[g]	11[h]
Female childlessness rate, % of age group 45-49	21[i] (2018)	13[j] (2015)	7[k] (2014)
Tertiary education, % of women, age group 25-49	32[l] (2019)	58[m] (2021)	31[n] (2021)
Tertiary education, % of men, age group 25-49	35[l] (2019)	40[m] (2021)	23[n] (2021)

Source: [a] *UN Population Division Data Portal* (2022b); [b] *World Bank* (2021), own calculations; [c] *UN Population Division Data Portal* (2022a); [d] *ILO* (2021); [e] *World Bank* (2019); [f] *DESTATIS* (2020); [g] *Eurostat* (2020); [h] *Statistica Moldovei* (2020); [i] *DESTATIS* (2019); [j] Own calculations based on data of the *Human Fertility Database* (2023); [k] *National Bureau of Statistics of the Republic of Moldova* (2014); [l] *DESTATIS Genesis-Online* (2023); [m] *Statistics Norway* (2023); [n] *National Bureau of Statistics of the Republic of Moldova* (2023).

(*Ellingsæter/Jensen* 2019). Parents in Norway benefit from both a year of paid parental leave and from universal public childcare services. Since the mid-2000s, Germany has also modernised its family policy with a Scandinavian-style parental leave scheme and by increasing the provision of public day-care for children under the age of three (*Krapf* 2014). Although the attendance rates for children under the age of three increased from 14 percent in 2006 to 34 percent in 2021, demand still exceeds supply (*BMFSFJ* 2022). Clearly, the situation of families in Moldova differs greatly from that in high-income countries such as Norway and Germany. Moldova is a middle-income country with an adjusted GDP per capita of €12,597 (see Table 1). The share of children under age three attending day-care services was as low as 11.2 percent in 2019, compared to 35.0 in Germany and 56.4 in Norway (cf. Table 1). Moldovan mothers with young families often perceive work and family as being incompatible (*Chistruga-Sînchevici* 2020). Tertiary education is widespread among Norwegian women (58 percent of women in the 25-49 age group). In Germany and Moldova, around 30 percent of women attain tertiary education.

4 Data and Methods

Our study is based on the Generations and Gender Survey (GGS-II, *Dommermuth et al.* 2021; *Gauthier et al.* 2020) and FReDA panel data, release v.2.0.0 (*Bujard et al.* 2023). A detailed study description is presented by *Schneider et al.* (2021). With regard to the questionnaire, FReDA (Family Research and Demographic Analysis) is fully comparable with GGS-II. Data were collected via different modes, however. Responses were collected in a combination of paper-and-pencil questionnaires (PAPI) and computer-assisted web interviews (CAWI) in Germany, through face-to-face computer-assisted personal interviews (CAPI) in Moldova and via CAWI in Norway.

Data collection took place during different phases of the COVID-19 pandemic: In Norway, it took place in November and December 2020, a time with considerable pandemic-related restrictions with a value of 60 on the Oxford Stringency Index (*Hale et al.* 2021), an index that records the strictness of Coronavirus government policies on a 0-100 scale. As a reaction to a disrupted fieldwork process in the early COVID-19 pandemic (*Gummer et al.* 2020; *Schneider et al.* 2021), FReDA Wave 1 comprises three parts, namely a short recruitment interview in April/Mai 2021 (W1R) and two subsequent questionnaires collected from July to mid-October 2021 (W1A) and in November and December 2021 (W1B). Most variables used in this paper stem from W1R and W1A. The dependent variable – intended number of (further) children – was collected in W1A. During the data collection, the pandemic-related restrictions decreased in Germany and reached Oxford Stringency Index levels below 60 from August to October 2021 (*Hale et al.* 2021). In Moldova, data collection started in January 2020, was interrupted from April–June due to the pandemic and was resumed thereafter. The data collection mode was changed: face-to-face-interviews were carried out outside of buildings and with various protection measures (e.g., face masks and gloves). The field phase ended in December 2020 (*Cristei* 2021). Moldova was not covered in the Oxford Stringency Index project.

The response rate was 34.6 percent for W1R and 82.4 percent for W1A in Germany. In Moldova, the response rate was roughly 45 percent. In Norway, it amounted to 33.5 percent (*Gauthier et al.* 2020; *GGP Colectica* 2022). For the German data, weights adjust for biases in various socio-demographic variables, such as sex, age and education (*Bujard et al.* 2023). In Moldova, weights adjust for sex and age. In Norway, weights were developed and applied to address non-response biases, related especially to sex and education (*Dommermuth/Lappegård* 2021).

We analyse women and men aged 18-49 at the time of the interview. After excluding respondents with missing information on biological children, further fertility intentions or of diverse genders, our samples comprise 17,602 individuals in Germany, 3,746 in Moldova and 3,322 in Norway.

This paper focuses on the intended number of (further) children. Respondents were asked about short-term (within three years) and long-term (ever) fertility plans. Those intending to have (further) children – either in the near future or later – were

asked: "How many (more) children – including biological and adoptive children[1] – do you intend to have overall? [Not including existing children]". The intended number of children was derived by adding the number of children at the time of the interview (i.e., parity) to the number of further intended children. While we combined the information of children born and the number of (further) intended children in our descriptive analysis, we focus on the intended number of (further) children in the multinomial logistic regression analyses. The outcome variable can take the values zero, one, two, and three or more children.

Education[2] is a central focus of this study. We differentiate between low (ISCED 0-2), medium (ISCED 3-4), and high (ISCED 5-8) levels of education. Several standard socio-demographic control variables are taken into consideration, namely age, sex (female, male), parity[3] (0, 1, 2, 3+), marital status (married, cohabiting, no partner), country of birth[4] (born in the country of survey, born abroad), regions (urban, rural; in FReDA, small towns and suburbs are classified as urban; information about settlement size is not available in the Norwegian GGS-II data) and religiosity[5] (low, medium, high). In sensitivity analyses, we further take into consideration stepchildren descending from the current partner[6] (0, 1, 2+) and enrollment in education at the time of the interview (enrolled in education, not enrolled in education).

In a first step, we provide the mean intended number of (further) children and the number of children born. The information is displayed for women and men by country, differentiated by age group (Fig. 2). In a second step, we describe the mean intended number of children and intended parity distribution by education. Finally, we present results of multinomial regression analyses for the number of further intended children. In our multiple regressions, we control for the number of children already born. Multivariate analyses for the actual number of children

1 We cannot derive the numbers for intended adoptions from our data. In GGS-I Wave 1, respondents were explicitly asked if they intend to adopt a child, apply for adoption or take a foster child in the near future. Available data for 13 European countries reveal that at ages 18-50, less than two percent of people intended to do so (roughly one percent in Germany and Norway). Overall, figures differed by age and were higher for the 30-39 age group (2.2 percent). We therefore tentatively conclude that adoptions only play a minor role in analyses on the intended number of children.

2 Education is measured via the International Standard Classification of Education (ISCED).

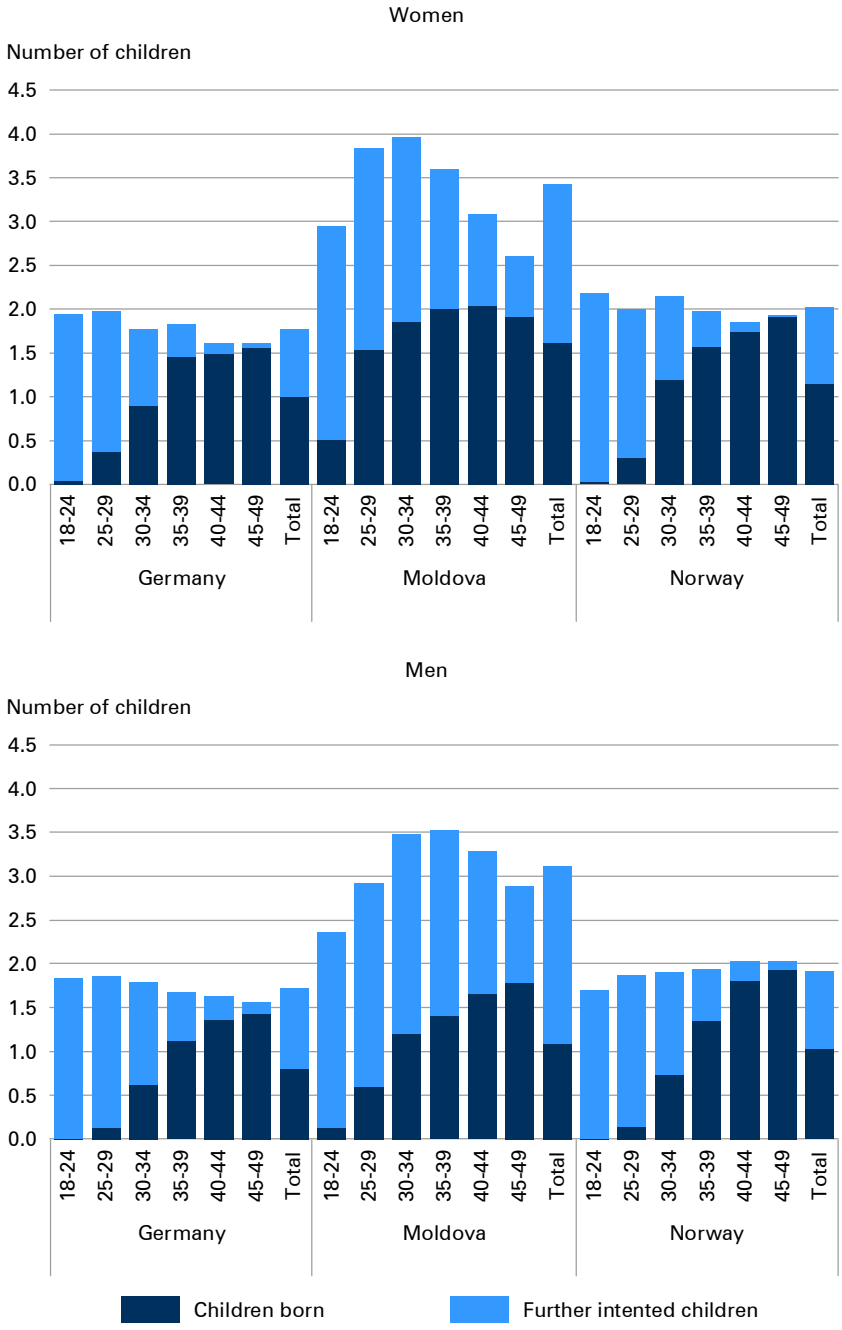
3 Parity includes biological children. Adopted children are not included. In the selected countries, less than one percent of the respondents reported an adopted child (see Table A1).

4 Immigrants' fertility often differs from natives' fertility (e.g., *Kulu et al.* 2017; *Krapf/Wolf* 2015). We are aware of different approaches to defining migration backgrounds and therefore here use country of birth as a binary indicator only. Numbers for different countries of origin are too small to allow for more detailed groupings.

5 Religiosity is captured via the question "Regardless of whether you belong to a particular religion, how religious would you say you are? Please express your religiosity on a scale of 0 to 10 where 0 means 'Not at all religious' and 10 means 'Very religious'." Following common practice (e.g., *Buber-Ennser et al.* 2018), we distinguished between low (0-2), medium (3-8) and high (9-10) levels of religiosity.

6 In addition, we provide the total number of stepchildren, including the current partnership and possible previous partners (Table A1). We do not examine whether stepchildren are cohabiting or non-cohabiting.

Fig. 2: Intended number of children, by age and country, 2020-2021



Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021); weighted data.

are provided in the Appendix. We provide average marginal effects (AME), which have the advantage of being comparable across models (*Best/Wolf* 2012). Positive coefficients indicate that the corresponding group more often intended to have a specific number of further children, negative coefficients indicate that the group less often intended to do so. As mentioned above, we conduct sensitivity analyses with regard to stepchildren as well as enrollment in education.

The samples for Germany and Norway include slightly more women than men (Table 2). The mean respondent age was 33-35 years. Respondents substantially differed with regard to parity, education and marital status across the three countries. Childlessness is pronounced in Germany and Norway (roughly 50 percent). In Norway and Moldova, between 12 and 15 percent of respondents had three or more children. The mean number of children born was comparably low in Germany (0.9) and Norway (1.1), and substantially higher in Moldova (1.4). Furthermore, in Germany and Moldova, the mean number of stepchildren within the current partnership was 0.1, while in Norway it was 0.2 (Table A1).[7] The educational differences across the three countries are striking: Large groups of German and Norwegian respondents were highly educated (about one third and nearly half, respectively), compared to only one fifth in Moldova. Furthermore, Moldova differs from Germany and Norway with a low proportion of cohabitating persons and few persons born abroad. Moreover, the level of religiosity is considerably higher in Moldova. Concerning urbanity, Germany has – as expected – a lower share of rural population (20 percent) than Moldova does (59 percent). Moreover, enrollment in any type of education is more frequent in Germany and Norway than in Moldova. This group consists of young adults holding low or medium levels of education at the time of the interview. Their further educational trajectories are unclear, but presumably they will achieve medium or high ISCED levels in the future.

5 Descriptive results

The differences in the intended number of children between the three countries are substantial: Adding children born and further intended children, we find that respondents in Germany and Norway reported a comparably low average intended number of children, while in Moldova, they clearly intended to have larger families (1.8; 2.0 and 3.3 children, respectively; see Table 2 and Figure 2). In Germany and Norway, the intended number of children is slightly lower for men than for women (Table A2 in the Appendix). However, in Moldova, gender differences are pronounced, and the intended number of children is substantially lower among men than among women (3.1 versus 3.4 children).

[7] The proportion of respondents with stepchildren slightly increases when stepchildren from possible previous partners are also taken into consideration. Furthermore, few respondents had adopted one or more children (see Table A1).

Tab. 2: Descriptive statistics, column percent

	Germany	Moldova	Norway
Sex			
Female	51%	50%	52%
Male	49%	50%	48%
Age			
18-24	17%	17%	17%
25-29	14%	17%	15%
30-34	18%	22%	17%
35-39	17%	18%	15%
40-44	18%	15%	18%
45-49	17%	11%	18%
Mean age	34.7 years	33.3 years	34.7 years
Parity			
Childless	51%	30%	46%
1 child	19%	22%	14%
2 children	22%	33%	28%
3+ children	8%	15%	12%
Mean number of children	0.9 children	1.4 children	1.1 children
Mean number of children among parents	1.8 children	2.0 children	2.0 children
Marital status			
Married	45%	55%	32%
Cohabiting	32%	18%	42%
No partner	23%	26%	25%
Missing information	0%	0%	1%
Education			
Low (ISCED 0-2)	11%	48%	28%
Medium (ISCED 3-4)	51%	32%	24%
High (ISCED 5-8)	31%	21%	47%
Missing information	7%	0%	1%
Country of birth			
Born in country of survey	80%	98%	83%
Born abroad	20%	2%	17%
Missing	0%	0%	0%
Religiosity			
Low	44%	4%	56%
Medium	35%	67%	27%
High	4%	24%	3%
Missing information	17%	5%	14%
Region			
Urban	80%	41%	-
Rural	20%	59%	-
Enrolled in education			
Enrolled	13%	6%	17%
Not enrolled	87%	94%	83%

Tab. 2: Continuation

	Germany	Moldova	Norway
Intended number of children, including children born			
0 children	15%	2%	13%
1 child	15%	7%	11%
2 children	48%	31%	49%
3 children	17%	23%	22%
4 or more children	5%	37%	5%
Mean intended number of children	1.8 children	3.3 children	2.0 children
Observations	17,602	3,746	3,322

Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany, 2021); weighted data.

The intended numbers of children by age show that below age 30, the mean number of children born is low and the intended number of children is dominated by further intended children (cf. Fig. 2). At age 40 and above, most respondents have completed family formation. In Norway and Germany, further fertility intentions of women in the early 40s are low and negligible in the late 40s, reflecting the lower biological chances of having a child in these ages. As a consequence of these biological chances, women age 40-49 in Norway and Germany adapt their child number intentions to the actual number of children they have. In both countries, this convergence of the intended and the actual number of children with increasing age is weaker for men age 40-49. In Moldova, intentions for further childbearing are remarkably high for women in their 40s, which might indicate a lower awareness of reduced fecundity at these ages. A second reason for the high stated intention to have further children in this group might be the information campaigns about the GGS-II in Moldova, which stressed the aspect of family in the survey (personal communication with Anne Gauthier, director of the GGP, on 11 October 2022). A third problem that might contribute to an overestimation of the intended number of children is related to a possible misconception of the survey question. Our additional analyses indicate that in Moldova, some respondents might have included the children born when reporting their further intended number of children resulting in a comparably high number of children. Nonetheless, this groups seems to be rather small (results available upon request).

Age patterns show remarkable differences across the three countries: child intentions are higher for older cohorts in Norway and lower in Germany. These trends might indicate a convergence of child intentions in the two countries among younger cohorts. Such a convergence can also be found in the TFR in both countries in the last two decades.

Given that the number of children growing up with a stepparent is increasing (e.g., *Kleinschlömer/Krapf* 2023), we briefly examine stepchildren. As mentioned above, a non-negligible share of respondents had stepchildren through their current partner, who were either residing in the same household or living with the other

parent. As expected, stepchildren were rarely reported by young adults and more frequently by persons in their 30s and 40s, who are more likely to have experienced separation and re-partnering (Fig. A1 in the Appendix). Norwegians living with a partner had 0.2 stepchildren on average and Moldavans and Germans had 0.1, see Table A1 in the Appendix. When taking into account the current and previous partners' stepchildren, numbers slightly increase to 0.3 stepchildren in Norway and to 0.2 in Germany. Adding stepchildren to biological children thus slightly increases the intended number of children.

Returning to biological children, descriptive analyses reveal different age patterns within the three countries (Fig. 2). The intended number of children is rather stable and tends to decrease across age groups among women in Norway (from 2.0 and 2.2 below age 30 to 1.9 at ages 40-49), whereas an increase is observed for older male cohorts (from 1.7 to 2.0). Conversely, the intended number of children decreases with age in Germany, from 2.0 (women) and 1.8 (men) in the early 20s to 1.6 for both sexes in the late 40s. In Moldova, a hump shape is observed for both sexes. The intended numbers of children increase from 2.4 and 3.0 in the youngest age group to 3.5 and 4.0 between ages 25 and 39 and decrease thereafter to levels of 2.6 and 2.9 at ages 40-49.

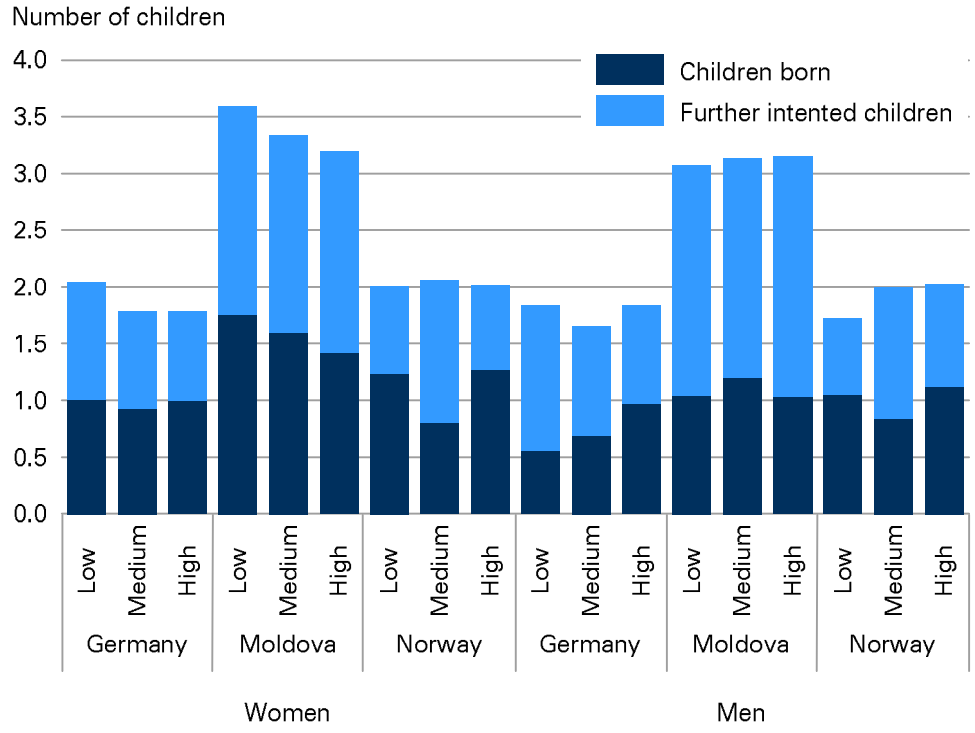
A differentiation by education reveals that the mean intended number of children decreases with higher levels of education among women in Moldova and in Germany (Fig. 3 and Table A2). This decrease is substantial in Moldova, where less-educated women intended to have 3.6 children on average, as opposed to their highly-educated compatriots reporting 3.2 children. In Germany, the differences are less pronounced: less-educated women intended to have 2.0 children, while at medium and high levels of education, the intended number of children was 1.7. Meanwhile, child number intentions do not vary by education among Norwegian women.

For men, the educational pattern differs in the three countries. Among German men, we find a U-shaped pattern with a somewhat higher intended number of children among those with lower and higher levels of education. A positive relationship between education and the intended number of children is visible for Norwegian men, where less-educated men intended to have a lower number than their medium- or highly-educated peers (1.7 versus 2.0). A rather stable relationship is observed among Moldovan men (from 3.07 to 3.15)[8] (Fig. 3).

We gain further insights by looking at the parity distribution of the intended number of children (Table A3 in the Appendix). A life without own children was the plan of 16 percent of German respondents, while 18 percent intended to have one child. In Norway, fewer persons intended to have no child or one child (13 percent and 11 percent). Such plans were also less often observed in Moldova, where overall only 9 percent of respondents intended to have less than two children. Two biological children are by far the most preferred number of children in Germany and Norway, with roughly one in two persons indicating this number. Fertility intentions

[8] When rounded to one decimal, both values are 3.1 for the three educational groups, and minor differences become evident with numbers rounded to two decimals.

Fig. 3: Intended number of children by education, sex and country, 2020-2021

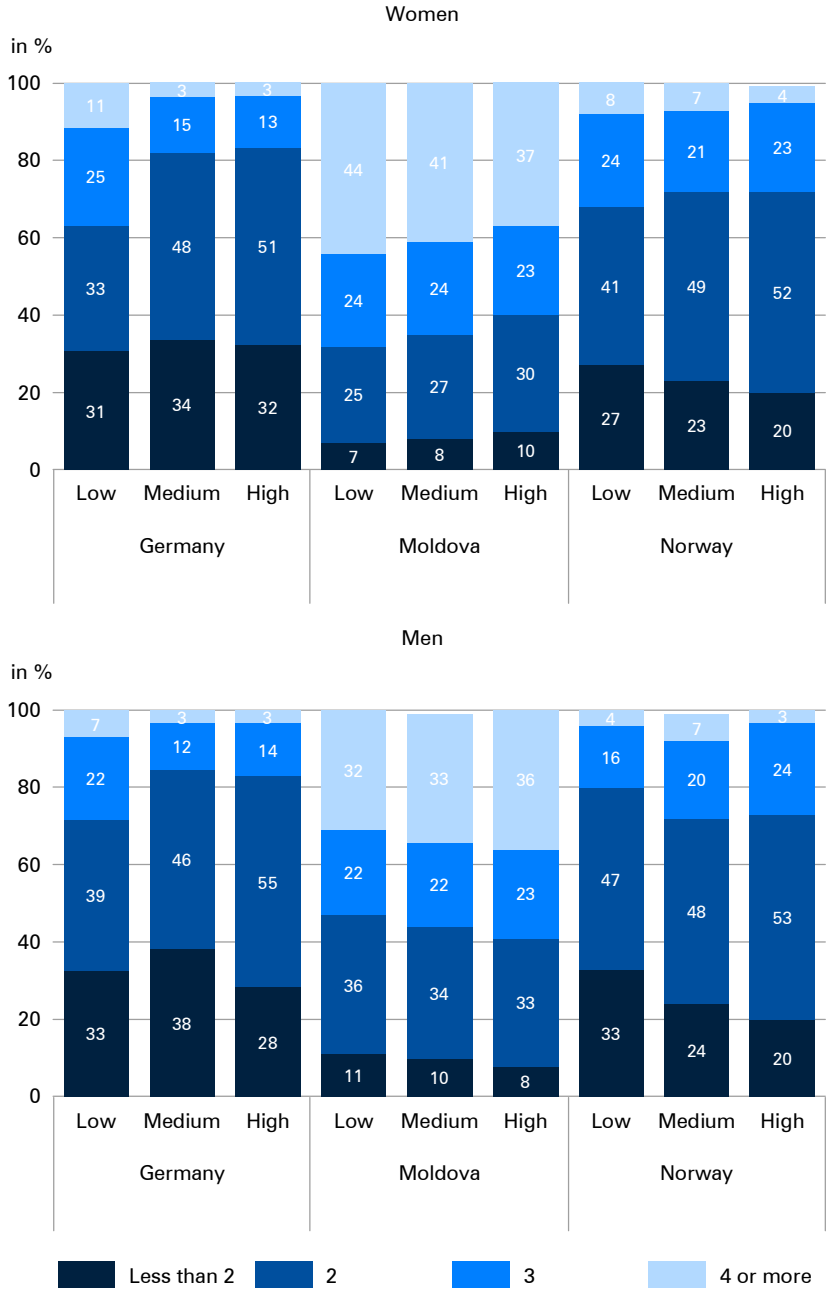


Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021); weighted data.

of three or more children are widespread in Moldova (60 percent) and less often reported in Norway and in Germany (27 and 19 percent, respectively). Whereas women and men in Germany have similar plans regarding intended parity, with only slightly more women intending higher parities, we find more pronounced gender differences in Norway and Moldova, where women more often intended to have larger families, especially in Moldova.

The previously described associations between education and mean intended number of children are partly reflected in the parity distributions (Fig. 4). For example, the two-child norm is less relevant for less-educated women in Germany (33 percent), of whom 36 percent intend to have three or more children. In contrast, only 18 percent of women with medium education and 16 percent of those with high education intended to have three or more children. For German men, these educational differences are similar. In Moldova, highly-educated women intended to have fewer children than their lower-educated peers and the share of those intending to have four or more children was lower among women with high than women with low education. The same holds for the positive association among Norwegian men, where the highly-educated intended to have more children and

Fig. 4: Intended number of children (including children born) by education, sex and country, 2020-2021



Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021); weighted data.

more often four or more children. However, it turns out that despite almost no variation by educational level for the mean intended number of children among Norwegian women and Moldovan men, the underlying parity distributions differ. Highly-educated Norwegian women intend to have two or three children more often than those with low education (52 versus 41 percent). They are less likely to intend to have (a) less than two and (b) three or more children. Furthermore, highly-educated Moldovan men more often reported four or more children as their intended number.

6 Multiple regression results

In the multiple regression analyses, we focus on the number of further intended children as the outcome variable and control for the current parity.[9] The outcome variable can take the values "no further child", "one further child", "two further children", and "three (or more) further children". Table 3 (Germany), Table 4 (Moldova) and Table 5 (Norway) show the results of our multinomial regression analyses for women and men. We calculate and show average marginal effects (AME).

Our key explanatory variable is education. However, before we present the associations with education, we want to emphasize that parity is – as expected – clearly the most important factor for further childbearing intentions. This is indicated by the effect size and statistical significance of the estimated AMEs, which are largest for parity. For example, for Germany the AME for intending to have no further children is –0.297 ($p<0.01$) for women with one child and –0.296 ($p<0.01$) for men with one child. These values are interpreted as follows: Among married German women, born in Germany, with a low level of religiosity and a medium level of education, those with one child less often intended to have no further child than those with two children (29.7 percentage points). Among men, the difference amounted to 29.6 percentage points (Table 3).

Overall, only some AMEs for education turned out to be statistically significantly different from zero, when controlling for parity, age, marital status, country of birth, religiosity and region. We find the strongest evidence for the association of education and (further) intended number of children in Germany. Those with high education are more likely to intend to have two further children (and less likely to intend to have no further children) than those with medium and low education. Among those with low education, the pattern is reversed: they are more likely to intend to have no (further) children and less likely to intend to have more than one (further) child. The patterns are more pronounced for women. For men with low education, the AME for intending to have no further children and for having three or more children are statistically insignificant.

[9] We refrain from analysing the combination of the number of children born and future childbearing plans (that we used in the descriptive analyses) because, for instance, respondents with children are by definition never part of the category "child number intention = 0".

Tab. 3: Multinomial logistic regression, outcome: number of further intended children, average marginal effects, Germany

	No further child	1 further child	2 further children	3+ further children
	Women			
Education (ref.=Medium)				
Low education	0.068***	-0.005	-0.047***	-0.017**
High education	-0.050***	0.003	0.046***	0.002
Age				
Age in years	-0.058***	0.060***	0.012**	-0.014***
(Age in years)^2	0.001***	-0.001***	-0.000***	0.000*
Parity (ref.=2 children)				
0 children	-0.378***	-0.000	0.287***	0.091***
1 child	-0.297***	0.196***	0.088***	0.013***
3+ children	-0.027	0.011	0.011	0.005
Marital status (ref.=Married)				
Cohabiting	-0.016*	0.011	0.012	-0.008
No partner	0.064***	-0.005	-0.048***	-0.011
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.026***	0.016	-0.004	0.015
Religiosity (ref.=Low)				
Medium religiosity	-0.066***	0.008	0.027***	0.031***
High religiosity	-0.087***	-0.003	-0.004	0.095***
Region (ref.=Rural)				
Urban	-0.019**	0.022***	-0.001	-0.002
Observations: n=9,946				
	Men			
Education (ref.=Medium)				
Low education	0.008	0.033	-0.039**	-0.002
High education	-0.074***	0.011	0.059***	0.003
Age				
Age in years	-0.038***	0.030***	0.009	-0.000
(Age in years)^2	0.001***	-0.000***	-0.000***	-0.000
Parity (ref.=2 children)				
0 children	-0.430***	0.015	0.345***	0.070***
1 child	-0.296***	0.224***	0.062***	0.009
3+ children	0.050**	-0.036**	-0.014	0.001
Marital status (ref.=Married)				
Cohabiting	-0.034***	0.003	0.021*	0.009
No partner	0.063***	-0.031***	-0.037***	0.006
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.045***	0.010	-0.005	0.039***
Religiosity (ref.=Low)				
Medium religiosity	-0.072***	0.002	0.035***	0.034***
High religiosity	-0.109***	-0.014	0.006	0.118***
Region (ref.=Rural)				
Urban	0.008	0.008	-0.021**	0.006
Observations: n=7,656				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Remark: Missing categories for marital status, education, country of birth and religiosity are not shown.
Source: FReDA Wave 1 (Germany; 2021).

Tab. 4: Multinomial logistic regression, outcome: number of further intended children, average marginal effects, Moldova

	No further child	1 further child	2 further children	3+ further children
	Women			
Education (ref.=Medium)				
Low education	-0.008	0.001	-0.003	0.011
High education	-0.014	-0.012	-0.030	0.056**
Age				
Age in years	0.012	0.007	0.000	-0.019*
(Age in years)^2	0.000	-0.000	-0.000	0.000
Parity (ref.=2 children)				
0 children	-0.152***	0.118***	0.149***	-0.115***
1 child	-0.138***	0.122***	0.171***	-0.155***
3+ children	0.044*	-0.013**	-0.274***	0.242***
Marital status (ref.=Married)				
Cohabiting	0.015	0.016	-0.001	-0.031
No partner	0.002	0.011	0.009	-0.023
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.110**	0.021	0.002	0.087
Religiosity (ref.=Low)				
Medium religiosity	-0.112*	-0.035	0.090*	0.057
High religiosity	-0.125*	-0.022	0.092*	0.054
Region (ref.=Rural)				
Urban	0.030*	0.004	0.020	-0.055***
Observations: n=2,332				
	Men			
Education (ref.=Medium)				
Low education	0.000	0.018	-0.010	-0.008
High education	-0.049*	0.022	-0.000	0.027
Age				
Age in years	-0.004	0.008	-0.021*	0.017
(Age in years)^2	0.000*	-0.000	0.000	-0.000**
Parity (ref.=2 children)				
0 children	-0.083***	0.078***	0.230***	-0.225***
1 child	-0.049*	0.087***	0.137***	-0.174***
3+ children	0.033	-0.027**	-0.303***	0.297***
Marital status (ref.=Married)				
Cohabiting	-0.042	0.044**	-0.013	0.010
No partner	-0.036	0.049***	-0.041	0.028
Country of birth (ref.=Born in country of survey)				
Born abroad	0.008	-0.053*	-0.102	0.148*
Religiosity (ref.=Low)				
Medium religiosity	-0.115**	-0.031	0.049	0.097**
High religiosity	-0.104*	-0.036	-0.005	0.145***
Region (ref.=Rural)				
Urban	0.019	-0.002	0.020	-0.038
Observations: n=1,414				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for marital status, education and religiosity are not shown.

Source: GGS-II Moldova (2020).

Tab. 5: Multinomial logistic regression, outcome: number of further intended children, average marginal effects, Norway

	No further child	1 further child	2 further children	3+ further children
	Women			
Education (ref.=Medium)				
Low education	0.036	-0.012	-0.028	0.004
High education	-0.020	0.002	0.012	0.006
Age				
Age in years	-0.088***	0.070***	-0.019	0.037**
(Age in years)^2	0.002***	-0.001***	0.000	-0.001***
Parity (ref.=2 children)				
0 children	-0.322***	-0.067***	0.290***	0.100***
1 child	-0.274***	0.166***	0.110***	-0.002
3+ children	0.082**	-0.035	-0.024	-0.024
Marital status (ref.=Married)				
Cohabiting	-0.011	0.016	0.011	-0.016
No partner	0.072***	-0.034*	-0.022	-0.016
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.037*	0.010	0.043*	-0.017
Religiosity (ref.=Low)				
Medium religiosity	-0.059***	0.016	-0.007	0.051***
High religiosity	-0.079*	0.060	-0.037	0.056
Observations: n=2,001				
	Men			
Education (ref.=Medium)				
Low education	0.062**	0.022	-0.029	-0.055***
High education	-0.050**	0.022	0.015	0.012
Age				
Age in years	-0.060***	0.041***	0.020	-0.001
(Age in years)^2	0.001***	-0.001***	-0.000**	-0.000
Parity (ref.=2 children)				
0 children	-0.416***	0.007	0.308***	0.102***
1 child	-0.326***	0.150***	0.165***	0.012
3+ children	0.043	-0.028	-0.021*	0.006
Marital status (ref.=Married)				
Cohabiting	-0.097***	-0.009	0.109***	-0.004
No partner	0.037	-0.080***	0.067*	-0.024
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.048*	0.052**	-0.002	-0.002
Religiosity (ref.=Low)				
Medium religiosity	-0.029	0.020	0.006	0.003
High religiosity	-0.022	-0.067*	-0.030	0.119*
Observations: n=1,321				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for marital status, education and religiosity are not shown.

Source: GGS-II Norway (2020).

In the model for Moldavan men, the estimated AME for intending to have no further children is -0.049 ($p<0.1$) for high education. This can be interpreted as follows: Married and highly-educated men who were born in Moldova who have a low level of religiosity, live in a rural area and who are fathers of two children, are 4.9 percentage points less likely to intend to have no further children than their peers who belong to the group that obtained medium education. Results indicate that – when controlling for parity and further socio-demographic characteristics – highly-educated men more often intended to have further children. For Moldovan women, we find that those with high education are more likely to belong to the group intending to have three (or more) children. In Moldova, education seems to be unrelated to other categories of child number intentions.

For Norway, education is not relevant for further childbearing intentions among women; the estimated coefficients are not statistically significant (Table 5). The statistically insignificant but strong association (AME=0.036) for women with low education to intend to have no further children is in line with our descriptive finding that in this country, less-educated women more often intend to have less than two children. For Norwegian men, the pattern is different, and the educational differences derived from descriptive analyses among men in Norway also become evident in the multiple regression analysis. For example, married men with low education who were born in Norway, have low levels of religiosity and are fathers of two children, are 6.2 percentage points more likely to intend to have no further children than their peers who belong to the group of medium education and otherwise identical characteristics. Highly-educated men with these characteristics are 5 percentage points less likely to intend to have no further children than medium educated ones. Overall, the negative AMEs for highly-educated persons in the three countries for intending to have no further children reflect the later transition to parenthood and postponement of family formation of highly-educated persons.

With regard to control variables, parity is most important for future childbearing plans, as mentioned above. Furthermore, age, country of birth, religiosity, rural-urban environment as well as marital status are associated with higher intended numbers of children. For instance, persons reporting to be very religious more often intended to have further children than those with a low level of religiosity. Individuals living in urban areas more often intended to have no further children than those in rural areas. Women and men with a migration background were less likely to belong to the group without further childbearing plans than those born in the country of survey.

Sensitivity analyses for respondents living with a partner show that having stepchildren reduces the intention for further childbearing (Table A4 in the Appendix). In the reference groups (medium education, male, married, two children, born in country of birth, low religiosity, living in a rural region, current partner has no pre-union children), persons with one stepchild were six to ten percentage points more likely to intend to have no further children, and the difference was even more pronounced if the partner had two pre-union children. In addition, we restricted the analyses to the age group 25-49 years to reduce collinearity between age, being in education and the level of education (Table A5 in the Appendix). Results

for education remained stable and became even more pronounced (e.g., among Norwegian women).

Multiple regression analyses for the actual number of children indicate that in young and middle adulthood, age is the main determinant. Furthermore, the association between education and the number of children was pronounced. For example, highly-educated individuals were more often childless than those with medium education (Tables A6-A8 in the Appendix). This is in line with prior research showing a postponement of family formation by those with higher levels of education (*Impicciatore/Tomatis* 2020).

7 Discussion

In this study, we analysed the intended number of children among 18-49 years old women and men in Germany, Moldova and Norway in 2020 and 2021. Our findings show that the intended number of children (including those already born) varies considerably by country. Respondents in Moldova intend to have 3.3 children on average, whereas in Norway (2.0) and Germany (1.8) the intended number of children is considerably smaller. The similar levels of the mean intended number of children in Norway and in Germany are consistent with similar levels of TFR in recent years, due to a remarkable decline in fertility rates in Norway over the last decade (*UN Population Division Data Portal* 2022c). In line with the two-child ideal (between 60 and 70 percent) in many European countries (*Sobotka/Beaujouan* 2014), our study shows that about half of the respondents in Germany and Norway intend to have two children. However, a considerable proportion of respondents report intentions above the two-child norm. Individuals plan to have large families in Moldova, where 60 percent of the respondents intended to have three or more children. In Germany, 19 percent of respondents plan to have three or more children. Among respondents in Norway, 27 percent intend to have three or more children (cf. Table A3).

We were particularly interested in the association between educational attainment and the intended number of children. In multinomial logistic regression analyses, we distinguished between four groups, ranging from zero to three or more further children. Our results indicate different patterns in the three countries. The association was negative among women and men in Germany, which might reflect difficulties in reconciling childcare duties and employment. In Norway, the pattern is gendered. Education is negatively related to men's intended number of further children. Such a negative relationship is not observed among Norwegian women. Figures for the mean number of children are also similar across educational groups among women in Norway, in line with findings based on cohort fertility (*Nisén et al.* 2021). In Norway, the availability of childcare facilities for children under three is high, which might help reconcile women's career and family plans. In Moldova, the multiple regression results indicate only a weak association between education and the intended number of further children. It seems that a high number of children (three or more) is intended among most Moldovans, regardless of education. This is surprising, given that only 11 percent of children under age three use public childcare.

Furthermore, the regular support of family and friends with childcare seems to be moderate among Moldovan families with children (20 percent, cf. *Sainsus* 2022: 11). It seems that a large share of Moldovan women drops out of the labour force, which is reflected in the comparably low female labour force participation rate of 44.8 percent (*World Bank* 2019). Our results indicate that this might also be the case for highly-educated women.

Our study contributes to the literature on child number intentions in several ways. First, we provide recent insights on the intended number of children in three European countries in 2020 and 2021. In Norway and Germany, the intended number of children is close to two, indicating that the two-child norm observed in many western countries persists (*Sobotka/Beaujouan* 2014). Although our data do not allow us to analyse time trends in child number intentions, the seemingly stable preference for two children in Germany and Norway does not indicate strong reactions in fertility plans caused by economic and other external shocks. The COVID-19 pandemic was one such dramatic shock and was associated with short-term fertility fluctuation in many European countries (*Bujard/Andersson* forthcoming; *Sobotka et al.* 2023). However, in line with our finding of child number intentions of around two in Germany and Norway, a recent study on Austria shows that the long-term impact of the pandemic on family plans is modest (*Buber-Ennser et al.* 2023). For Moldova, we are among the first to analyse child number intentions. Most strikingly, although the TFR was low for many years, our study shows that Moldovans intend to have large families, i.e., three or more children. Overall, child number intentions might change in all three study countries with further threats to the economic and security situation in Europe. Uncertainties related to rising energy prices and living costs in Europe following the Russian invasion of Ukraine might negatively affect individuals' subjective view of the future, which might in turn affect fertility intentions (*Lappegård et al.* 2022). Uncertainties might be in particular relevant for Moldova, which is commonly mentioned as a potential future target for Russian invasion and received many more refugees per capita than other European countries.

A second contribution of our study is the identification of country differences. There might be cultural and institutional variations that shape the intended number of children. Our findings for these three analysed countries are partly transferable to others, e.g., the results for Germany might be informative for the German-speaking countries, Norway for the Northern European countries and Moldova for Eastern European countries. As a third contribution, our analyses allow a comparison of Germany with other European countries and shows the importance of the German FReDA data for family research at both the national and the international level.

The data underlying our study stem from three different periods of the pandemic: (1) from the time when the first COVID-19 cases were registered in Europe and when societies experienced lockdowns and contact restrictions for the first time (Moldova), (2) from the period shortly before and at the beginning of the second lockdowns

in Europe (Norway), and (3) from summer 2021 with low incidences[10] (Germany). Therefore, we are not able to rule out the effects of the time-varying pandemic situations on differences between the three countries. For Moldova, *Emery/Koops* (2022) compared data collected before and after the onset of the pandemic and showed that medium-term fertility intentions were not affected by the pandemic. However, their results indicated changes in short-term family planning.

Some of the data's specificities limit our study. Regarding the quality of fertility data collected via CAWI, the GGS-II team estimated that fertility indicators for Norway turned out to be consistent with population-based data, thus pointing towards no systematic deviations (*Jablonski et al.* 2022). However, analyses on data from Moldova hint towards an over-estimation of the intended number of children, mainly because of an under-estimation of childlessness. This might be due to the awareness campaigns about the GGS-II in Moldova, which stressed the aspect of a family survey and might have led to higher participation among respondents with children, and lower participation among childless persons. Another reason for an overestimation of the number of (further) intended children in Moldova might be that not all respondents understood that they should exclude children already born from their answer. Moreover, this paper includes individuals in different stages of their life course, irrespective of their current partnership context and ignoring the couple perspective (*Corijn et al.* 1996). This might lead to an overestimation of the AME of education: Prior research indicates that the association of women's education with completed fertility turned out to weaken after controlling for husbands' characteristics (*Naz et al.* 2006). Moreover, with our cross-sectional data, we cannot analyse the impact of COVID-19 and its restrictions on fertility intentions in the three countries. Finally, the country differences might be biased by data collection at different times of the pandemic due to selection effects and response behavior to the adapted survey modes.

In sum, our study highlights that the intended number of children varies considerably in European countries in 2020/2021. The results confirm the persistence of a two-child norm in Germany and Norway. We find intentions different from this norm among the majority of respondents in Moldova, who largely intend to have three or more children. However, we also found the intention to have three or more children among 27 percent of respondents in Norway. Regarding education, we find the strongest association between educational attainment and the number of intended further children in Germany and for Norwegian men, and less so among Moldovans. For Norwegian women, we did not find any statistically significant association of education and intended number of further children. These country differences indicate that contextual and institutional factors are relevant for fertility plans.

[10] As mentioned above, the German data underlying this study stem from two surveys (W1R and W1A). Whereas basic socio-demographic characteristics were collected in recruitment interviews (W1R) carried out at the end of the second lockdown, fertility intentions were part of the W1A questionnaire, distributed in summer 2021.

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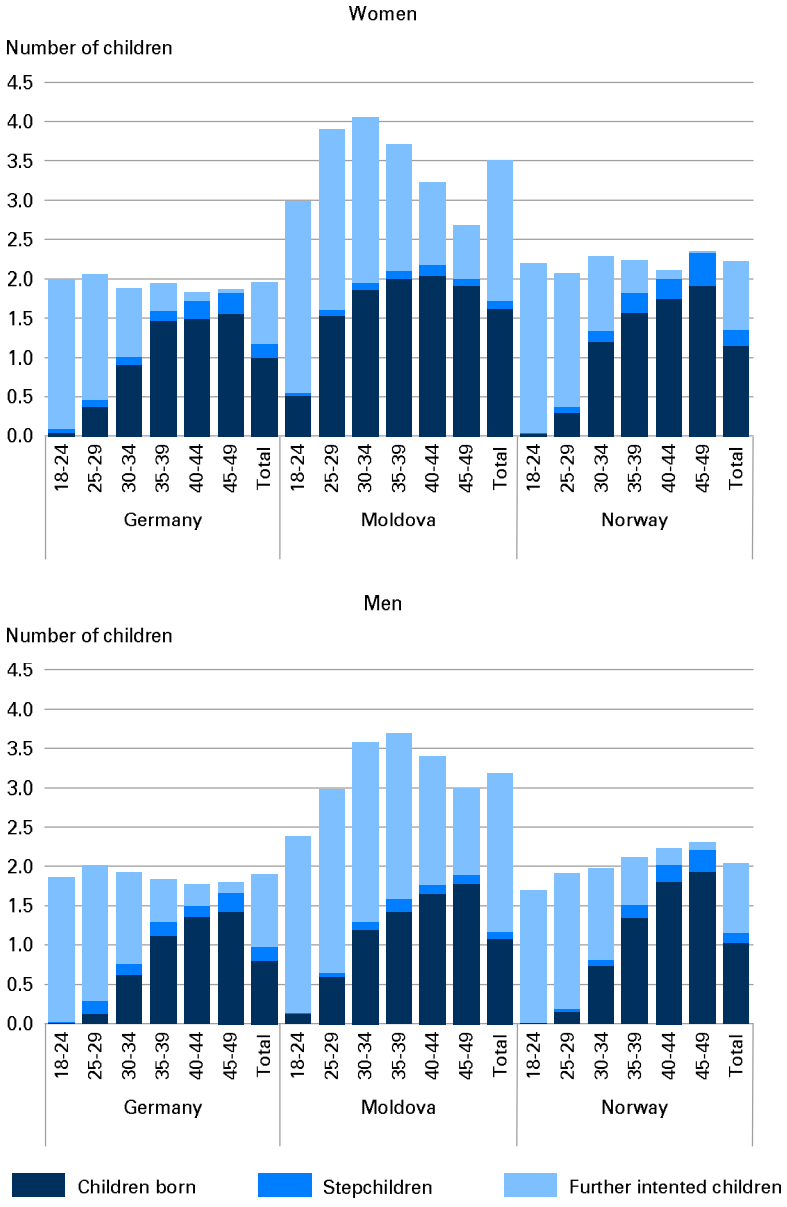
Appendix

Fig. A1: Intended number of children, including previous children of current partner, by age and country, 2020-2021



Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021); weighted data.

Tab. A1: Descriptive statistics on stepchildren and adopted children, column percent

	Germany	Moldova	Norway
Previous children of current partner, if married or cohabiting			
0 children	91%	92%	87%
1 child	6%	6%	6%
2+ children	3%	3%	7%
Mean number of stepchildren with current partner	0.1 children	0.1 children	0.2 children
Observations	14,135	2,815	2,512
Stepchildren, including current and previous partnerships			
0 children	89%	92%	87%
1 child	7%	5%	6%
2+ children	4%	3%	7%
Mean number of stepchildren	0.2 children	0.1 children	0.3 children
Adopted children with current partner			
0 children	-	99.2%	99.7%
1 child	-	0.4%	0.2%
2+ children	-	0.3%	0.1%
Mean number of adopted children	-	0.014 children	0.004 children
Adopted children, including previous partnerships			
0 children	99.2%	99.2%	99.7%
1 child	0.6%	0.5%	0.2%
2+ children	0.2%	0.3%	0.1%
Mean number of adopted children	0.012 children	0.014 children	0.004 children
Observations	17,602	3,746	3,322

Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021); weighted data.

Tab. A2: Mean intended number of children, by education, sex and country, 2020-2021

	Women	Men	Total
Germany			
Low education	2.0	1.9	1.9
Medium education	1.7	1.6	1.7
High education	1.7	1.8	1.8
Total	1.8	1.7	1.8
Moldova			
Low education	3.6	3.1	3.3
Medium education	3.3	3.1	3.2
High education	3.2	3.1	3.2
Total	3.4	3.1	3.3
Norway			
Low education	2.0	1.7	1.8
Medium education	2.0	2.0	2.0
High education	2.0	2.0	2.0
Total	2.0	1.9	2.0

Remark: Missing categories for education are not shown.

Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021); weighted data.

Tab. A3: Intended number of children, by sex and country, in percent

	Women	Men	Total
Germany			
0 children	16	17	16
1 child	17	18	18
2 children	48	48	47
3 children	15	14	15
4 or more children	5	4	4
Total	100	100	100
Moldova			
0 children	2	3	2
1 child	6	7	7
2 children	27	35	31
3 children	24	22	23
4 or more children	42	33	37
Total	100	100	100
Norway			
0 children	12	14	13
1 child	11	11	11
2 children	49	49	49
3 children	23	21	22
4 or more children	6	4	5
Total	100	100	100

Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA wave 1 (Germany; 2021); weighted data.

Tab. A4: Multinomial logistic regression, outcome: number of further intended children, average marginal effects; persons with coresiding partner

	No further child	1 further child	2 further children	3+ further children
	Germany			
Education (ref.=Medium)				
Low	0.049***	-0.003	-0.036***	-0.010
High	-0.057***	0.008	0.045***	0.004
Sex (ref.=Male)				
Female	0.038***	-0.010*	-0.026***	-0.002
Age				
Age in years	-0.046***	0.042***	0.012***	-0.009***
(Age in years)^2	0.001***	-0.001***	-0.000***	0.000
Parity (ref.=2 children)				
0 children	-0.385***	-0.004	0.316***	0.074***
1 child	-0.301***	0.219***	0.071***	0.010**
3+ children	0.009	-0.013	0.000	0.004
Marital status (ref.=Married)				
Cohabiting	-0.022***	0.009	0.016**	-0.003
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.027***	0.015*	-0.003	0.015**
Religiosity (ref.=Low)				
Medium religiosity	-0.060***	0.007	0.025***	0.028***
High religiosity	-0.105***	-0.006	0.021	0.091***
Region (ref.=Rural)				
Urban	-0.007	0.015**	-0.009	0.001
Previous children of current partner (ref.=0)				
1 stepchild	-0.013	0.020	-0.048***	0.041***
2+ stepchildren	0.046***	-0.088***	-0.014	0.056***
Observations: n=14,312				

Tab. A4: Continuation

	No further child	1 further child	2 further children	3+ further children
	Moldova			
Education (ref.=Medium)				
Low	-0.003	-0.002	-0.003	0.008
High	-0.014	-0.015	-0.040*	0.070***
Sex (ref.=Male)				
Female	0.121***	0.012	-0.034*	-0.099***
Age				
Age in years	0.002	0.009*	-0.003	-0.008
(Age in years)^2	0.000**	-0.000	-0.000	-0.000
Parity (ref.=2 children)				
0 children	-0.175***	0.099***	0.221***	-0.145***
1 child	-0.131***	0.104***	0.189***	-0.163***
3+ children	0.031	-0.014**	-0.277***	0.260***
Marital status (ref.=Married)				
Cohabiting	-0.021	0.022*	0.016	-0.018
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.058	0.009	-0.045	0.094
Religiosity (ref.=Low)				
Medium religiosity	-0.084	-0.024	0.016	0.092*
High religiosity	-0.088	-0.014	-0.002	0.103**
Region (ref.=Rural)				
Urban	0.036**	0.011	0.003	-0.051***
Previous children of current partner (ref.=0)				
1 stepchild	0.104***	-0.018	-0.122***	0.037
2+ stepchildren	0.145***	0.031	-0.175***	-0.001
Observations: n=2,815				

Tab. A4: Continuation

	No further child	1 further child	2 further children	3+ further children
	Norway			
Education (ref.=Medium)				
Low	0.006	0.009	-0.009	-0.005
High	-0.036**	0.023	0.003	0.010
Sex (ref.=Male)				
Female	0.000	0.011	-0.004	-0.007
Age				
Age in years	-0.075***	0.069***	0.009	-0.003
(Age in years)^2	0.001***	-0.001***	-0.000	-0.000
Parity (ref.=2 children)				
0 children	-0.327***	-0.038*	0.277***	0.089***
1 child	-0.301***	0.189***	0.110***	0.002
3+ children	0.074***	-0.029	-0.025*	-0.020**
Marital status (ref.=Married)				
Cohabiting	-0.040***	0.016	0.043**	-0.019
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.047***	0.028	0.042**	-0.023*
Religiosity (ref.=Low)				
Medium religiosity	-0.040***	0.013	0.012	0.015
High religiosity	-0.043	0.029	-0.045	0.059
Previous children of current partner (ref.=0)				
1 stepchild	0.062*	0.006	-0.033	-0.035
2+ stepchildren	0.212***	-0.076***	-0.095**	-0.041
Observations: n=2,512				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for education and religiosity are not shown.

Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021).

Tab. A5: Multinomial logistic regression, outcome: number of further intended children, average marginal effects; persons aged 25-49 years

	No further child	1 further child	2 further children	3+ further children
	Germany			
Women				
Education (ref.=Medium)				
Low	0.055**	-0.014	-0.055**	0.014
High	-0.048***	0.007	0.040***	0.000
Observations: n=8,368				
Men				
Education (ref.=Medium)				
Low	-0.012	-0.003	-0.021	0.035*
High	-0.076***	0.015*	0.055***	0.006
Observations: n=6,440				
	Moldova			
Women				
Education (ref.=Medium)				
Low	-0.012	-0.004	0.001	0.015
High	-0.016	-0.015	-0.024	0.055**
Observations: n=1,973				
Men				
Education (ref.=Medium)				
Low	0.003	0.012	-0.020	0.005
High	-0.053	0.017	-0.000	0.036
Observations: n=1,164				
	Norway			
Women				
Education (ref.=Medium)				
Low	0.001	-0.018	0.003	0.014
High	-0.047*	0.002	0.023	0.022*
Observations: n=1,653				
Men				
Education (ref.=Medium)				
Low	0.034	0.021	0.007	-0.062***
High	-0.049*	0.024	0.050*	-0.025
Observations: n=1,107				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for education are not shown. Controlled for age, age², parity, marital status country of birth, religiosity and region.

Source: GGS-II Norway (2020), GGS-II Moldova (2020), FReDA Wave 1 (Germany; 2021).

Tab. A6: Multinomial logistic regression, outcome: number of children born, average marginal effects, Germany

	No child	1 child	2 children	3+ children
	Women			
Education (ref.=Medium)				
Low education	0.049**	-0.024	-0.106***	0.081***
High education	-0.010	-0.029***	0.042***	-0.003
Age				
Age in years	-0.002	0.052***	-0.019***	-0.031***
(Age in years)^2	0.000**	-0.001***	0.000	0.000***
Marital status (ref.=Married)				
Cohabiting	0.108***	0.056***	-0.081***	-0.083***
No partner	0.227***	0.080***	-0.207***	-0.101***
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.009	0.014	-0.035**	0.030**
Religiosity (ref.=Low)				
Medium religiosity	-0.062***	-0.030***	0.032***	0.060***
High religiosity	-0.059***	-0.073***	-0.056**	0.189***
Region (ref.=Rural)				
Urban	0.013*	0.025***	-0.018	-0.020**
Observations: n=9,946				
	Men			
Education (ref.=Medium)				
Low education	0.034	0.005	-0.096***	0.057***
High education	-0.048***	-0.059***	0.082***	0.025***
Age				
Age in years	0.004	0.035***	-0.013**	-0.026***
(Age in years)^2	0.000	-0.000***	-0.000	0.000***
Marital status (ref.=Married)				
Cohabiting	0.124***	0.020*	-0.069***	-0.075***
No partner	0.279***	0.002	-0.182***	-0.099***
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.020	-0.022*	-0.037*	0.079***
Religiosity (ref.=Low)				
Medium religiosity	-0.061***	-0.037***	0.036***	0.062***
High religiosity	-0.042*	-0.108***	-0.073**	0.223***
Region (ref.=Rural)				
Urban	0.014	0.017*	-0.003	-0.028***
Observations: n=7,656				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for marital status and religiosity are not shown.

Source: FReDA Wave 1 (Germany; 2021).

Tab. A7: Multinomial logistic regression, outcome: number of children born, average marginal effects, Moldova

	No child	1 child	2 children	3+ children
	Women			
Education (ref.=Medium)				
Low education	0.015	-0.063***	-0.028	0.077***
High education	0.067***	0.027	-0.041	-0.053***
Age				
Age in years	-0.065***	-0.056***	0.046***	0.075***
(Age in years)^2	0.001***	0.001***	-0.001***	-0.001***
Marital status (ref.=Married)				
Cohabiting	0.191***	0.023	-0.201***	-0.012
No partner	0.266***	-0.016	-0.209***	-0.041*
Country of birth (ref.=Born in country of survey)				
Born abroad	0.000	-0.015	0.093	-0.078
Religiosity (ref.=Low)				
Medium religiosity	0.003	-0.045	0.196***	-0.153**
High religiosity	-0.007	-0.050	0.162**	-0.105
Region (ref.=Rural)				
Urban	0.054***	0.054***	-0.000	-0.108***
Observations: n=2,332				
	Men			
Education (ref.=Medium)				
Low education	-0.035*	0.040*	0.001	-0.006
High education	-0.000	0.089***	-0.045	-0.043*
Age				
Age in years	-0.049***	-0.013	0.014	0.049***
(Age in years)^2	0.000***	0.000	-0.000	-0.001**
Marital status (ref.=Married)				
Cohabiting	0.296***	-0.010	-0.243***	-0.043*
No partner	0.525***	-0.106***	-0.318***	-0.101***
Country of birth (ref.=Born in country of survey)				
Born abroad	-0.042	0.068	0.089	-0.114***
Religiosity (ref.=Low)				
Medium religiosity	-0.081*	0.106***	-0.059	0.034
High religiosity	-0.092**	0.102**	-0.108*	0.097**
Region (ref.=Rural)				
Urban	0.046**	-0.008	-0.010	-0.028
Observations: n=1,414				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for marital status and religiosity are not shown.

Source: GGS Moldova (2020).

Tab. A8: Multinomial logistic regression, outcome: number of children born, average marginal effects, Norway

	No child	1 child	2 children	3+ children
	Women			
Education (ref.=Medium)				
Low education	-0.057**	0.054*	-0.022	0.025
High education	0.036*	-0.001	-0.024	-0.010
Age				
Age in years	-0.128***	-0.009	0.089***	0.048***
(Age in years)^2	0.001***	0.000	-0.001***	-0.001***
Marital status (ref.=Married)				
Cohabiting	0.128***	0.002	-0.038*	-0.092***
No partner	0.339***	-0.020	-0.190***	-0.129***
Country of birth (ref.=Born in country of survey)				
Born abroad	0.049**	0.070***	-0.076***	-0.043***
Religiosity (ref.=Low)				
Medium religiosity	-0.035**	-0.034**	0.023	0.047***
High religiosity	0.076	-0.072**	-0.132***	0.128***
Observations: n=2,001				
	Men			
Education (ref.=Medium)				
Low education	-0.029	0.027	0.042	-0.041
High education	0.037	-0.018	0.016	-0.035
Age				
Age in years	-0.088***	-0.005	0.048*	0.045*
(Age in years)^2	0.001***	0.000	-0.001	-0.000
Marital status (ref.=Married)				
Cohabiting	0.148***	-0.006	-0.094***	-0.047**
No partner	0.443***	-0.092***	-0.255***	-0.096***
Country of birth (ref.=Born in country of survey)				
Born abroad	0.113***	-0.006	-0.108***	0.001
Religiosity (ref.=Low)				
Medium religiosity	-0.006	0.019	-0.054**	0.041**
High religiosity	0.037	-0.047	-0.021	0.032
Observations: n=1,321				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Remark: Missing categories for marital status, education and religiosity are not shown.

Source: GGS Norway (2020).

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