

Press release: 13 149-177/23

Education shows strong correlation with life-expectancy and fertility

Demographic indicators 2021 illustrate education-specific differences

Vienna, 2023-09-04 – Statistics Austria's new set of demographic indicators differentiated by highest educational attainment shows that academics have the highest life expectancy and compulsory school graduates the lowest. Furthermore, female higher school graduates have fewer children than women with only a compulsory school certificate.

“Education and life expectancy go hand in hand. 35-year-old men with a university degree have a life expectancy of 84 years, which is eight years more than men of the same age with a compulsory education. The life expectancy of 35-year-old female university graduates is even higher - 87 years hence four years more than the life expectancy of women of the same age who have completed compulsory education. There is also a correlation between education and fertility: As the level of education of women increases, their age at childbirth also increases and their number of children tends to decrease”, says Statistics Austria Director General Tobias Thomas.

Life expectancy of academics exceeds that of compulsory school graduates

There are large education-specific differences in life expectancy, with the number of remaining years of life increasing with higher levels of education. At the age of 35, when most people have already completed their formal education, men with a university degree can expect to live to an average age of 84.2 years, while those with a compulsory school diploma will live to an average age of only 76.6 years. The life expectancy of 35-year-old women with compulsory education is 82.7 years, while that of women with a university degree is 86.9 years.

The difference in life expectancy between the lowest and highest educational attainment was 6.3 years for men and 3.4 years for women in 2015 and it increased to 7.6 years for men and 4.1 years for women in 2021. From 2020 to 2021, life expectancy increased only among male academics and decreased or remained constant among all other educational groups.

Among older age groups, the life expectancies of educational groups converge, but differences remain. At the age of 65, the life expectancy of men with a university degree is still 4.9 years higher than that of men with only a compulsory education, while for women the difference between the lowest and highest level of education is 2.6 years.

Low fertility among female higher school graduates

The average number of children per woman also differs according to educational level. Between 2015 and 2021, women with higher school diplomas consistently had the lowest total fertility rate, while women without an education beyond compulsory schooling had the highest. While female compulsory school graduates had an average of 1.66 children in 2021, this figure was only 1.31 for women with higher school degrees. There are also opposing trends noticeable: Compulsory school graduates had fertility rates of about two children in 2015 and 2016, since then, their fertility rate has been falling. For all other educational qualifications, fertility rates tend to increase over time, especially for women with higher school degrees. However, the low starting level in this age group in 2015 with a total fertility rate of only 1.13 children per woman has to be noted.

The average fertility age in 2021 was 29.2 years for women with compulsory schooling and increased with higher levels of education. Female academics were on average 33.9 years old at the birth of their child.

Further information on demographic indicators by educational attainment and employment status can be found on our [website](#).

Table 1: Longer-term life expectancy at age 35 by educational attainment and sex 2015 to 2021

Educational attainment /sex	2015	2016	2017	2018	2019	2020	2021
Male	44.21	44.80	45.17	45.20	45.52	44.84	44.73
Compulsory school	42.14	42.54	42.87	42.73	42.93	41.96	41.65
Apprenticeship and intermediate vocational school	43.79	44.30	44.94	44.95	45.27	44.58	44.55
Higher school with "Matura" exam (A level)	46.12	46.96	47.23	47.11	47.34	46.86	46.58
University and equivalent study programme	48.41	48.77	49.04	49.28	49.32	48.91	49.21
Female	48.86	49.19	49.47	49.55	49.79	49.34	49.31
Compulsory school	47.90	48.11	48.35	48.32	48.42	47.82	47.71
Apprenticeship and intermediate vocational school	49.17	49.46	50.01	50.05	50.26	49.88	49.81
Higher school with "Matura" exam (A level)	50.03	50.35	50.60	50.98	51.20	50.80	50.69
University and equivalent study programme	51.31	51.58	51.72	52.08	52.07	51.88	51.86

S: STATISTICS AUSTRIA, Demographic indicators.

Table 2: Total fertility rate and mean age of mother at birth by educational attainment 2015 to 2021

Educational attainment	2015	2016	2017	2018	2019	2020	2021
Total fertility rate							
Compulsory school	2.00	2.03	1.92	1.80	1.77	1.70	1.66
Apprenticeship	1.44	1.52	1.57	1.54	1.54	1.50	1.53
Intermediate vocational school	1.47	1.52	1.58	1.55	1.52	1.54	1.58
Higher school with "Matura" exam (A level)	1.13	1.21	1.30	1.27	1.26	1.27	1.31
University and equivalent study programme	1.33	1.37	1.40	1.39	1.40	1.35	1.42
Mean age of mother at birth (in years)							
Compulsory school	28.60	28.62	28.81	28.93	29.08	29.05	29.21
Apprenticeship	29.13	29.08	29.15	29.25	29.25	29.45	29.60
Intermediate vocational school	30.20	30.15	30.15	30.17	30.26	30.24	30.21
Higher school with "Matura" exam (A level)	32.19	32.28	31.95	32.01	32.07	32.02	32.04
University and equivalent study programme	33.69	33.63	33.74	33.75	33.66	33.76	33.87

S: STATISTICS AUSTRIA, Demographic indicators.

Information on methodology, definitions:

Statistics Austria now publishes **demographic indicators** with a time lag of one year, broken down **by highest completed level of education and employment status**. The indicators on life expectancy, fertility and marriages are calculated on the basis of register data and are available from 2015 onwards, while those on divorces are available from 2018 onwards. The analysis is based on a combination of data on births, deaths, marriages, divorces and registrations as well as dissolutions of registered partnerships with information from the educational attainment register and the register-based employment histories. This provides a deeper insight into demographic processes than previously possible. It should be noted that the analyses are presented from a **period perspective**. This means that it is not considered whether a person obtains further educational qualifications at a later point in time.

The **register-based employment histories** are a complete survey of employment careers that adopts the concepts of the register-based labour force statistics as far as possible. For this purpose, overlap-free and gap-free employment careers are formed from a large number of register data for all persons who appear in at least one of these registers (even if they never had a main residence in Austria). The results come from the base registers of the register-based census and the register-based labour force statistics.

The **educational attainment register** contains information on formal educational qualifications of the Austrian resident population aged 15 and older. It enables a regionally broken-down presentation of the educational attainment and its changes.

If you have any questions on this topic, please contact:

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