OECD

EDUCATION INDICATORS IN FOCUS

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How are health and life satisfaction related to education?

- **Both education and skills are associated with better health. The percentage of adults who report being in good health is 33 percentage points higher among those with high literacy skills and a high level of education than among those with low literacy skills and a low level of education.**
- **In inclusive societies with lower earning advantages from higher education, such as Denmark, Norway and Sweden, fewer people tend to report limiting their activities due to health problems and there are high levels of life satisfaction across all educational attainment levels.**
- **Having a higher education is associated with being more satisfied with life. In all OECD and partner countries, with the exception of India, Korea and Turkey, more than 80% of tertiary graduates reported they were satisfied with their life.**

In recent years, there has been a significant shift in recognition of the importance of social benefits and measures of social and personal well-being. The Stiglitz-Sen-Fitoussi report (Stiglitz et al., 2009) influenced a key shift in government and research thinking on measuring the well-being of societies, turning away from solely economic measures such as GDP, and laid the foundation for much of the subsequent development of the role of governments and organisations in measuring, shaping and monitoring well-being.

Since 2009, *Education at a Glance* (EAG) has included an indicator on education and social outcomes using data from different surveys. The OECD Programme for the International Assessment of Adult Competencies (PIAAC) develops and conducts the Survey of Adult Skills which measures adults' proficiency in literacy, numeracy and problem solving in technology-rich environments. Data collected through the Survey of Adult Skills were used in various editions of EAG as it gathered rich information on various social outcomes. In EAG 2016, Indicator A8 (How are social outcomes related to education?) used this source to measure the association between educational attainment and self-reported health. This indicator also analysed data from the European Union Statistics on Income and Living Conditions (EU-SILC) on the prevalence of limitations that affect people's ability to perform normal daily activities across the different educational attainment levels. Finally, it referred to the Gallup World Poll to analyse how life satisfaction varied across the different countries and educational attainment levels. The main findings are further developed in this paper.

Definitions

Activity limitation: Individuals with activity limitation are those who report that, because of a health problem, they were limited to a greater or lesser degree from doing normal activities during at least the six months prior to the survey.

Life satisfaction: Individuals satisfied with their life are those who reported they stand on the positive side of the Cantril ladder of life satisfaction, meaning they answered 6 or above to the question about where they feel they currently stand in a ladder with 10 steps, where 0 represents the worst possible life and 10 the best possible life.

Self-reported health: Individuals reporting being in good health are defined as those who report that they are in excellent, very good or good health.

Health increases with educational attainment and literacy proficiency

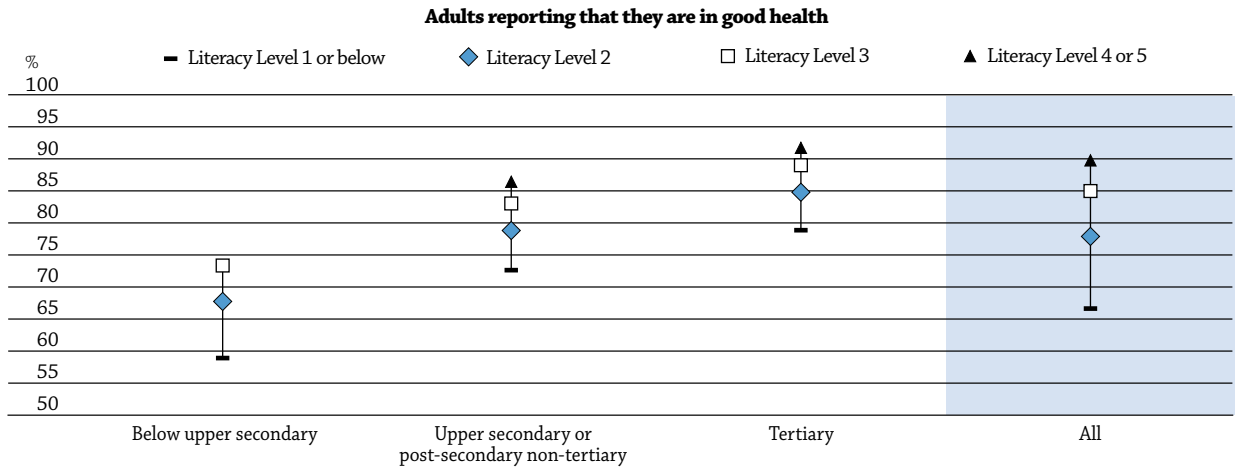
Skills and educational attainment are both positively associated with good self-reported health. The percentage of adults who report being in good health is 33 percentage points higher among those with high literacy skills and a high level of education than among those with low literacy skills and a low level of education. Skills and educational attainment are two independent measures in the Survey of Adult Skills, and although skills tend to increase with education, there is variation

within each educational attainment level. Even if these two measures are highly correlated, data show that they each play an individual role on the share of adults who report that they are in good health.

Figure 1 shows that the percentage of adults who report that they are in good health increases with literacy levels even within the same educational attainment (vertical comparison). The largest difference is among adults with below upper secondary education where there is a 15 percentage-point gap between those with literacy proficiency Level 1 or below and those with literacy proficiency Level 3.

Figure 1. **Self-reported health, by educational attainment and literacy proficiency (2012 or 2015)**

Survey of Adult Skills, average, 25-64 year-olds



Note: Data are not displayed when there are too few observations to provide a reliable estimate.
Source: OECD Survey of Adult Skills (PIAAC) (2012, 2015). *See Education at a Glance 2014* for more information, http://dx.doi.org/10.1787/eag-2014-en.

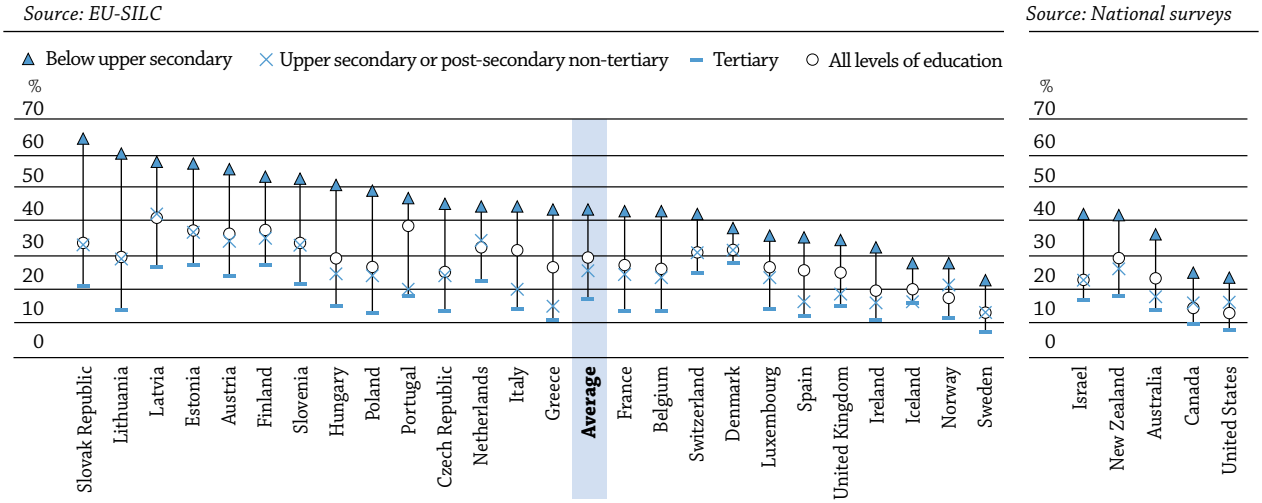
The horizontal comparison shows that educational attainment is also associated with health among adults with the same level of literacy proficiency. Among adults with literacy proficiency Level 1 or below, there is a 20 percentage-point difference between adults with below upper secondary education and tertiary-educated adults. This shows that the difference in the share of adults reporting that they are in good health is greater across the three aggregated levels of educational attainment for the same literacy proficiency (horizontal comparison) than across the different literacy proficiency levels for the same educational attainment level (vertical comparison).

The variation in self-reported health across educational attainment levels could be explained by the various indirect links that exist between education and health. For instance, social and emotional skills partly acquired through formal education can in some instances play an even larger positive role on health than cognitive skills such as literacy and numeracy (OECD, 2015). For example, social and emotional skills such as perseverance, sociability and self-esteem contribute to reducing obesity, a major health concern, and together with cognitive skills they enhance the likelihood of achieving higher education. These skills can also be strongly influenced by the family and the social context in which children evolve and those with highly educated parents are more likely to be exposed and replicate health-promoting behaviours than children with less educated parents. Other distinct factors could be that there is a selection effect in educational attainment, where bad health conditions could prevent people from pursuing further education, or that the jobs of lower-skilled workers are more likely to be associated with higher injury risks.

Activity limitation due to health problems decreases with educational attainment

Figure 2 shows that activity limitation due to health problems decreases with educational attainment in all OECD countries with data. Among OECD countries participating in EU-SILC, Sweden has the lowest prevalence of activity limitation across all levels of education and the differences across educational attainment levels are comparatively low, which is an indicator of the high equity within this country. In contrast, in countries such as Austria, Estonia, Finland, Hungary, Latvia, Lithuania, the Slovak Republic and Slovenia, more than 50% of the population with below upper

Figure 2. **Percentage of adults reporting activity limitation due to health problem, by educational attainment (2014)**



Note: For Australia, Canada, New Zealand and Switzerland the year of reference is 2012 or 2013.
Countries are ranked in descending order of the percentage of 25-year-olds and over with below upper secondary education reporting activity limitation due to health problems.
Source: OECD European Union Statistics on Income and Living Conditions (EU-SILC) and other national surveys. *See Education at a Glance 2016* for more information, www.oecd.org/education/education-at-a-glance-19991487.htm.

secondary education reported they have activity limitation due to health problems. This share seems to be very high, but it can be influenced by the low share of the population with below upper secondary education. For example, in the Slovak Republic less than 10% of the population have only attained below upper secondary education, and 65% of them reported activity limitation due to health problems, the highest share among all OECD countries with data.

Longitudinal data would show how educational attainment affects individuals' adoption of healthier behaviour over time. However, analysing data by age group can be a good proxy measure of this evolution. Data on OECD countries collected through EU-SILC shows the average difference in the share of people with activity limitation between those with below upper secondary education and those with tertiary education is 12 percentage points among 25-34 year-olds, increasing to 15 percentage points among 35-44 year-olds, 18 percentage points among 45-54 year-olds and 20 percentage points among 55-64 year-olds. The steady increase in the gap suggests that education may help provide a buffer against health problems as people age.

Tertiary-educated adults have the highest life satisfaction

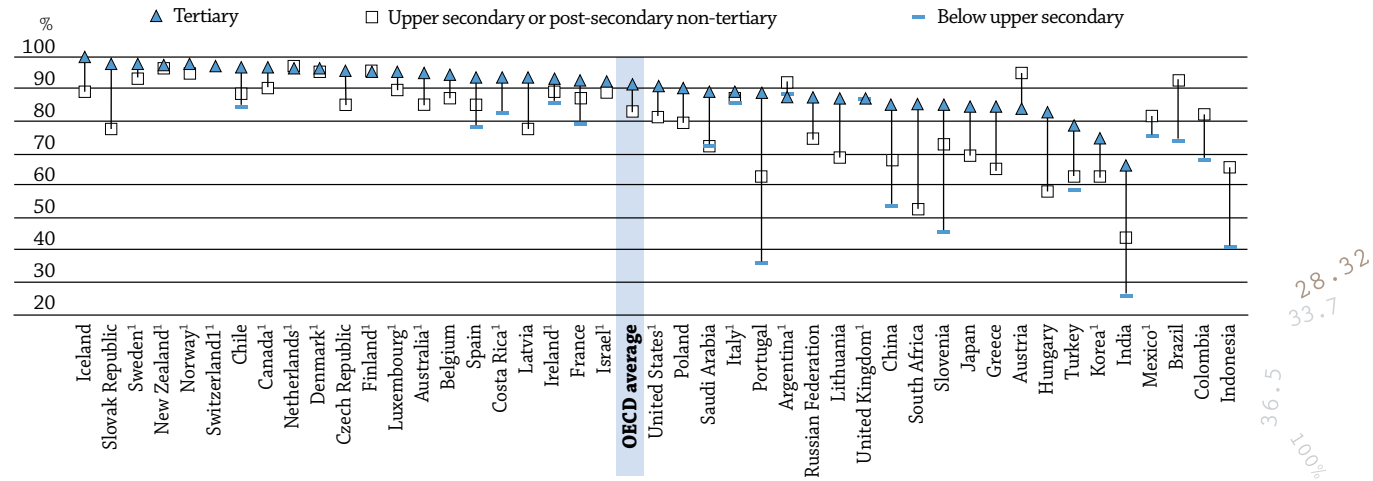
Data collected by the Gallup World Poll show that there is a positive association between education and life satisfaction. On average across OECD countries participating in the Gallup World Poll, 92% of tertiary-educated adults were satisfied with their life in 2015, compared to 83% of those with upper secondary or post-secondary non-tertiary education (Figure 3). While the building blocks of life satisfaction are complex, research shows that social and emotional skills can play a large role in determining life satisfaction, much of which stem from education in schools, but also from family and cultural environments. These skills in turn may play a role in improving the economic and social outcomes of education: lower unemployment rates, higher earnings, better health and greater civic and political engagement, all of which influence individual well-being (OECD, 2015).

Countries that report high levels of life satisfaction regardless of educational attainment levels, such as Denmark, Finland, Norway and Sweden, are also countries characterised by more inclusive societies as can be demonstrated by the lower earning advantages from higher education observed in these countries. In some other countries, the share of the population reporting being satisfied with their life varies significantly across educational attainment levels. In Hungary, India, Indonesia, Portugal, the Slovak Republic, Slovenia and South Africa, a higher level of education (either from below upper secondary to upper secondary or from upper secondary to tertiary) increases the percentage of adults reporting that they are satisfied with their lives by more than 20 percentage points.

Finally, in India, Korea and Turkey data show that tertiary education does not guarantee a feeling of life satisfaction to the same extent, as in these three countries less than 80% of tertiary-educated adults report being satisfied with their life. This demonstrates that life satisfaction is a subjective measure of well-being and that other contextual and cultural factors beyond educational attainment play an important role and need to be accounted for to better understand the variations across countries.

Figure 3. **Life satisfaction, by educational attainment (2015)**

Percentage of 25-64 year-olds reporting they stand on the positive side of the Cantril ladder of life satisfaction



Note: Educational attainment categories collected by Gallup may differ from ISCED 2011. Data are not displayed when there are too few observations to provide a reliable estimate.

1. The difference between the highest and the lowest educational attainment is not statistically significant at 5%.

Countries are ranked in descending order of the percentage of 25-64 year-olds with tertiary education reporting to be satisfied with their life at the time of the survey.

Source: OECD European Union Statistics on Income and Living Conditions (EU-SILC) and other national surveys. *See Education at a Glance 2016* for more information, www.oecd.org/education/education-at-a-glance-19991487.htm.

The bottom line: The well-being of a population cannot be measured purely through economic indicators. Social outcomes such as health and life satisfaction are perceived as important aspects of well-being. Data show that education, cognitive skills and social and emotional skills all play a role in increasing health outcomes and life satisfaction.

For more information

- OECD (2016), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2016-en.
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- Stiglitz, J.E. et al. (2009), *Report by the Commission on the Measurement of Economic Performance and Social Progress*, http://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement_of_economic_performance_and_social_progress.pdf.

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